

# Research on Deepening Mechanism of University-Enterprise Cooperation and Industry-Education Integration in Undergraduate and Vocational Education

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**Abstract** In order to alleviate the current dilemma of undergraduate vocational education cooperation, this paper summarized the research status of deepening mechanism of school-enterprise cooperation at home and abroad, and investigated schools, enterprises, students and other multi-level subjects, then explored the key factors that restricted the construction of school-enterprise cooperation deepening mechanism. Finally, the paper also put forward effective measures from the aspects of system, platform and model, trying to establish a mechanism of industry-education integration and school-enterprise cooperation in undergraduate vocational education to promote the long-term and in-depth development of industry-education integration and school-enterprise cooperation in our vocational education.

**Keywords** Undergraduate Vocational Education; School-Enterprise Cooperation; Deepening Mechanism; Cooperation between School and Enterprise

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## Introduction

Nowadays, the cooperation between enterprises and colleges and industry-education integration have shown results, however at a low and superficial level. Some enterprises will regard universities as labor markets and are even using students as cheap labor. In terms of job allocation, the vocational education students are assigned to low-end positions, barely without any requirements for qualities or skills and are lack of position adjustment mechanism, such as production line workers. From the prospective of the enterprises, they are aiming to pursue the maximization of economic benefits. But for education, lack of "Knowing" and "Thinking" in the three sectors "Knowing, Acting and Thinking" in education, will lead to a result that the sector of "Acting" staying on the surface instead of distillation.

Universities only regard the enterprises as practice places serving during the teaching process, without in-depth study of the specific working environment, technical requirements and salary structure of different enterprises, or in-depth thinking from the perspective of the integration of production and education. As a result, the university-enterprise cooperation seems like flourishing, but is actually fragile. And it is difficult to carry out stable long-term cooperation. From the university perspective, the talent training program is not implemented more effectively, one one hand, which will lead to the dissatisfaction of students and parents. On the other hand, there will be a high turnover rate of students after employment, which will also lead to dissatisfaction of enterprises, as a result, the next round of university-enterprise cooperation will experience a lower motivation. These problems existing in the university-enterprise cooperation of industry-education integration between vocational colleges and enterprises will have a far-reaching impact on the subsequent cooperation and development. Therefore, it is necessary to actively and deeply study and explore how to build a deepening mechanism for university-enterprise cooperation of industry-education integration, so as to effectively solve these problems and ensure the full integration of the interests of the government, universities, enterprises and students, promoting the optimization and promotion of talent training programs from the genuine perspective of talent training.

## Research status

Differs in ways of language expression, the word of "industry-education integration" in vocational education had not been clearly put forward in foreign countries. Due to that the university-enterprise cooperation was an important part of the industry-education integration, the author will regard foreign studies on university-enterprise cooperation as research on the industry-education integration and university-enterprise cooperation in vocational education. In foreign countries, the industry-education integration and university-enterprise cooperation in vocational education started earlier, and so far, relatively mature mechanisms and vocational education systems had been formed, among which the typical ones were Germany's "Dual System", Britain's "Apprenticeship", America's "Cooperative Education" and Australia's TAFE model.

## Research on the reform of school-enterprise cooperation

Foreign scholars' research on the integration of industry and education in vocational education and school-enterprise cooperation could be roughly divided into three categories: reform research on the integration of industry and education in vocational education and school-enterprise cooperation, model and mechanism research on the integration of industry and education and school-enterprise cooperation, and ideological research on the integration of industry and education and school-enterprise cooperation, which had formed their own unique experience and methods. It provided reference for the related research of production-education integration and school-enterprise cooperation in vocational education in China.

The first research field of Chinese scholars in vocational education development was the study of foreign models, including the German "Dual System", the Australian TAFE model, the American "Project Group" vocational education model and the Japanese "Industry, Education and Officials Cooperation" vocational education model [1].

### **Case studies on the industry-education integration in vocational colleges and university-enterprise cooperation**

The second research field of Chinese scholars mainly focused on case studies on the industry-education integration in vocational colleges and university-enterprise cooperation. Scholars discussed various teaching modes to deepen the industry-education integration by studying typical cases. Fusion, between production and education cooperation governance approach was the comparison of the domestic scholars pay close attention to the third research field, the results of the field were mainly concentrated in the vocational education teaching fusion, university-enterprise cooperation governance system and structure of the research. By combing the relevant research literature on the industry-education integration in vocational education and university-enterprise cooperation in recent years, it was found that, driven by national policies, the research achievements in the fields of the industry-education integration in vocational education and university-enterprise cooperation were relatively abundant and the research contents are also relatively diverse.[2] However, it was the research field that lacks diversification, mainly focusing on the introduction of foreign advanced experience, the industry-education integration in domestic vocational education, the analysis of university-enterprise cooperation cases, the industry-education integration in vocational education, and the study of university-enterprise cooperation governance methods. There were few research achievements in the industry-education integration in vocational education and the deepening mechanism of university-enterprise cooperation. As a result, the current research on the industry-education integration in vocational education and the realization mechanism of university-enterprise cooperation had not formed a relatively systematic theoretical system. The practicability and pertinent of the research results were not strong, and it was difficult to provide strong theoretical support for the industry-education integration in vocational education and the optimization of the realization mechanism of university-enterprise cooperation as well as the development of the industry-education integration and university-enterprise cooperation.

### **Development enlightenment**

In addition, the design field of university-enterprise cooperation deepening mechanism based on the feedback effect of multi-level subjects such as universities, enterprises and students is as far blank. Based on the relevant foreign research and combined with the actual situation of the industry-education integration in vocational education and university-enterprise cooperation in China, some development enlightenment is conducted on the difficulties of the realization mechanism of university-enterprise cooperation in the current undergraduate vocational education for multi-level subjects such as universities, enterprises and students. To explore the key factors that restricting the construction of deepening mechanism of university-enterprise cooperation, and attempt to construct a mechanism of industry-education integration and university-enterprise cooperation in undergraduate vocational education that is suitable for multi-subject needs and can promote the current development of vocational education, so as to promote the long-term and in-depth development of industry-education integration and university-enterprise cooperation in our vocational education.

### **The coupling of "1+X" certificate system and the deep integration of university-enterprise collaborative education**

The goal of university-enterprise collaborative education is to integrate academic degree teaching and vocational education to improve talent competitiveness and matching degree. On the one hand, the

implementation of "1+X" certificate system forces colleges and universities to go out and actively connect with enterprises, adapt to the demand of the job market, and deepen the reform of education and teaching. On the other hand, only if the practice teaching system can be built jointly by enterprises and universities can ensure the smooth implementation of the "1+X" certificate system, achieve the goal of improving the modernization level of vocational education and providing high-quality talents for economic and social development. Therefore, based on the perspective of the deep integration and coupling of "1+X" certificate system and university-enterprise collaborative education, the reform and innovation of the practical teaching system of engineering cost major in private colleges and universities is a powerful measure to effectively solve the above dilemma, and will also promote the transformation and upgrading of construction and related industries, which is of great benefit to students, universities and even the society to achieve a win-win situation.

### **Actively introduce Internet technology to build a new university-enterprise cooperation platform in which the government, universities and enterprises can jointly participate in**

In order to achieve sustainable development of production-education integration of university-enterprise cooperation and form the construction of long-term mechanism, the fundamental premise is to build a complete platform to realize the collaborative participation of the government, universities and enterprises, so that the construction of mechanism can be guided by relevant government policies, and education, administrative and economic organizations can jointly establish working committees, organize specific affairs such as macro decision-making and cooperation planning. Therefore, information technology should be actively introduced to build a sharing platform, and a cooperation platform integrating vocational education and industrial development should be established to make it the connection point of university-enterprise cooperation and effectively integrate all parties of university-enterprise cooperation. Meanwhile, a board of directors with university-enterprise cooperation as the core members should be set up, and other vocational education resources within the development of enterprise operation vocational education should be integrated, so as to build a more powerful scientific and technological research and development platform, effectively improve the frequency of interaction between universities and enterprises, and promote the construction of long-term mechanism.

### **Actively expand the specific ways of operation cooperation and form diversified cooperation models**

In many developed countries, vocational education started much earlier. Strengthened by the strong support and assist from the government, more advanced experience has been accumulated in university-enterprise cooperation, and more diversified university-enterprise cooperation modes have been formed. In the development of university-enterprise cooperation in China, we should actively make use of the experience in advanced countries to explore more diversified ways and modes of cooperation, so as to make vocational education more closely related to the development of national industry. In order to improve the degree of integration between the two ways, dual-subject university running can be adopted to solve the key point that enterprises are unwilling to participate in university-enterprise cooperation. Industrial colleges can integrate the needs of industries, enterprises and universities to build industrial colleges in a better way, so that the needs of industries and enterprises can directly enter the curriculum of students. Universities and enterprises can jointly develop talent training programs and teaching plans, and closely connect the actual needs of enterprises with the curriculum of colleges and universities. In the process of personnel training, the actual standards of enterprise employment are used to design courses and teaching content according to their actual needs, and technical experts are hired to carry out professional training, to build a cooperation mechanism integrating production, learning and research, to promote the construction of training bases, and thus to form a more powerful practising teaching team and improve the quality of teaching. In the meantime, majors can be set up according to production, professional training

programs can be prepared jointly by universities and enterprises, and cooperation between universities and enterprises is adhered to, so as to carry out theoretical and practical training of universities and enterprises and realize order-type training. Universities and enterprises jointly build university-in-factories and carry out multi-level teaching, and enterprises and universities jointly establish factory-in-university, based on ideological and political guidance. Professional and skilled comprehensive personnel training and other specific implementation path to deepen the industry-education integration and university-enterprise cooperation.

## Conclusion

In a word, the key of the current research needs to focus on the design of the deepening mechanism of school-enterprise cooperation based on the feedback effect of multi-level subjects such as schools, enterprises and students. Only from the perspective of the full integration of the interests of the government, schools, enterprises and students can we systematically propose the implementation path of the integration of industry and education in undergraduate vocational education and the deep integration of school-enterprise cooperation. It's a very important way by which we can really think about the problem from the perspective of talent training, so as to promote the optimization and improvement of talent training programs.

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## Conflicts of Interest

There is no conflict of interest.

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