

## Exploration on Personnel Training Mode of Internet of Things under the universities Transformation and Development Background

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**Abstract.** In this paper, the development and transformation of innovation and pioneering new requirements around the networking requirements engineering professionals, in-depth analysis of characteristics of training talents in Colleges and universities, from the professional training curriculum system, practice base construction and "Double teacher, double energy" teacher team construction and so on, networking engineering application training of technical talents the professional training mode of exploration.

### Introduction

In the 21st century, with the changes in economic development mode, the deep adjustment of industrial structure and the vigorous development of the real economy, the demand for talented people in society have risen to an unprecedented level, thus putting forward new requirements for the social and economic development of higher education. "National long-term education reform and development plan (2010-2020)" proposed to establish a modern vocational education system, optimize the structure of higher education, and classify the management of universities. The key to these three tasks is the undergraduate colleges, especially the application of colleges and universities in the modern education system in the scientific positioning of the problem. To solve this problem, the application of undergraduate college should transform to serve the development of local economic and social development services, to the integration of production and education, school-enterprise cooperation, to cultivate the application of technical and technical personnel, to enhance the ability of students to start employment [5].

To solve the Internet of Things engineering construction and personnel training issues, the Ministry of Education Computer Teaching Committee led the joint construction of the first batch of networking engineering professional 30 colleges and universities set up a network of professional engineering research expert group, Network engineering professional development strategy, teaching norms, practice teaching norms were studied, and issued a "college of things networking engineering development strategy research report and professional norms (Trial)" and "college of things networking engineering practice teaching system and Specification (trial)" in 2010.

The Internet of Things is a multi-disciplinary professional, involving computer technology, communication engineering technology, electronic information technology, measurement and control technology and other professional knowledge and management, software development technology and other aspects, for this in the exploratory stage of the new professional, the Schools are in accordance with their own characteristics continue to explore and revision of Internet of Things engineering professional training model.

### Personnel Requirement

Internet of Things is the third wave of information industry, and is listed as one of the strategic emerging industries of national key development.

At present, the number of enterprises with the concept of Internet of Things is very large, social demand is also large, but the engineer supply is very small, far from proportional. And in the next few years, Internet of Things technology will be widely popular in various fields of society, so this professional employment has broad prospects. During the 12th Five-Year Plan period, the key areas of the Internet of Things industry include intelligent transportation, intelligent logistics, smart grid, intelligent medical, intelligent industry, intelligent agriculture, environmental monitoring and disaster warning, smart home, public safety, social public utilities, intelligent city, defense and military. The main areas of the Internet need a lot of talent, according to the Ministry of Industry statistics, the following areas of the next five years, the demand for Internet of Things is expected: Intelligent Transportation: 200,000; Intelligent Logistics: 200,000; Smart Grid: 1 million; intelligent industry: 500,000; intelligent agriculture: 10 million [1].

### **Problems in the Current Personnel Training in Local Universities**

Personnel training, still continue "thick foundation, wide calibre" talent training mode, professional positioning fuzzy, in the end to train students what, what can master, master what kind of technical skills is not clear.

Teachers as the centre, emphasizing the leading role of teachers, students are not concerned about; still follow the old teaching and learning relationship, students in the learning process in the subordinate status. Teacher emphasis on the basic theory of knowledge, not on the students' self-learning and practical ability. Making a lot of students have more solid theoretical knowledge, but can not adapt to business needs of talent, resulting in many students graduation is equal to the plight of unemployment.

Teaching methods is traditional, case; project, flip class and other new teaching methods are not really introduced into the classroom, less teaching interaction, resulting in teaching out of touch, the classroom teachers say themselves, students sleepy, playing mobile phones and other undesirable phenomena. Assessment and evaluation to the end of the final examination papers, ignoring the ability of students to assess the practice, resulting in students learn more rigid, practical ability is poor.

Curriculum system set up, basically in accordance with the research college curriculum or vocational college curriculum, heavy theory of light practice or light theory of practice more serious [4].

### **Networking Engineering Professionals Training Mode**

Adhere to the virtue-oriented, the team priority to run the school strategy; adhere to the active service, employment-oriented professional education requirements; adhere to the overall coordination and stability, the quality of the first line of education, harmonious work situation, mainly for the Jiangxi and Xinjiang, Tibet and other western areas of economic and social development needs, with the Ministry of Education, the provincial and ministerial organs of the spirit of the document as a guide to cultivate "political qualified, physical and mental health, theory in place, skills," the application as the goal, to build a knowledge education system and technical skills training system two systems, the full implementation of general education, professional education and job capacity education "121" personnel training model, innovation and improvement of political, physical and mental health, theoretical knowledge, technical skills and so on four courses and comprehensive practice and quality to expand the two courses curriculum system to focus on professional construction, highlighting the characteristics of professional school, the implementation of professional transformation, personnel training mode transformation and curriculum system transformation, improve personnel training quality, improve the service of local economic and social development ability and level, to ensure the application of skilled personnel training goals.

The major develop political qualified, physical and mental health, moral, intellectual, physical and aesthetic development, mainly for the Internet of Things application system development industry, focusing on the Internet of Things application engineers, Internet of things software management

division, master networking technology, network technology , data processing technology, application development technology, with the Internet of Things project planning and construction management, Internet of things application system configuration and maintenance, the formation of wireless sensor networks, Internet of things application system development of technical skills, theoretical, technical skills system is High-quality applied talents.

To highlight the ability training as the goal, build ideological and political, physical and mental health, theoretical knowledge, technical skills and other four courses and comprehensive practice and quality to develop two courses of curriculum system.

### **Construction of practical base**

The training of practical personnel is the key to the cultivation of practical ability. At present, most of the training lab and practice bases of universities are based on the cultivation of disciplines and talents. Under the new development of innovation and entrepreneurship, the theory is practical service and training. Students have a solid theoretical knowledge, excellent technical skills and innovative entrepreneurial ability, must rely on the need to adapt to innovation and entrepreneurship training base, relying on "integration of production and education, school-enterprise cooperation" model, the establishment of school physical integration classroom, comprehensive training Center, innovation and entrepreneurship studio and a stable off-campus practice base, to build "curriculum experiment □ project training □ graduate design □ enterprise practice" as the main line of practical teaching system for the application of personnel training to provide reliability.

### **Double division and dual energy faculty construction**

Training of application personnel, the key is in the teachers, to create a both ability and political integrity, ability, which is the first problem must solve.

The biggest difference between the applied college and the traditional colleges lies in the different teaching objectives of the teachers. The applied colleges and universities cultivate the students' what they will learn, what will be done, and how to cultivate the students on the basis of mastery of certain theoretical knowledge. Therefore, the professional teacher teaching standards must be based on the virtue, highlighting the teacher "professional ability", as a standard to certify teachers' professional competence. [3].

Strengthen the construction of part-time teachers, relying on "integration of production and education, school-enterprise cooperation, school-school cooperation" model. Give full play to the advantages of school-enterprise, school and school cooperation, the formation of colleges and universities, counterpart enterprises, scientific research institutions, "mutual engagement, multi-flow" flexible introduction mechanism, strengthen exchanges, encourage part-time teachers to school, participate in laboratory construction , Personnel training program development, expert lectures, as a professional mentor, to cultivate a "special combination, school-enterprise sharing," the relatively stable part-time teachers [2].

Encourage and support college teachers, go out for full-time master's degree, doctoral degree, through the Ministry of Education to implement the high-level backbone of ethnic minority personnel training program. Select backbone teachers and professional teachers, to carry out short-term study, through "Jiangxi Province undergraduate institutions of young teachers' development plan and Jiangxi Province teacher training Plan "

Teachers are sent to the enterprise, training incentive mechanism to guide the professional teachers to the first line of enterprises, carry out professional practice training. Or send teachers to enterprises in summer, to participate in the first line of production and management, improve the teacher's practical ability.

### **Summary**

The transformation of universities focusing on the implementation of the "four transfer", the core is the skilled technical personnel training. This paper analyzes the advantages and disadvantages of the talent cultivation mode in colleges and universities, and constructs the personnel training mode of Internet of Things engineering based on the application of technical talents. In the background of the transformation and development, the advantages and disadvantages of the university personnel training mode are analyzed, the Internet of Things engineering application of personnel training is explored.

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