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# Practical Effect and Rational Analysis of Talent Training Mode in Higher Vocational Colleges Based on Modern Apprenticeship System

# Jianxin Ge, Yanhua Zhang

Heyuan Vocational and Technical College, Heyuan, Guangdong, China 414586580@qq.com

**ABSTRACT.** This paper expounds the practice of talent training mode in Heyuan Polytechnic through the establishment of Heyuan Vocational and Technical College- ZTE Corporation modern apprenticeship class". Promote the construction of pilot organization and management organization; Promoted the integration of enrollment and recruitment; Improved the talent training program and curriculum system; Promote the construction of teaching operation and management mechanism; Accelerated the construction of apprenticeship and double tutor team; Strengthened students' professional skills; Improved the professional quality of students; At the same time, through rational analysis, it puts forward the problems and solutions in the process of practice.

**KEYWORDS:** Modern apprenticeship, Higher vocational college, Talent training mode

## 1. Introduction

Modern apprenticeship is a new educational mechanism advocated by the state to deepen the cooperation between schools and enterprises and the integration of production and education. It is also an important strategy for the development of national human resources. In order to promote the high-quality development of vocational education, the applied electronic technology major in Heyuan vocational and technical college cooperated with ZTE Communication Co., Ltd., and successfully applied to become the third batch of modern apprenticeship pilot units in China. According to the negotiation between the school and the enterprise, the apprenticeship class implements the 1.5 + 1.5 talent training mode, that is, the students learn professional theoretical knowledge in the school in the first three semesters, and follow the post, post in the enterprise and study alone in the fourth to sixth semester. The cooperative enterprise of apprenticeship in applied electronic technology specialties is ZTE. The company's Heyuan production base has more than 3000 employees. The company has strong strength, excellent working environment and treatment, and large demand for talents. The company's production base is only 15 kilometers away from our school, with convenient transportation, which is conducive to the implementation of modern apprenticeship talent training mode.

## 2. Practice and Effect of Modern Apprenticeship Pilot Work

The reform of talent training mode in Higher Vocational Colleges Based on Modern Apprenticeship marks a new stage of communication and cooperation between local colleges and local enterprises, which helps to consolidate and deepen the close relationship between ZTE and Heyuan vocational and technical college, and promotes the mutual progress and win-win situation of both sides. Since the establishment and implementation of ZTE modern apprenticeship class, initial results have been achieved.

### 2.1 Promoted the Construction of Pilot Organization and Management Institutions

Combined with the practical needs of national pilot professional education and teaching, we should constantly improve the school enterprise Cooperation Council, and explore the Educational mechanism of the School enterprise dual subject, such as the Resource sharing, the process co management, the responsibility sharing and common development. The school and enterprise jointly established the professional Steering Committee for Modern Apprenticeship of Heyuan vocational and Technical College (For short, "apprenticeship Commission"). Under the guidance of the school teaching steering committee, the apprenticeship committee is mainly engaged in the theoretical

research and practice guidance of modern apprenticeship, so as to ensure the guidance of the theory and practice of modern apprenticeship piloted work and the sustainability of modern apprenticeship development.

At the same time, the specialty and ZTE established the "modern apprenticeship" working group of applied electronic technology specialties, so as to ensure direct and close multi-party coordination and communication in terms of recruitment, teaching implementation process, student practice, etc., so as to release and share information in time, and put forward and solve problems in time, so as to realize the efficient operation of cooperative education.

# 2.2 Promoted the Integration of Enrollment and Recruitment

The integration of enrollment and recruitment is the basis of building a modern apprenticeship talent training system. Our school adheres to the school enterprise dual subject collaborative education, school teachers and enterprise masters double tutor teaching, clear apprentice enterprise employees and vocational college students dual identity, forming a long-term mechanism of joint enrollment, joint training and integrated education between schools and enterprises, and improve the college enrollment and enterprise enrollment and enterprise The employment system of the integration of industry and employment. Led by the school admissions office, the college and the cooperative enterprises jointly established a recruitment and recruitment working group, jointly formulated and implemented the "Heyuan vocational and technical college modern apprenticeship pilot enrollment and examination program", standardized the enrollment and recruitment procedures of the school and enterprises, followed the principle of information transparency and two-way selection. And let apprentices, schools and enterprises sign tripartite agreements to determine the rights of each party The specific position, teaching content, rights and interests protection and liability for breach of contract of Yihe apprentice training should be clear, and the responsibilities and division of labor between the school and the enterprise should be made clear.

#### 2.3 Improved the Talent Training Program and Curriculum System

Based on enterprise research and several seminars with ZTE on work posts and talent training programs, the specialty jointly formulated the talent training program, and determined The training goal of modern apprenticeship class of applied electronic technology specialty is to train SMT production management talents for electronic production enterprises. The main training positions, include SMT production technician, maintenance technician, equipment transfer technician, high-end communication product video debugging personnel, PCBA field process technician and whole machine field process technician. Relying on the Heyuan production base of ZTE Co., Ltd., the school and enterprise cooperate deeply to cultivate students.

According to the ability and quality requirements of SMT production management post, a series of SMT production management courses are developed. The course offered in the second semester is: common process equipment and its application of modern electronic assembly. The courses offered in the third semester are: modern electronic assembly technology, modern electronic assembly and soldering technology, modern electronic assembly material technology foundation, modern electronic assembly environment and material management, modern electronic assembly requirements for components and printed boards. These six courses are jointly developed by the school and enterprise curriculum standards, CO teaching, mainly school teachers, supplemented by enterprise teachers, apprentices in the enterprise practice, mainly by the enterprise sent engineers responsible for guidance, school teachers track and assist in the management of students. Let students complete the study of SMT production management related theoretical knowledge in school, and lay a solid theoretical foundation for enterprise practice.

## 2.4 Promoted the Construction of Teaching Operation and Management Mechanism

The relevant management system and operation mechanism of modern apprenticeship pilot work are gradually constructed. In order to standardize the pilot work of modern apprenticeship, ensure the quality of personnel training for modern apprenticeship projects, and protect the interests of students, schools and cooperative enterprises participating in the pilot program of modern apprenticeship, through the school enterprise discussion, combined with the actual situation of the school, the implementation plan of modern apprenticeship pilot work of Heyuan vocational and technical college and the implementation measures of modern apprenticeship pilot teaching management of Heyuan vocational and technical college were formulated,

In order to ensure the successful completion of ZTE apprenticeship training program, stimulate the enthusiasm of the teaching team, and achieve the expected training effect, the college has specially formulated a performance plan to give work subsidies to the head teachers of modern apprenticeship classes. The college has special funds for apprenticeship classes, enterprise teachers' transportation, accommodation, and course remuneration, and encourages enterprise teachers to participate in school teaching more. In addition, the school teachers are required to follow up the

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teaching process of enterprise teachers and give them the same remuneration, thus encouraging the teachers to participate in the whole teaching process of enterprise teachers and learn the working experience of enterprise masters.

#### 2.5 Accelerated the Construction of Apprenticeship Double Tutor Team

In order to accumulate valuable school running experience for apprenticeship class, ZTE order class was established among 2016 applied electronic and electronic students. Enterprise engineers were invited to give lectures for students, and relevant theoretical knowledge of SMT production management was taught for students. The school and the enterprise have set up six SMT production management related courses for the order class. The teachers are mainly enterprise engineers, and the school teachers follow-up learning. Using the time of each weekend, the enterprise selects 10 engineers to teach for students, and 2 backbone teachers for applied electronic technology major are selected to follow up the whole process of learning.

On the basis of the teaching team of ZTE order class, the school and enterprise have further improved and built an apprenticeship double tutor teaching team. The enterprise masters adopt three levels of masters, including management master, supervisor master and teaching master. The selection of enterprise master shall be coordinated by ZTE manufacturing institute according to the master standard, and the backbone engineers of ZTE equipment department, process department, production department and other departments are selected as the master. The first modern apprenticeship class in Heyuan base of ZTE Co., Ltd. was held in the enterprise and apprenticeship ceremony, marking the close and profound relationship between 17 apprentices of ZTE modern apprenticeship class and 17 masters of ZTE. The school has selected backbone teachers with rich working experience from the applied electronic technology specialty as the teaching and practice guidance teachers of the University. The teachers' teams of both schools and enterprises jointly discuss and formulate curriculum standards and teaching plans, jointly implement curriculum teaching, jointly assess apprentices, and strengthen quality control. Through this order class, we have trained two teachers who are familiar with SMT production management. The school and the enterprise have established a teaching team, which provides a guarantee for the smooth implementation of modern apprenticeship.

#### 2.6 Strengthened the Students' Professional Skills and Enhanced Their Professional Quality

At present, 17 apprenticeship students have been trained in seven different positions, reflecting well. Through the systematic study of professional theoretical knowledge in school and the rotation training of professional skills of enterprise following, post taking and independent post, students' post group skills and sustainable development ability have been cultivated, and their employability has been significantly improved. In the training mode of enterprise culture and enterprise system implemented in apprenticeship class, students have a deep understanding of industrial culture, industry culture and enterprise culture, and cultivate good professional quality in practical posts, so as to heat up their own major, better integrate into the enterprise, improve their professional quality, and more clearly define their future career planning and career development direction.

#### 3. Existing Problems

# 3.1 Students

In recent years, our school has developed rapidly in all aspects, and has become one of the demonstration vocational colleges in Guangdong Province. However, due to the fact that our school is a vocational college in the underdeveloped mountainous area of northern Guangdong Province, the students' quality is relatively poor, the understanding ability is weak, the initiative and enthusiasm of learning are not strong, and the foundation is not solid, so the theoretical study is more difficult during the period of school.

#### 3.2 School

The modern apprenticeship class of Applied Electronics and ZTE jointly cultivate SMT production and management talents. Due to the lack of SMT production process and management experience, professional teachers often deviate from the actual working scene when teaching the relevant theoretical basis courses.

#### 3.3 Enterprises

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For the needs of personnel training, the senior managers of enterprises still show great initiative, but sometimes the enterprise masters lack the initiative. In addition, the state has no relevant policies and funds for the enterprises implementing the modern apprenticeship pilot, which also limits the enthusiasm of enterprises to a certain extent. Therefore, the incentive mechanism needs to be further improved.

#### 4. Conclusion

For the above problems, first of all, we should make clear the training mode of modern apprenticeship class, optimize the system and measures, formulate specific talent training implementation plan, so that more students can understand and accept modern apprenticeship and participate in it, so as to select the best students.

#### References

- [1] Xinming Wang. On the construction of "artificial intelligence +" modern apprenticeship training system. Education and occupation, No.8, pp.56-62, 2020.
- [2] Zhenglian Wang. Exploration and practice of modern apprenticeship training mode. Journal of Zhejiang textile and garment vocational and technical college, No.2, pp.85-88, 2018.
- [3] Xianjun Liu. Concept and path of Applied Talents Training. China higher education research, No.10, pp.6-10, 2018.
- [4] Wenzhou Shan, Zhong Li, Liyan Zhou. Analysis of the implementation path of modern apprenticeship pilot. Adult education, No.05, pp.63-69, 2019.