

# A Preliminary Study on the School-enterprise Collaborative Innovation Model for the Cultivation of Applied Talents in Mechanics

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**Abstract:** In the new era, as an educator, it is necessary to update the educational concept in time, be guided by market demand, and strengthen cooperation with enterprises to strengthen practical teaching so that students can better meet the needs of enterprises. Therefore, this article is mainly based on this background, first analyzes the problems existing in school-enterprise cooperation, and then explores the school-enterprise cooperative education innovation mode under the electromechanical professional application-oriented talent training mode.

**Keywords:** Mechanical and Electrical; School-enterprise Cooperation; Collaborative Education; Innovation Model

In the new era, colleges and universities undertake the important task of cultivating applied talents, among which school-enterprise cooperation can well solve the problem of the lack of applied talents in society. From this perspective, school-enterprise cooperation and collaborative education are very necessary. Electromechanical teaching has more distinct operability and social application characteristics<sup>[1]</sup>. The rapid development of the economy requires the effective support of talents and advanced technology, and the mechanical and electrical profession has gradually become the development focus of universities in various regions. However, current college graduates majoring in mechanical and electrical engineering only have theoretical knowledge and lack practical ability after graduation, which is an important reason why graduates cannot meet the requirements of enterprises<sup>[2]</sup>. As students are the leaders of the future of society, strengthening practical education from students is the main way to promote technological innovation. Therefore, the participation of enterprises in college education is the key to cultivating more applied talents. It can not only realize the reasonable allocation of resources, but also meet the needs of schools and enterprises. From the perspective of universities, school-enterprise cooperation provides opportunities for teachers to improve their practical ability, so that teachers have the opportunity to become dual-qualified teachers, thereby solving the problem of lack of practical teaching in classroom teaching. Moreover, school-enterprise cooperation can enable students to meet the industry's demand for talents, thereby improving the quality of college education<sup>[3]</sup>. From the perspective of enterprises, school-enterprise cooperation education can save the cost of personnel training for enterprises, and can also grasp the progress and achievements of scientific research of universities in the first time, thereby accelerating the speed of industrial transformation of results and enhancing the overall creativity of enterprises.

## 1. Problems of school-enterprise cooperation and collaborative education based on applied talents

### 1.1 The effectiveness of education

The current market economic system is constantly changing and the socio-economic structure is constantly being upgraded. This indicates that the society has an increasing demand for high-quality and professional application-oriented

talents. Only by focusing on the training of application-oriented talents can we serve the society. Provide guarantee for sustainable economic development. If local colleges and universities follow the traditional education concepts and goals, it will not only make it difficult for graduates to meet market demands, but also hinder the development of the local economy. The current university-enterprise cooperation is only on the surface, and there is no real reasonable allocation of resources. For example, the main form of schools is to hire technical experts from enterprises to give lectures, and enterprises provide training opportunities for school students. This lack of in-depth cooperation there is no real use of the role of school-enterprise cooperation, so collaborative education is even more impossible to talk about.

### **1.2 The teaching system has defects**

At present, most colleges and universities are in charge of teaching work by teachers<sup>[4]</sup>, and the technical staff of enterprises gives lectures from time to time, mainly focusing on theoretical teaching, ignoring practical teaching. Only by establishing a system of practical teaching by enterprise experts can it be true Realize the combination of theory and practice teaching, thereby constructing a perfect teaching system, enabling students to master professional skills, possess professional qualities and abilities, and become applied talents.

### **1.3 School-enterprise cooperation and collaborative education model is not sound**

With the continuous implementation of policies, schools and enterprises pay more and more attention to school-enterprise cooperation, but at present, school-enterprise cooperation lacks a sound management mechanism and operating system, and imperfect policies lead to short school-enterprise cooperation strong utilitarianism, coupled with the simplification of the form of cooperation, has resulted in school-enterprise cooperation that has not yet established a feasible system and mode.

## **2. School-enterprise cooperation collaborative education innovation method for the cultivation of applied talents in mechanical and electrical major**

### **2.1 Build an innovative mechanism for school-enterprise collaborative education**

Schools and enterprises should coordinate to establish an internal management system, enhance the depth of school-enterprise cooperation through a variety of forms of cooperation, build a teaching mechanism that promotes the overall development of students, and thereby improve the effectiveness of school-enterprise cooperation in mechanical and electrical majors. On the one hand, we can start with the system and improve relevant documents to regulate the behavior of school-enterprise cooperation and the responsibilities of both parties. On the other hand, schools and enterprises should formulate a feasible income distribution system to break the worries of enterprises, enable more enterprises to participate in the school-enterprise cooperation of mechanical and electrical major, and mobilize enterprises to participate in the construction of training bases and courses. The enthusiasm for development further achieves the goal of cultivating outstanding application-oriented talents. Cultivating applied talents should be combined with the actual production of the enterprise and construct a unique teaching system based on tasks. At the same time, companies and schools can participate in the development of teaching materials for electromechanical disciplines and curriculum standards to fundamentally improve the quality of talent training and provide guarantee for the cultivation of applied talents. In addition, companies can incorporate corporate culture and post specific instructions into the electromechanical professional teaching according to their needs, so that students can improve their professional qualities while learning knowledge. And companies can also use actual projects as cases to compile textbooks or use them as important resources for classroom teaching to realize the corporateization of teaching models and professionalization of the teaching environment, thereby promoting the reform process of electromechanical education and making talent training more targeted.

### **2.2 Strengthen the construction of the electromechanical specialty through the school-enterprise collaboration mechanism**

Enterprises can cooperate with schools to set up a construction team headed by experts from the perspectives of school goals, education goals, employment, etc., responsible for teaching work as part-time teachers in accordance with the development trend of the electromechanical industry and job requirements, and achieve school-enterprise integration. This model can be Realize the docking of majors and job requirements, and further accelerate the process of building electromechanical majors. For example, schools and enterprises can jointly enroll students, comprehensively consider their needs and formulate electromechanical talent training plans, and at the same time form a teaching team to conduct targeted education to students, so that students can become applied talents required by enterprises. Moreover, schools and companies

can jointly establish off-campus training bases to provide students with opportunities to practice, and create distinctive professions and effective teaching models.

### **2.3 Training the practical ability of electromechanical students through school-enterprise cooperation**

In school-enterprise cooperation, enterprise experts and school teachers jointly participate in the formulation of talent training goals and training plans, and integrate the relevant knowledge and skills of the enterprise in talent training according to the needs of the society, and build a distinctive curriculum system. Moreover, the school hires outstanding managers and professional technicians in the enterprise to participate in teaching, to guide students' practice and graduation design, so as to improve students' application ability of electromechanical professional knowledge, help students realize their own shortcomings, and encourage students to be targeted. It is also an important way to realize the connection between school education and social needs. It can increase the social recognition of applied talents, so that they can better contribute to and serve the society after graduation.

### **2.4 Improve the construction path of dual-qualified teachers**

The professional qualities and abilities of teachers in the electromechanical profession directly determine the quality of the training of applied talents in the electromechanical profession, and the applied talents in the electromechanical profession should first have the practical ability, so as the guide, they must have the theoretical knowledge and higher skill level of the electromechanical profession. Only in this way can we ensure the effectiveness of classroom teaching and enable students to meet the requirements of applied talents. At the same time, the practice of mechanical and electrical teachers is also a learning process. They can continue to broaden their horizons and improve teaching goals and teaching content based on practice, making classroom teaching more convincing, and students can also better understand the mechanical and electrical major based on practical experience knowledge, so the mechanical and electrical professional teachers can improve the overall level of enterprise practice, and then fundamentally optimize the teaching effect. In order to make the practice more effective, companies can require teachers to sign a target task book, and perform assessments in accordance with the set goals in practice, so as to arouse the enthusiasm of teachers. Human resources are the core competitiveness of an enterprise, as well as its productivity. If an enterprise wants to gain a foothold in a fiercely competitive environment, it must pay attention to the training of its employees. The electromechanical professional teachers can provide special training to the employees in the course of enterprise practice. Training to improve the comprehensive quality and level of employees, thereby building a harmonious working environment, so that teachers and employees can learn from each other and grow together, which is also an important way to enhance corporate cohesion.

## **3. Conclusion**

School-enterprise cooperation and collaborative education of mechanical and electrical majors can not only promote the process of cultivating applied talents and improve the quality of talent training, but also for enterprises can obtain technical services and improve corporate efficiency. Therefore, school-enterprise cooperation can achieve a win-win situation and deepen school-enterprise cooperation. Cooperation has become an important way to cultivate applied talents. For example, it is possible to achieve school-enterprise cooperation and education by improving the mechanism and teaching system of mechanical and electrical school-enterprise cooperative education, strengthening professional construction, and strengthening the construction of dual-teacher teams.

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