

# Construction of Innovation and Entrepreneurship Education Ecosystem in Colleges and Universities Based on Multi-cooperation of Government, Schools, Industries and Enterprises

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**Abstract.** Through the multi-cooperation of government, schools, industries and enterprises, we can integrate all kinds of resources, set up a platform for students to start a business, have colleges and universities to help higher vocational students expand their entrepreneurial thinking, understand the latest development trends of colleges and universities in the industry and contact with the real projects of enterprises. Based on the author's study and practical experience, this paper first analyzed the significance of the multi-cooperation of government, schools, industries and enterprises, and then discussed the role orientation of the main elements in the system. Finally, this paper put forward how to construct the ecological system of innovation and entrepreneurship education in colleges and universities based on the multi-cooperation of government, schools, industries and enterprises.

## Introduction

In 1971, Haken, German scholar, put forward the concept of multi-cooperation theory for the first time [1]. The result is to produce the synergistic effect of " $1+1>2$ ". In the context of higher education in China, the multi-cooperation of government, schools, industries and enterprises means that the main interests should aim at win-win results, and set up an integrated cooperation platform through the innovation of the system and mechanism. In order to realize that the overall function is greater than the sum of some functions, the interest community of mutual deep cross-fusion is formed, so as to play the most effective role in the cultivation of high-quality skilled talents [2].

## The Significance of the Multi-cooperation of Government, Schools, Industries and Enterprises

The multi-cooperation of government, schools, industries and enterprises is the requirement of the times to effectively promote the ability of education in colleges and universities. At present, the higher education in China has developed from scale expansion to the key stage of connotation promotion. Through the multi-cooperation of government, schools, industries and enterprises, colleges and universities can give full play to their overall advantages and improve their performance, which is the requirement for colleges and universities to improve their ability to educate people in the new era. The multi-cooperation of government, schools, industries and enterprises is the concrete practice of deepening the reform and innovating the system and mechanism of colleges and universities in China. We should integrate the resources of government, schools, industries and enterprises to fully mobilize the initiative and enthusiasm in school-enterprise cooperation, give full play to their respective advantages [3]. The multi-cooperation is a useful attempt to cultivate innovative, high-skilled and entrepreneurial talents. China's higher education is often criticized for its lack of innovative thinking and ability. Therefore, how to improve the innovation of college students has become the key to improve the quality of higher education and enhance the core competitiveness of higher education.

## **The Role Orientation of the Main Elements in the Multi-cooperation**

**The role orientation of government.** With the maturity of the market economy system, how to maximize the effectiveness of collaborative education and maximize the interests of each subject are keys to build the Multi-cooperation. In the process of cooperative education, the government undertakes the responsibilities of the coordinator of interests, the promoter of cooperation and the supervisor of the whole implementation phase [4]. In order to carry out Multi-cooperation smoothly, the government's support and assistance is essential. Among these four subjects, the main responsibility of colleges and universities is to train high-quality, high-skilled talents for the country and society, and industries and enterprises are for the sake of certain interests. The main responsibility of the government is to effectively coordinate the differences between universities and enterprises in the education of people and do a good job of organizing and coordinating. Many colleges and universities are backward in thinking, and they are unwilling to cooperate with the related enterprises in personnel training, and some enterprises are also unwilling to cooperate with the colleges and universities. At this time, the local government should play its effectiveness to coordinate the relationship between the two, and urge schools and enterprises to perform their duties [5].

**The role orientation of Schools.** In the concept of collaborative education, the importance of colleges and universities can not be ignored, because college students have not yet gone into the society, the ability to deal with things is still lacking. Therefore, colleges and universities should shoulder the sacred mission, appoint special leadership groups to the enterprise to understand the relevant needs, work with the enterprises to formulate a talent training plan, and incorporate the post needs and relevant standards in the enterprise into the establishment of the curriculum system of colleges and universities. Work with enterprises to complete teaching tasks and practical training for graduates [6]. In addition, colleges and universities should make appropriate adjustments to the school-running ideas, professional settings and teaching contents according to the changes in the needs of the enterprises, so as to make full use of the teaching resources and the strength of teachers in colleges and universities.

**The role orientation of industries.** Industries know the most about the actual development of the industry and the needs of the industry, so, in the cultivation of talent they are the guide. Therefore, trade associations should actively assist the government departments to guide the change of the current economic development law and the work of social demand. With the help of the media such as the network, they can release the information of the current social shortage industry and talent demand regularly, which can provide some help for the cultivation of talents in colleges and universities. In addition, the industries can also directly participate in the formulation of talent training plans and the setting up of colleges and universities' majors to guide colleges and universities to carry out effective teaching activities in accordance with the current social development situation. Combined with the needs of the society in the establishment of majors and the development of the practical activities, the talents can really have the ability to innovate and start a business.

**The role orientation of enterprises.** Enterprises are also an indispensable role in developing collaborative education. Enterprises can participate in curriculum development with colleges and universities by providing trainee positions for college students. It is also possible to send backbone staff to colleges and universities to provide professional guidance for students, and to inject new blood into the cultivation of talents in colleges and universities [7].

## **Strategies to Construct the Ecological System of Innovation and Entrepreneurship Education in Colleges and Universities Based on the Multi-cooperation of Government, Schools, Industries and Enterprises**

**Enhance integrated curriculum learning context.** Because of the restriction of all kinds of factors, one of the difficult problems faced by higher education in China is the lack of real-world practice in students' practical training, and it can be solved effectively by adopting the multi-cooperation of

government, schools, industries and enterprises. The main duty of colleges and universities is to explain the theoretical knowledge to the students. After the students have a certain understanding of the knowledge they have learned, the universities can contact the enterprises which are in line with the students' major and organize the students to carry out practical exercises in the enterprises. In this way, the students' knowledge can be consolidated in time.

**Construct effective communication and coordination mechanism.** According to the related content of Synergetics, each component of the system should cooperate with each other and perform its duties to give full play to the greatest advantage of the overall effect. Colleges and universities should carry out effective teaching in curriculum setup and major selection according to the actual needs of enterprises [8]. Colleges and universities should also do a good job of communication and coordination with the government, and agree with the requirements of enterprises in carrying out teaching work. Government departments should also give full play to its role, draw up a plan for the training and implementation of collaborative training of skilled innovative entrepreneurial talents, pay attention to the communication and exchange of information among various departments, and set up a platform for cooperation and docking between schools, industries and enterprises.

**Carry out the system of "double Division".** According to the actual requirements of post setting and related personnel system reform policies, the training of full-time teachers as well as the requirements of part-time teachers should be included in the management of post setting. Colleges and universities can divide teacher posts into two categories: one is a permanent post and the other is a non-permanent post. The teaching posts are mainly undertaken by the full-time teachers and part-time teachers in the cooperative enterprises, and the experienced skilled talents in the enterprises can be selected and employed according to the professional characteristics. In general, full-time teachers implement the system of "one division and two posts". Each full-time teacher shall undertake the teaching workload prescribed by the school within the academic year, and the rest shall be completed in the enterprise that cooperates with the school. Enterprise post work mainly refers to the training of professional skills for employees, participation in the research work of enterprise projects and the organization of college students to carry out practical exercises in the enterprise and so on [9].

**Strengthen government support.** In the process of cooperative education, the government should take the lead in the traction work, increase the investment, and seek effective mechanism and system construction. Both equipment, site input, or financial support should be stepped up to ensure that the work is carried out smoothly. In the process of cooperation with enterprises, colleges and universities should provide a certain service space for enterprises according to the actual situation of the school, carry out the mode of school-enterprise cooperation and development, so as to train more skilled innovative entrepreneurial talents. In particular, they can be strengthened in the following areas: the first is to adopt the mode of site support and space ownership to strengthen cooperation, the second is to adopt the mode of equipment use right to share, and the third is to develop the mode of building teaching staff to cooperate. With the improvement and innovation of the original supporting facilities, the multi-party introduction of funds will strengthen the construction of the procurement and teaching environment of relevant equipment in the school, and use the high-standard facilities to attract the relevant enterprises to settle in the campus and build the practical training base [10]. In addition, the human resources department of the cooperative enterprise should also set up the student training management department according to the situation, and should have the professional management personnel to carry on the management. In order to make the management work more effective, colleges and universities should train managers regularly, strengthen their sense of service, enhance their professional skills, and do a good job in the management of students' practical training.

## Summary

The entrepreneurship education ecosystem includes all the relevant factors, including macroeconomic, cultural, social and political factors, which affect the choice of entrepreneurial

activities. Therefore, only through multi-cooperation of government, schools, industries and enterprises, and the integration of culture, policy, financial resources, human capital, market and support services, can we better stimulate the entrepreneurial enthusiasm of college students. Also, only by forming a close multi-cooperation of government, schools, industries and enterprises and forming a scientific cooperative mechanism, can we truly realize the maximum effectiveness of the entrepreneurial ecosystem.

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