

## The Metro Talent Training Mode Based on Modern Apprenticeship

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**Abstract.** The talent training mode based on modern apprenticeship has been widely implemented in Germany, Britain, the United States and other countries, and has made some achievements. Under the impetus of the State Council and the Ministry of Education, our country also actively explores the talent training mode of modern apprenticeship. Through the analysis of modern apprenticeship system in our country, the paper points out that the metro talent training mode based on modern apprenticeship should realize four-docking cooperation mode and three interoperability training mode. At the same time, in order to enhance the quality of metro talents training, the paper puts forward some suggestions.

### Background and Significance

In recent years, with the continuous reform of education system in our country, our country attaches great importance to the reform of the modern apprenticeship system. The State Council and the Ministry of Education pointed out that it is necessary to speed up the construction of modern vocational education system, deepen the integration of production and education, promote the cooperation between college and enterprise, and train more high-quality workers and technical talents.

The essence of modern apprenticeship is a modern vocational education system [1]. It is a close combination of work based vocational training and school based academic education, and a deep integration of production and teaching. The distinctive feature of modern apprenticeship is that college and enterprise work together to train students who are both part of the college and part of the enterprise [2].

With the rapid development of metro industry, the shortage of technical talents has become the bottleneck. Under this background, it is of great practical significance to actively explore and practice the talent training mode of modern apprenticeship.

### Analysis of Domestic and Overseas Situation

#### Analysis of Overseas Situation

German school-enterprise cooperation is a dual system of vocational training mode. On the one hand, the dual system refers to the vocational colleges. On the other hand, it refers to the training places outside the college, such as enterprises or public institutions[3]. Students learn professional knowledge in the college and receive professional training in the enterprise or public institution. Under the dual system, students study in a specific working environment. Students have more opportunities to communicate with the enterprise, which greatly improves their employability. However, Germany's dual system of vocational training mode is too dependent on the development and operation of the enterprise. The development of their own businesses largely determines the rise and fall of the college.

In addition, the sandwich education mode in the United Kingdom, the training mode of

Competency-based Education (CBE) and Outcome-based Education (OBE) in the United States and Canada, the enterprise education mode in Japan and the industry-college cooperation in South Korea also has its own characteristics[4].

### **Analysis of Domestic Situation**

Since the 21st century, many vocational colleges in our country have carried out different forms of exploration and practice on the modern apprenticeship. For example, in June 2010, Xinyu municipal party committee and municipal government plan to invest 6 billion yuan to construct the education industrial park in Jiangxi province, which is the experimental base of modern apprenticeship. In 2011, Ningbo Beicang Vocational High School started a modern apprenticeship teaching.

Although many higher vocational colleges have conducted different explorations and practices on the talent training mode of modern apprenticeship, our country is still in a very awkward situation. The modern apprenticeship in China has three main disadvantages.

**The Assessment Mechanism of the College is not Perfect.** On the one hand, enterprise can not grasp the students' learning situation in time and can not know whether the students' theoretical knowledge and basic skills can meet the requirements of the enterprise. On the other hand, the assessment of students in college is mainly based on examination, which leads to incomplete assessment results.

**The Teaching Team is Incompetent.** On the one hand, the teachers lack the professional practice abilities and can not meet the students' needs of the basic skills. On the other hand, most of the enterprise masters work in the frontline for a long time without learning the advanced teaching and learning concepts, which leads to the poor teaching[5].

**Insufficient Communication between College and Enterprises.** The college attaches great importance to the training of students and actively liaises with the enterprise to report the learning situation of students. However, the learning situation of students is not taken seriously by enterprises, and most of the enterprises adopt the trusteeship mode during the the period of students' studies.

### **Research on the Metro Talent Training Mode of Modern Apprenticeship**

#### **Realize the Training Mode of Four Docking Cooperation**

College and enterprise should improve the system and standards of talents training. At the same time, College and enterprise should work together to shoulder the responsibility of training qualified talents to achieve a win-win situation for both sides. College and enterprise jointly design the program of talent training, formulate corresponding teaching standards, and realize the cooperation mode of four docking. The cooperation mode of the four docking are the docking of college and enterprise, the docking of the practice base and the workshop, the docking of profession and industry, and the docking of teachers and masters.

**Docking of College and Enterprise.** College and enterprise sign the school-enterprise cooperation training agreement and jointly formulate the training plan and assessment mechanism of students. Students learn theoretical knowledge and basic skills in college, while their practical abilities and skill training are completed by the enterprise.

**Docking of the Practice Base and the Workshop.** The standard of the practice base in the college should meet the standards of the workshop, including facilities, teaching staff, training courses, production and processing. Students should be able to grasp the resources of the enterprise and get familiar with the work process as soon as possible.

**Docking of Profession and Industry.** College and enterprise jointly formulate the professional construction plan, the talent training program, the construction of the students' curriculum system and course content, and closely integrate the students' majors with the industry.

**Docking of Teachers and Masters.** College teachers and enterprise teachers should communicate with each other. College teachers not only need to have strong professional knowledge, but also

should have a strong ability of professional skills. Meanwhile, enterprise teachers should also master the advanced education teaching concept and improve their teaching abilities. College teachers and enterprise teachers cooperate with each other to accomplish the students' teaching work together.

### **Realize the Training Mode of Three Interoperability**

College and enterprise should work together to explore education mechanism, improve the training and management mechanism of modern apprenticeship and clarify responsibilities of college and enterprise[6]. College and enterprise can effectively achieve the goal of three interoperability training mode through effective cooperation. The three training mode of interoperability are the interoperability of enrollment and recruitment, the interoperability of class and job, and the interoperability of graduation and employment.

**The Interoperability of Enrollment and Recruitment.** College and enterprise participate in the whole process of enrollment. Before enrollment, college and enterprise work out the conditions, scale and methods of enrollment. After enrollment, both sides formulate the training plan and determine the time of signing the work agreement. When students are studying at college, they are not only a part of the college, but also a member of the enterprise. Students should not only obey the rules and regulations of the college, but also measure and demand themselves according to the standards of the enterprise.

**The Interoperability of Class and Job.** Students can realize the effective combination of classroom knowledge and enterprise needs through the combination of the classroom, the training base and the enterprise.

**The Interoperability of Graduation and Employment.** Students meet the requirements of learning in college and fulfill the requirements of practice in the enterprise. If students meet the theoretical knowledge requirements, professional skills requirements, cultural and moral training requirements, and access to the corresponding vocational qualification certificate of competency, they can become a regular employee of the enterprise by signing the employment agreement.

### **Summary**

It is a modern and effective mode for college and enterprise to train metro talents through modern apprenticeship. College and enterprise should cooperate with each other to develop the metro talents that can meet the needs of the enterprise. In addition, in order to improve the quality of metro talents and to provide more excellent talents for enterprise, suggestions are as follows.

First of all, college and enterprise need to actively implement the four docking cooperation mode and the three interoperability training mode. The problems in the process of cooperation should be solved in time. College and enterprise should work together to train metro talents. Second, college and enterprise should be good at learning and be creative. Modern apprenticeship is a effective way to train metro talents. In the process of college-enterprise cooperation, both parties should be able to learn the advanced concepts of running a college from abroad and use them for their own students. Meanwhile, college and enterprise should be brave to innovate and find corresponding solutions according to their own problems. Last but not least, students should learn to practice. The students' theoretical knowledge and basic skills should be fully applied to the practice of the enterprise. It is necessary to combine the theoretical knowledge with the demand of the industry.

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## References

- [1] Zhao Pengfei. Practice and Understanding of Cultivating Modern Apprenticeship Talents. China Vocational and Technical Education, 2014, (21):150-154.[2017-09-09].
- [2] Zhao Pengfei, Chen Xiuhu, Practice and Thinking of Modern Apprenticeship. Chinese Vocational and Technical Education, 2013, (12):38-44.[2017-09-09].
- [3] Wang Yudong. German Dual System of Vocational Education Research. Liaoning Normal University, 2010.
- [4] He Yangyong. Equity in The Development of Dual-system Vocational Education in Germany . Higher Education Research, 2017, 38(03):104-109.[2017-09-09].
- [5] Zhang Weijin, The Cultivation of Shanghai Metro, Urban Mass Transit, 2004, (02):89-90.
- [6] Wang Dechun, Gong Qinglin, Analysis on the Problems and Countermeasures of the Training of mechanical and electrical technicians in Urban Rail Transit, 2017, (11):279.