

# Research on the Mechanism of Enterprise College Construction in the context of Industry-Education Integration

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**Abstract:** Enterprise college has established a talent training mode to meet the needs of industry, which promotes the deepening of integration of industry and education. Aiming at the problems including weak policy-driven, single college-running efficiency, unclear power and responsibility of college and enterprise, and low cultural synergy, this paper explores the development path of establishing a college-enterprise cooperation integration and industry-education integration complex, and further improves the applicability and effectiveness of college-running of enterprise colleges, with a view to providing enlightenment and reference for proposing a college-enterprise cooperation model in the new era.

## 1. Introduction

In recent years, higher vocational education has made great progress. On the one hand, it has occupied half of China's higher education in scale. On the other hand, vocational education and industrial economy are more closely coordinated, and the integration of industry and education has enjoyed a considerable foundation: vocational education provides human resources, technical services and scientific research force for industrial economic development, and industrial economy provides the material basis, market demand and growth space for the development of vocational education. [1] The report of the Nineteenth National Congress of the Communist Party of China clearly points out that we should improve the system of vocational education and training, deepen the integration of industry and education and college-enterprise cooperation. In order to implement this requirement, the State Council issued "Several Opinions of the General Office of the State Council on Deepening the Integration of Industry and Education" (No. 95 issued by the State Office of Education, 2017), which further takes deepening the integration of industry and education as a strategic design and institutional arrangement for a powerful country in education.

As a typical resource-dependent organization, higher vocational colleges attach special importance to colleges and society, which determines the inevitable close combination of higher vocational education and modern industry. [2] The goal of the integration of industry and education is to realize the deep cooperation and mutual integration of industry system and education system. Industry development supports education development, and education development serves industry development. Elements of the two system synergize to form a new model of economic education. The final goal of all this is to achieve the deep integration of enterprises and colleges. Only when these two core elements achieve extensive and deep cooperation, can the full integration of industrial production and education, teaching and scientific research be realized. Therefore, how to internalize the deepening of integration of industry and education into specific college-running practice is the key to the connotative development of higher vocational colleges. This calls for not only the carrier, but also the establishment of mechanism. It is necessary to take the systematic thought as the guidance, so as to create a structure which can facilitate the integration of industry and education. [3] Enterprise college is guided by regional economic and enterprise development needs, driven by college-enterprise cooperation, aiming at personnel training, scientific research and social services through the integration of resources and factors, providing effective paths and important grasps for deepening the integration of industry and education in higher vocational

colleges in the new era. The relationship between the two is shown in the following table

Table 1 Integration of enterprise college and the integration of industry and education

<b>Integration of Industry and Education</b>
<b>Junction Point</b>
<b>College-enterprise cooperation</b>
<b>Area of support</b>
<b>Enterprise College</b>
<b>Industry trade enterprise college students</b>

## 2. Connotation of Enterprise College

Enterprise college in this paper refers to the college co-built by higher vocational college and enterprise with joint investment and share of return and risk. This college-running mode reflects the cross-border nature of higher vocational education. The main college-running bodies rely on their respective resources and advantages to form a cooperative platform integrating the practical functions of enterprise production and the teaching functions of college education. On the one hand, colleges should actively respond to the development of new economy and new format, base themselves on the production line and technological innovation of enterprises, and promote the transformation and upgrading of enterprises. For talent support and technical services. On the other hand, enterprises should actively participate in vocational education with project resources and industrial information, cooperate in training applied talents, and achieve cooperation in information sharing and internal management between colleges and enterprises, so as to complete the interaction and transformation of talents, technology and services. Through enterprise colleges, higher vocational colleges can obtain funds and information resources, and released the productive value of knowledge. Enterprises can obtain the support of human resources and economic benefits, and their own innovation ability has also achieved sustainable development.<sup>[4]</sup>

At present, vocational colleges all over the country have launched beneficial exploration of enterprise colleges, some of which are based on the joint running of regional industrial parks and leading enterprises, such as the enterprise college mode established by Zhongshan Polytechnic according to the local industrial layout of "one town, one product". Some enterprise colleges are based on vocational education group, such as Baiguo Garden College and Tianhong College, which are set up by Guangzhou Panyu Polytechnic relying on modern apprenticeship "Professional Shop Manager" established by Shop Manager Vocational Education Group. Some of them are based on the secondary college-enterprise and mixed ownership reform, such as Huafei Aviation College co-built by Wuxi Institute of Technology and aviation enterprise, which is an effective exploration of the reform of college-enterprise cooperation mechanism. Other vocational colleges and enterprises have established independent entity companies, such as Hunan Xiangshui Engineering Construction Consulting Service Co., Ltd. established by Hunan Technical College of Water Resources and Hydro Power, which can be regarded as an upgraded version of the enterprise-college. All the above modes of enterprise colleges provide practical models for effective exploration of the college-enterprise cooperation mechanism of the integration of industry and education in the new era.

## 3. The Realistic Dilemma of Enterprise College Construction

In recent years, the cooperation between higher vocational colleges and enterprises has become more and more close, and the cooperation mode has been constantly changing. Enterprise College, as a mode of college running, has produced good results in deepening the integration of industry and education. But there are also some problems in its construction and operation, which lead to its lack of vitality and guarantee of sustainable development.

### **3.1 Lack of policy drive and insufficient safeguard mechanism**

The key to running an enterprise college lies in deep cooperation between colleges and enterprises, and the impetus lies in government policies. In recent years, the state has promulgated a series of policies to promote the cooperation between industry and college in vocational education. In particular, the promulgation of "Several Opinions on Deepening the Integration of Industry and Education" by the State Council and "Measures for Promoting College-Enterprise Cooperation in Vocational Colleges" by the Ministry of Education and other six ministries reflects the systematic deployment of the government for the integration of industry and education and college-enterprise cooperation, providing important preconditions for the construction and development of enterprise colleges. However, besides with the planning of upper-level policies, the implementation of policies and the systematic synergy between policies and laws are even more crucial. College-enterprise cooperation, represented by enterprise colleges, involves the multi-stakeholder, namely government, college, trade and enterprise. It needs the collaborative support of multi-system departments of education industry, such as finance, taxation and human resource, and the supply and implementation of supporting policies at the regional government level. At present, the supporting policies and implementation rules binding on the rights and responsibilities of all parties in college-enterprise cooperation are not in place, and the integration of industry and education lacks quantifiable assessment criteria and requirements. What's more, there is no linkage among tax relief, financial support, talent introduction and other related laws and regulations betterment related to the introduction of enterprises into education, which will inevitably make the inefficient implementation of the policy.

### **3.2 The efficiency of running a college is single and the driving mechanism is not strong.**

If policy is the driving force of running an enterprise college, the cooperative benefit is the vitality of its sustainable development. At present, many enterprise colleges start from the joint training of technical and skilled personnel between colleges and enterprises, but often confine themselves in providing talent for enterprises or short-term cooperation to solve phased employment in enterprises. Enterprises' participation in running colleges is often limited to providing financial or equipment support for colleges, providing practice places for teachers and students and other surface cooperation. The single form of cooperation and the insufficient comprehensive benefit of running a college are the main dilemmas faced by enterprise colleges at present. The reasons are as follows: firstly, due to the restrictions of the college-running system and mechanism, enterprises lack the right to speak in the cooperative college-running, and their demands and resources investment can not be converted into the expected economic benefits. Thus, it is difficult to stimulate their intrinsic initiative to participate in the college-enterprise cooperation. Secondly, higher vocational colleges fail to serve industry with limited ability and level, effectively solve the problems of enterprises in key technical problems, employee training, efficiency improvement, etc., and obtain corresponding social benefits. Thus, the colleges have little confidence in college-enterprise cooperation. Enterprise colleges can not find a driving mechanism to satisfy the interests of both sides, and can not find a balance between the economic benefits pursued by enterprises and the social benefits pursued by colleges. Such cooperation between colleges and enterprises is doomed to be unsustainable.

### **3.3 The power and responsibility of college and enterprise are not clear, and the restraint mechanism is not in place.**

Rights and obligations are the core of legal relations, and correspondence between powers and responsibilities is the cornerstone of economic and social cooperation. Enterprise college is a systematic project involving the government, enterprises, colleges, students and other parties. If there is no corresponding system design to regulate the rights and obligations of all parties, it will often cause conflicts of interest among all parties in running colleges and hinder the process of cooperative colleges running. In reality, many enterprise colleges will sign cooperation framework agreements, joint college-running contracts or other college-enterprise cooperation documents as

internal management charters. However, these documents often list the forms and contents of cooperation in a general way, and just simply stipulate the daily operation and management mechanism of the organization. There is lack of specific provisions on the relationship among multi parties and their rights and obligations, clear agreements on the key issues including rights and interest distribution, responsibility assuming and dispute handling of the college-enterprise. There is also a lack of detailed measures to deal with the conflict and protection of rights and interests between enterprises and students and combine the training offered by college and enterprise. This kind of contract documents lacking overall design and management norm can neither coordinate the relations among all parties nor restrain their rights and responsibilities. As a result, when problems arise in the cooperation between colleges and enterprises, there is no provisions can be taken for reference, and the cooperation documents become mere formalities.

### **3.4 The degree of cultural synergy is not high and the mechanism of mutual accommodation is of no use.**

Talents training in enterprise colleges aims to educate people with not only knowledge and skills, but also with culture, which depends on the degree of docking and collaboration between college culture and enterprise culture. In reality, most enterprise colleges focus on the frontier technology and production technology of enterprises, pay attention to the joint cultivation of students' technical skills, but ignore the cultivation of craftsman spirit, sense of responsibility, lean production and other professional qualities. College education culture and enterprise benefit culture can not be integrated organically, and the effect of cultivation is greatly reduced. Talents trained can hardly meet the requirements of the market and enterprises. In addition, the difference between college culture and enterprise culture is also reflected in such aspects as behavioral norms, value orientation, cultural environment and decision-making methods. [5] Without the system design of cultural docking, enterprise colleges can not establish an inclusive mechanism of mutual accommodation. Because of cultural differences, managers of both sides inevitably have disagreements and disputes in daily management and decision-making, which have great impact on the operational effectiveness of enterprise colleges.

## **4. Basic Path of Enterprise College Construction**

The problems encountered in the construction of enterprise colleges are also the problems that restrict the further cooperation between colleges and enterprises and the integration of industry and education in vocational colleges. This paper explores the construction path of enterprise college and the deeper integration of enterprise and industry in system, mechanism and culture, in order to release more cooperation dividends.

### **4.1 Strengthen the guarantee of legal system**

College-enterprise cooperation and the integration of industry and education have been widely implemented in vocational colleges as a mode of personnel training. To break through the current problems of enterprise college, including shallow level of cooperation, loose cooperation and low level of cooperation, the enthusiasm of the college and the sense of responsibility of the enterprise are far from enough. There is still a demand of national law and policy coordination system. The government should upgrade the common development of education and industry, turn industry-education integration and college-enterprise cooperation into the overall system design of national education reform and talent development and ensure the implementation of relevant supporting legal guarantee system. [6] Firstly, it is necessary to start the legislative work while introducing enterprises into education. Policy is not law and can not restrict and protect the rights and obligations of all parties. College-enterprise cooperation involves different circles, and education policy can not divide the powers and responsibilities of industry enterprises and other government departments. Only by raising the policies proposed in "Several Opinions on Deepening the Integration of Industry and Education" and "Measures for Promoting College-Enterprise Cooperation in Vocational Colleges" to the legal level, clarifying the rights, responsibilities and

interests in college-enterprise cooperation in running colleges, guaranteeing the rights and interests of enterprises to participate in running colleges with capital, technology and management, and taking a good advantage of the relevant laws and regulations including the Finance and Taxation Law, the Labor Law and the Employ Law, can the implementation of policy be guaranteed. Secondly, the state should make greater efforts in policy design and management settings. The core is to break through the interest barriers among the original departments and policies, eliminate the obstacles of institutional mechanisms in the integration of industry and education, and strengthen the impetus for industry to integrate into talent training. [7] Thirdly, the local governments and competent departments should promulgate supporting management measures and regulations, refine the national policies and systems, and formulate promotion measures in the light of regional economic development and vocational education level. For example, in September 2018, Guangdong Province promulgated the "Opinions on the Implementation of Deepening the Integration of Industry and Education from the General Office of the Guangdong Provincial People's Government", which specifies in detail the policy support of local governments, measures to give full play to the role of enterprises as the main body in running colleges, and specific measures for college education and teaching reform. It also favors the implementation of "Several Opinions on Deepening the Integration of Industry and Education" issued by the State Council.

#### **4.2 Promoting the Comprehensive Benefit of Enterprise College**

Under the mode of enterprise college, colleges and enterprises are independent stakeholders. Resource sharing is only a form of cooperation, while benefit sharing is the core driving force of cooperation. [8] Therefore, facing up to the interests demands from college and the enterprise, aiming at mutual benefit and win-win situation and constantly improving the efficiency of running the college are the cornerstone of the sustainable development of the enterprise college. Firstly, it is supposed to find common interests of colleges and enterprises. Enterprise colleges should establish a docking platform to communicate the needs of colleges and enterprises, fully demonstrate the expected benefits of cooperation, find the combination and balance points of the economic benefits pursued by enterprises and the social benefits pursued by colleges, so that both sides can form a community of interests and maximize their respective interests. Secondly, it is supposed to remove barriers in the process of integration. Enterprises and colleges have their own systems. For example, traditional colleges only accept those with certain teacher certifications and titles, which keep many excellent enterprise teachers out of the door. On the basis of weighing the heterogeneity of college-enterprise system, enterprise colleges should break down the barriers of mechanism, establish the organizational system allowing joint decision-making and management of college and enterprise, construct the presidential responsibility system under the leadership of the board of directors, and directly express the needs of industry and enterprises through the design of the system in college-running practice, so as to effectively improve the pertinence of personnel training. Finally, it is supposed to revitalize resources and improve the efficiency of college running. Enterprise College has the main advantage of collecting college and enterprise resources. To improve the efficiency of college running, the key lies in revitalizing the existing human and financial resources and realizing the docking of educational technology value and industrial value. First, it is necessary to continue to provide talent support for industrial development and improve the quality and applicability of talent training through the combination of colleges and enterprises. Second, college and enterprise should conduct cooperation in technical aspects to implement scientific research and project cooperation. Thirdly, teachers should be shared to carry out the project of introducing enterprises into colleges and re-education of enterprise employees. It is supposed to promote the sustainable development of enterprise colleges through comprehensive college-running benefits by expanding cooperation projects and deepening cooperation content.

#### **4.3 Standardizing the management of college-enterprise cooperation documents**

Enterprise college is a mechanism innovation that combines modern enterprises with vocational education. It needs necessary legal and policy support from the outside and corresponding system design from the inside to guarantee the cooperation between colleges and enterprises, so as to

realize the efficient and standardized operation of the organization. As an important college-running document, the cooperation agreement is the main basis for implementing the daily operation and management of enterprise colleges. Once confirmed by the college-running bodies, it will have legal effect. It must be standardized and operable. Firstly, the spirit of contract should run through the cooperation documents. Equality, mutual benefit and equivalence of power and responsibility are the core of college-enterprise contractual relationship and the cornerstone of cooperation documents formulation. The implementation of the spirit of contract is to implement the idea of running a college with two main bodies, to clarify the autonomous status of each main body in the mechanism and management, to endow it with its due rights and responsibilities, and to become an important guarantee for coordinating the relations and rights of all parties. Secondly, on the basis of reasonably defining the content and form of college-enterprise cooperation, the contract should clarify the rights, obligations and responsibilities of both sides, stipulate the mechanism of interest coordination and dispute settlement, and refine it into operable clauses, which can serve as the management charter and operation basis within the enterprise college. Finally, the cooperative text management should be standardized. As a legal document of enterprise colleges, cooperation document is binding on all parties, which requires that the formulation, signature and implementation of the text must be scientific, normative and legal, so that it has real legal effect and become an important guarantee for the realization of the interests of both sides and risk aversion. Educational authorities should also assume corresponding supervisory responsibilities, introduce corresponding systems and measures to strengthen the examination, approval and filing of college-enterprise cooperation documents, and regularly supervise their implementation. Of course, the operation of enterprise colleges can not rely solely on a cooperative document. Enterprise college should improve the rules and regulations on the basis of the agreement. For example, vocational colleges should formulate corresponding regulations on teaching management, student practice management and teachers' practice guidance to achieve orderly college-enterprise cooperation. Enterprises should establish measures for enterprise teachers' teaching quality assessment, regulations on guaranteeing interns' salaries and rights and other documents to implement the corresponding education responsibility. [9]

#### **4.4 Promoting integration between college culture and enterprise culture**

Industry-education integration and college-enterprise cooperation have different levels. Primary cooperation is material reciprocity. Intermediate cooperation is mechanism interaction, and senior cooperation is cultural infiltration. [10] Only by realizing cultural integration and cultural education, can college-enterprise cooperation truly achieve integration. Enterprise colleges should effectively promote the integration of college culture and enterprise culture. Firstly, they should promote cultural identity. Cultural identity is the fundamental way to avoid and solve cultural conflicts. College culture and corporate culture are of positive value and indispensable to the cultivation of students' humanistic and professional qualities. Enterprise colleges should embody the dual-subject characteristics of culture, realize the multi-combination of the two cultures in the aspects of environment construction, cultivation concept, cooperation mode, daily management and so on, and constantly strengthen the mutual trust and communication between college culture and enterprise cultures. The second is to establish a support system for cultural integration. Cultural identity does not necessarily bring about cultural integration. It is necessary to support the combination of college culture and enterprise culture in system design. Enterprise colleges should set up a culture cultivation mechanism, embody the co-cultivation of college culture and enterprise culture directly in the talent cultivation program, and graft the docking points of college culture and enterprise culture, such as humanistic connotation, innovative consciousness, craftsmanship spirit and benefit value, into students' learning practice, so as to truly cultivate a group of high-quality talents with technical skills and professional ethics. In addition, a communication and consultation mechanism should be established within the enterprise college to clarify the voice of the staff of both sides in daily decision-making and management, break through the contradiction in value orientation, communication and decision-making and management action and construct the system culture and

behavior culture with the characteristics of the enterprise college, so as to improve the efficiency of common management.

Enterprise College has established a talent training mode of vocational education to meet the needs of industry, which promotes the deepening of integration of industry and education. The degree of integration of college-enterprise cooperation determines the path of sustainable development. Enterprise colleges can release the social benefits of college-enterprise cooperation in the new era only on the basis of the integration of industry and education, the correspondence between rights and interests, responsibility sharing and cultural integration.

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