

Collaborative Industry-Academia Integration in Local Undergraduate Institutions: Establishing Practical Education Bases

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Abstract:The integration of industry and academia in local undergraduate institutions is essential to align educational outcomes with the practical needs of industries. This paper explores the establishment of collaborative educational foundations that bridge theoretical knowledge with practical experience, focusing on the "soft order-based" model of school-enterprise collaboration. By emphasizing extracurricular activities such as corporate culture presentations and practical training, the proposed framework enables students to develop essential skills and adapt to industry requirements. The study also addresses existing challenges in industry-academia cooperation, such as mismatched curricula and limited corporate involvement, and proposes strategies to enhance the depth of cooperation and ensure mutual benefits for students, educational institutions, and enterprises.

Keywords: Industry-Academia, Local Undergraduate Institutions, Practical Education Bases, Collaborative

1. INTRODUCTION

At present, my country's economy has shifted from a high-speed growth stage to a high-quality development stage. It is in the critical period of economic structural adjustment and industrial transformation. Vocational education is facing new challenges and opportunities. For this reason, industry-education integration has become a hot word in vocational education reform. Industry-education integration refers to the process of mutual integration and development between industry entities and education entities in the process of production, operation, service and teaching. It first appeared in the form of policy texts, and then gradually became an academic concept as a guide for educational practice. The concept of industry-education integration emphasizes the deep integration of education and industry, aiming to cultivate students' practical ability, innovation ability and professional literacy, and promote the all-round development of students. Through industry-education integration, students can learn in practice, enterprises can provide internships and employment opportunities, and schools can adjust educational content and teaching methods according to industry needs to achieve the deep integration of industry-education integration and school-enterprise cooperation.

Against the background of industry-education integration, vocational education is undergoing profound changes. The cooperation and integration between schools and enterprises are becoming increasingly close, and students have more and more internship and employment opportunities. Industry-education integration is not only a trend in education reform, but also an important force to promote economic transformation and upgrading. However, industry-education integration also faces some challenges. For example, how to balance the needs of education and industry, how to ensure the quality of students' learning and employment opportunities, etc. Therefore, it is necessary to further deepen the practice of industry-education integration and promote the high-quality development of vocational education. The implementation of industry-education integration requires the participation and cooperation of multiple parties. The government needs to provide policy support and financial

investment, enterprises need to provide internships and employment opportunities, schools need to adjust educational content and teaching methods according to industry needs, and students need to actively participate in practice and learning. Only through industry-education integration can we truly achieve the deep integration of education and industry and promote economic transformation and upgrading. In the process of industry-education integration, the application of the information technology also plays an important role. Through information technology, schools can realize online cooperation with enterprises, students can study and intern online, and enterprises can provide employment opportunities online. The application of information technology has further expanded the scope and depth of industry-education integration and promoted the innovative development of the education and industry. In the Figure 1, the sample of collaborative industry-academia integration is illustrated.



Figure. 1 The Sample of Collaborative Industry-Academia Integration (Image source:

<https://fastercapital.com/topics/collaboration-with-industry-and-academia.html>)

2. THE PROPOSED METHODOLOGY

2.1 School-enterprise cooperation presents a new pattern of close and collaborative education

On the basis of in-depth cooperation between schools and enterprises, the school and enterprises are jointly committed to building a collaborative education mechanism with Chinese characteristics. This model not only emphasizes the

cultivation of students' professional abilities, but also focuses on their actual working ability and comprehensive quality improvement in the corporate environment. The school has continuously improved and innovated the school-enterprise dual-system school-running model, promoted the new apprenticeship system of "recruiting workers is recruiting students, entering enterprises is entering schools, and joint training of teachers from enterprises and schools", further broadened the training channels for students, and enabled them to grow rapidly in the combination of academics and practice. The core of this training model lies in the two-way interaction and deep integration between enterprises and schools. Both parties of the school and enterprises not only jointly formulate professional training goals and curriculum settings, but also jointly establish training bases and build management platforms to achieve resource sharing and complementary advantages. In this process, enterprises have played an important role and actively participated in various educational and teaching activities of the school. By hiring enterprise experts, engineering and technical personnel, management talents and skill masters as technical consultants and part-time teachers of the college, enterprises will directly pass on cutting-edge industry knowledge, technical trends and professional requirements to students, so that they can understand corporate culture and industry development direction during their school years and make career plans in advance.

In addition, enterprises also actively participate in the school's professional setting, curriculum construction, teaching material development and other work, helping the school to better adapt to industry needs and cultivate talents that meet market requirements. For example, enterprise experts regularly participate in the professional talent training plan and professional construction demonstration meetings held by the school, provide valuable industry advice, ensure that the course content keeps up with the industry development, and that what students learn is highly consistent with the needs of the enterprise. At the same time, enterprises explain industry trends, professional requirements, and the company's production processes and management concepts to students through forms such as "technician lectures", so that students have a clearer understanding of their future careers. Through this school-enterprise collaborative education mechanism, students not only acquire solid professional theoretical knowledge, but also get practical training in a real corporate environment and accumulate rich work experience. This two-way training model enhances students' employment competitiveness and provides enterprises with high-quality talent resources for targeted training, truly achieving a win-win situation for schools, enterprises and students.

2.2 The main existing problems of industry-education integration in China

Combined with the research of domestic experts and scholars, the current school-enterprise cooperation in higher vocational education still faces many challenges, mainly the following problems. First, the matching degree between the professional settings of higher vocational colleges and the industry is not high. The professional settings of some colleges are relatively old, and they have not been adjusted in time according to the changes in industrial structure and market demand, resulting in the skills learned by students after graduation being out of touch with the actual needs of enterprises, making it difficult to effectively enter related industries. Secondly, the depth of cooperation between enterprises and higher vocational colleges is insufficient. Although the school-enterprise

cooperation model has been developing in recent years, it still remains at the surface level. Enterprises participate more out of social responsibility or short-term interests, and fail to deeply intervene in the education and training system from a long-term perspective, and have not formed a continuous interactive mechanism. In addition, the complementarity of talents among teaching, production and research is unbalanced. Most teachers in higher vocational colleges are academic talents and lack practical experience in enterprises, while enterprises pay more attention to production and the market, do not understand the laws of education, and research talents play a limited role in the integration of industry and education. The insufficient complementarity of the capabilities of all parties directly affects the effect of the integration of industry, education and research, and restricts the ability of higher vocational colleges to cultivate high-quality application-oriented talents. It is urgent to improve and deepen it in future school-enterprise cooperation.

2.3 The teaching reform practice

Based on the practical problems faced by local undergraduate colleges and enterprises in the "order-based" talent training, colleges and universities need to further broaden their horizons and explore the in-depth cooperation between various education links and enterprises from the perspective of "three-dimensional education". Under the current "order-based" model, the training path of students is relatively fixed, the scope of school-enterprise cooperation is limited, and it is difficult to give full play to the role of enterprises in talent training. Therefore, colleges and universities should use the "soft order-based" school-enterprise collaborative education model and rely on the second classroom as an important platform to achieve comprehensive training of students and early intervention in career planning. Compared with the traditional "first classroom" dominated by teaching, the "second classroom" is often regarded as an "invisible classroom" for cultivating students' practical ability. It has the characteristics of rich content and diverse forms, and can provide students with scenarios such as knowledge application, knowledge supplementation, ability improvement, and ability expansion, making up for the time and space limitations of the first classroom and becoming an important extension of the first classroom. Through the second classroom, students can participate in various practical activities in their extracurricular time to improve their comprehensive quality and practical ability. Especially in the context of school-enterprise cooperation, the second classroom provides a broader platform for enterprises to intervene in student training.

The "soft order-based" school-enterprise collaborative education model is proposed based on this advantage. Different from the traditional "order-based" talent training model, the soft order model is more flexible and multi-dimensional, focusing on introducing corporate culture through second-class forms such as club activities, and cultivating the capabilities of corporate employees in advance. The school and the enterprise signed an agreement to jointly build a student club, and used the resources and influence of the enterprise to carry out a series of related activities, such as corporate culture presentations, skills training, career planning counseling, recruitment presentations, etc. These activities not only help students better understand the development trends of the industry, but also help them make more reasonable judgments in career choices. At the same time, school-enterprise cooperation under the soft order model closely combines corporate culture, work skills and students' career

planning through club activities. This embedded and long-term cooperation model not only allows companies to contact potential outstanding talents earlier, but also allows students to gradually understand the working environment and cultural atmosphere of the company in the process of participating in corporate activities, and adapt to future professional roles in advance. In this way, companies can train talents according to their own needs and reduce the mobility problems caused by mismatch of corporate culture or unclear career cognition in traditional recruitment.

In addition, the "soft order-based" model is also a supplement and improvement to the education system of colleges and universities. In this process, colleges and universities can work closely with enterprises to design curriculum systems and practical activities that are more in line with corporate needs and social development, and enhance the flexibility and pertinence of professional settings. In particular, the alignment of college club activities with corporate needs will further strengthen students' professional qualities and practical abilities, and help improve the quality of talent training and students' employment competitiveness. For companies, the soft order model provides a more flexible and efficient recruitment approach. Through long-term embedded cooperation, companies can not only observe students' abilities, attitudes, and potential at an early stage, but also jointly design practical activities and training plans with colleges and universities to ensure that students have the required professional skills and cultural identity before entering the company. This long-term, multi-dimensional interaction not only reduces the company's recruitment costs, but also improves recruitment efficiency, helping companies find more suitable employees.

3. CONCLUSION

Collaborative industry-academia integration in local undergraduate institutions offers a practical and adaptable approach to talent development. By fostering the deeper collaboration through mechanisms such as the "soft order-based" model, this integration provides students with early exposure to corporate environments and enables them to develop practical skills aligned with industry needs. Despite challenges such as insufficient curriculum alignment and shallow corporate engagement, this approach holds significant potential to improve the educational outcomes, enhance employment competitiveness, and create a sustainable talent pipeline for industries. Going forward, refining these collaborative frameworks and expanding their application will be critical to fostering quality development in vocational education.

4. THE FUNDING

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