

# Research on Personnel Training Model of Internet of Things Applied Technology Speciality

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**Abstract.** At present, the global information technology is in a period of rapid development, and all sectors of society are also in urgent need of Internet of Things professionals. In addition, the society has also put forward higher professional requirements and standards for employees in the Internet of Things industry. Therefore, higher vocational colleges have also formulated a more stringent training mode for bored applied technology professionals in order to cultivate more excellent applied technology professionals of the Internet of Things, and constructed a training mode for applied technology professionals of the Internet of Things based on school-enterprise cooperation mode. This thesis first discusses the current social standards and requirements for the talents of Internet of Things application technology, and deeply analyses the training mode of the talents of Internet of Things application technology specialty in school-enterprise cooperation, so as to study the existing problems at the current stage, and then puts forward relevant solutions and countermeasures, hoping to be able to provide the talents of Internet of Things application technology in higher vocational colleges with contemporary school-enterprise cooperation. Training mode provides some reference.

**Keywords:** Internet of things applied technology specialty, talent training model, countermeasures and measures.

## 1. Introduction

Internet of Things technology is mainly composed of two parts, one is hardware technology, the other is software technology. The former includes many technologies, such as radio frequency identification technology, nanotechnology and so on, while the latter also includes many technologies, such as information processing technology, security technology. There are also many technologies covered by the Internet of Things, which are mainly composed of three core modules: sensing data acquisition module, data import and transmission module and network information processing module. Sensor data acquisition module refers to the use of a variety of technologies to obtain object information, such as radio frequency identification technology, two-dimensional code technology. Data import and transmission module refers to the integration of various communication networks and the Internet, and the acquisition module acquired information is transmitted accurately and quickly. In addition, the network communication processing module refers to the use of various intelligent computing technologies, such as cloud computing, optimization algorithms, etc., to intelligently process large amounts of data and information, and intelligently control objects. The knowledge system corresponding to these three important modules is very large and complex, and there are many disciplines involved, such as computer science and technology, high frequency microwave and so on. It covers a variety of specialties, such as computer, automation, communication and so on.

Since 2012, the development of the Internet of Things in China is at a rapid stage. It can be predicted that in the next few decades, professionals of Internet of Things technology will be needed in all fields of society. Moreover, most of these jobs related to Internet of Things technology require talents to possess various abilities, such as operating vehicle management ability. At the same time, due to the rapid development of the Internet of Things industry in China, various Internet of Things industries have emerged, such as smart grid, smart home and so on. These industries also need a large number of Internet of Things professionals, and even these places can directly provide jobs for the graduates of the Internet of Things in higher vocational colleges. Therefore, this is for the graduates

of the Internet of Things major in Higher Vocational colleges. For students, it is a very excellent development opportunity.

## **2. The Construction of School-Enterprise Cooperation and Co-Modeling Model**

For the Internet of Things industry, the training mode of talents in the Internet of Things plays an important role in its development, not only can it play a supporting role, but also can play a leading role. However, the Internet of Things industry puts forward high standards for professionals and experience. Therefore, despite the great demand for Internet of Things talents, there are still few qualified talents. In order to make up for the shortage of talents generated by the rapid development of the Internet of Things industry, we need to constantly cultivate some compound talents. These talents not only need to possess high-level Internet of Things technology, but also have strong innovation ability, so as to meet the needs of the current development of Internet of Things application technology. In addition, it is necessary to further deepen the cooperation between schools and enterprises, fully exert their respective advantages, and speed up the cultivation of talents in the Internet of Things, so as to realize the win-win situation between schools and enterprises as soon as possible.

### **2.1 Joint Formulation of Personnel Training Programs**

At present, the field of Internet of Things application involves a lot of knowledge and requires a lot of technology. Therefore, when offering major courses of Internet of Things in higher vocational colleges, schools should pay attention to the organic combination of local characteristics and local specific economic conditions, so as to truly realize the talent training mode of school-enterprise cooperation. At the same time, schools should regularly contact relevant enterprises, and deeply understand the current demand trends of enterprises, and carry out local Internet of Things talent demand survey and research, so as to make decisions with enterprises, and select qualified positions for Higher Vocational students, so as to formulate a scientific and suitable training program for Internet of Things application technology professionals in accordance with the current position requirements of enterprises.

### **2.2 Joint Participation in the Training Process**

According to the training mode of school-enterprise cooperation, we need to make clear the specific arrangement and progress of teaching. Moreover, according to the training mode of school-enterprise cooperation, theoretical courses should be explained by full-time teachers. In addition, schools and enterprises should explore the teaching part together, and enterprises also need to provide students with internship opportunities, inspect students' learning and skills, and promise schools that graduates will be given priority to enterprises in choosing jobs.

### **2.3 The Co-construction of Laboratories between Schools and Enterprises**

In order to truly integrate the high-quality resources of schools and enterprises, optimize and adjust the allocation of teaching resources, it is necessary to establish practical bases for off-campus enterprises and build public research rooms of technology. In addition, the construction of the Internet of Things experimental training room by schools and enterprises can not only meet the needs of professional teaching, but also highlight the school's own characteristics and industry advantages. At the same time, Internet of Things enterprises should also put part of the experience equipment in schools, so that teachers and students can operate the related equipment directly in schools, so as to enhance their professional ability. This has two advantages. On the one hand, enterprises do not need to make room for these devices, and schools can save the cost of purchasing them. At the same time, school-enterprise cooperation in the construction of experimental training room, can also allow consumers to visit the school, and let consumers understand the strength of the enterprise, so as to gain more consumer trust.

## **2.4 The Co-construction of Teachers**

Higher vocational colleges should regularly organize teachers to participate in the training of Internet of Things, so as to improve teachers' practical and innovative abilities, and strive to cultivate a team of teachers with the quality of research engineers. Higher vocational colleges can not only arrange teachers to practice and research in Internet of Things enterprises, but also invite managers and professional technicians of Internet of Things enterprises to serve as special teachers or internship instructors in Higher Vocational colleges. The former can enable teachers to gain more practical experience, so as to provide students with more work experience and methods. The latter can improve the level of professional construction and personnel training in Higher Vocational colleges, promote the development of Internet of Things in schools, and improve the overall level of future employees in enterprises.

## **2.5 Jointly Establish Scientific Research and Innovation Team**

Schools and enterprises need to jointly build scientific research and innovation teams, and select excellent teachers and enterprises to carry out technical exchanges and academic research, so as to formulate a scientific and rational personnel training program. In addition, both schools and enterprises should give full play to the advantages of one word, so as to carry out cooperative activities, and together apply to the government for funds for scientific and technological research.

## **2.6 Joint Implementation of Enterprise Projects**

At present, the Internet of Things industry is in a period of rapid development, but there are also a series of problems, such as the shortage of human resources in Internet of Things enterprises, the emergence of Internet of Things applications in various fields, which leads to the urgent need for more high-quality talents in Internet of Things project. At the same time, higher vocational colleges can choose some excellent teachers and students as representatives, to practice in the relevant Internet of Things enterprises, so as to experience the real enterprise workflow, so as to more targeted and purposeful teaching and learning. In addition, it can also help enterprises to find suitable professionals, thus improving the employment rate of Higher Vocational colleges, which has a beneficial role for enterprises, schools and students.

# **3. Problems in the Training of Personnel Majoring in Internet of Things Applied Technology**

## **3.1 Practicality to be Improved**

There are also some problems in the process of training talents of Internet of Things application technology in Higher Vocational Colleges with school-enterprise cooperation. For example, many enterprises have formed their own workflow because of the late start of the school-enterprise Cooperative Talent Training model. Therefore, many enterprises are unwilling to participate in the process of talent training in Higher Vocational colleges, and have no time and energy to invest in the process of talent training in Higher Vocational colleges. In addition, because of the low level of Higher Vocational colleges, many courses have not met the requirements of the times, and the poor ability of basic services of enterprises, it is difficult to truly achieve a win-win situation between schools and enterprises.

## **3.2 Persistence to be Strengthened**

At present, because the relevant system of school-enterprise cooperation training for talents of Internet of Things application technology in higher vocational colleges is still not promulgated, and there are many non-institutional factors in the process of building the school-enterprise cooperation system, the cooperation relationship between the two sides is very weak, and it is difficult to withstand the severe impact of the market economy. In other words, both sides have a great probability of dissolving the cooperative relationship at any time because they are unwilling to bear too much cost,

which will undoubtedly cause great losses to the other side. Therefore, under the current conditions, the talent training mode can hardly go smoothly.

### **3.3 Deepness to be Strengthened**

Despite the fact that the current mode of school-enterprise cooperation training for talents majoring in Internet of Things application technology in Higher Vocational Colleges in China has been carried out for some time and some successful experiences have been gained, the theoretical research on the mode of school-enterprise cooperation training has not been updated, and the management system, motivation mechanism and teaching reform of school-enterprise cooperation have not been optimized and innovated.

## **4. The Countermeasure and Measures in the Training of Personnel Majoring in Internet of Things Applied Technology**

### **4.1 Establishing the Guarantee Mechanism of School-Enterprise Cooperation**

Enterprises are the main part of school-enterprise cooperation. At the same time, whether higher vocational colleges and enterprises can maintain long-term cooperative relations and whether the cooperation between them can achieve the desired results are closely related to the various safeguard mechanisms they have established in the process of cooperation. In addition, how to establish the legal guarantee mechanism, incentive-oriented mechanism and scientific evaluation mechanism of school-enterprise cooperation is an important problem to be solved urgently in the process of school-enterprise cooperation. Moreover, the establishment of a legal safeguard mechanism can ensure that both parties cooperate in accordance with the law, and can also ensure that both sides effectively fulfill their responsibilities and obligations under the restraint of the law; establishing incentive-oriented mechanism can fully display the enthusiasm of both sides of school and enterprise, and can also promote the development and perfection of school-enterprise cooperation towards a deeper level; establishing an effective evaluation mechanism can effectively and accurately evaluate the specific effects of school-enterprise cooperation, and constantly optimize and improve all aspects of the process of school-enterprise cooperation, so as to improve the efficiency of school-enterprise cooperation.

### **4.2 Formulating the Talent Training Program Scientifically**

In order to ensure that the talent training mode of Internet of Things application technology specialty in higher vocational colleges with school-enterprise cooperation can fully play its own role, relevant personnel need to constantly update and optimize the talent training mode in accordance with the requirements of Internet of Things specialty and the needs of the current society, and then formulate a scientific, rational and comprehensive talent training program in Colleges and universities.

### **4.3 Building a Talent Training Team**

In order to fully exert the effectiveness of the talent training mode of Internet of Things application technology specialty in Higher Vocational colleges, it is necessary to build a talent training team. Therefore, relevant workers need to attract as many high-quality talents as possible, and optimize the teaching mode of talent training in time, so as to ensure that the talent training mode of school-enterprise cooperation maximizes its own benefits.

### **4.4 Strengthening the Construction of Training Platform**

In order to ensure that the training mode of Internet of Things applied technology professionals in higher vocational colleges can maximize its own effectiveness, it is necessary to continuously strengthen the construction of enterprise training platform, especially from the technical and financial aspects, so as to ensure the smooth progress of professional training mode.

#### **4.5 Career Planning and Employment Guidance**

At present, the Internet of Things industry is growing fast, but it is not stable. Therefore, in order to fundamentally ensure the smooth progress of talent training mode, it is necessary to establish a scientific and systematic vocational planning and employment guidance system for Vocational College students, so that graduates can quickly adapt to the needs of Internet of Things professionals in China.

#### **5. Conclusion**

To sum up, the talent training mode of school-enterprise cooperation is very suitable for the needs of the current society, which is also an important means for higher vocational colleges and enterprises to cultivate high-level counterparts. At the same time, higher vocational colleges should also set up the idea of "school-enterprise cooperation" and formulate scientific and reasonable talent training objectives in accordance with the requirements of relevant enterprises, and constantly optimize the teaching mode to train excellent talents. Moreover, higher vocational colleges also need to actively carry out the practice of school-enterprise cooperation mode, and constantly adjust the talent training mode according to the teaching results and enterprise needs, so as to realize the win-win situation between schools and enterprises as soon as possible.

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