

The Cultivation Mechanism of Innovative Talents Based on School-enterprise Cooperation

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Abstract: In order to realize the college-enterprise cooperation in school running, the basis for the selection of “quasi-employee 2+1” talent training model, the practice of school-enterprise joint education, the design of talent training programs, the construction of curriculum system, the exploration of school-enterprise integration education, faculty construction, trinity post internship management system and construction of the assessment system for the post practice were all systematically analyzed. The research results showed that this model had obvious advantages in improving the employment rate of students and the construction of school teachers as well as deepening the reform of the curriculum system. Therefore, it is a general trend of the reform and development of international higher vocational education that colleges and universities should work closely together to cultivate people.

1. Introduction

With China’s accession to the WTO, the process of economic globalization and integration is accelerating. The international and domestic economic situation has undergone profound changes, and the transformation and upgrading of industry is in full swing [1]. The focuses of talent training model reform are the practicality, openness and professionalism of the teaching process, and the three key links are experiments, practical training, and internships.

Firstly, a comparative analysis of the main model of talent cultivation in Higher Vocational Education in China and foreign countries was carried out, and the SWOT analysis method was used in planning the development strategy of higher vocational education development in China. Also, it was proposed that higher vocational education must be open to schooling and cultivate high-skilled talents adapted to social development through school-enterprise cooperation and integration of resources [2]; then, the College of Bioengineering of Shandong Vocational Institute of Commerce and Technology was taken as a case to analyse the research results of the “quasi-employee 2+1” talent training model and the corresponding safeguard mechanism was discussed [3]. It is proposed that school-enterprise integration is the best way to guarantee the smooth implementation of the talent training model. Finally, a strategic analysis of the problems existing in the implementation of the “quasi-employee 2+1” talent training model was put forward.

2. Literature Review

In the *Joint Education Declaration* published by the American Vocational Association in 1946, cooperative education was defined as a kind of educational model that combined theoretical learning with real work experience to make classroom teaching more effective. The World Association for Cooperative Education defined co-operative education in 2001 as: “Students combine learning in the classroom with that in the workplace, and apply theoretical knowledge to the related work and the paid labour. And then they bring the challenges and growth insights encountered in their work back to the classroom for further analysis and thinking in their studies” [4]. School-enterprise cooperation is

the cooperation between schools and enterprises and its essence is an educational model in which education and industry are combined. Schools and enterprises are interdependent and mutually promoting in cooperation. The form of school-enterprise cooperative education originated in Germany at the end of the 19th century, and the German “dual system” model was considered to be the beginning of school-enterprise cooperative education in history in the world. The term “school-enterprise cooperative education” first appeared in the field of engineering technology in American universities in the early 20th century [5].

Liu Li believes that the “School-enterprise cooperative education” is an education model that uses the educational resources and educational environment of schools, industries, and enterprises to cultivate application-oriented talents that are suitable for the needs of the industry and enterprises [6], that is, to combine the educational environment in which indirect knowledge is imparted in the classroom organically with the production site environment where actual experience and capabilities can be gained by establishing a close connection between the industrial sector and the education sector, between the actual production & management process and the educational and teaching activities as well as by making use of the advantages of schools, industries, and other units in talent training.

3. Methodology

3.1 Talent training model of school-enterprise cooperation in foreign higher vocational education

The “dual system” model emerged from the special historical background of the demand for talent training in the process of the revitalization of the German economy after World War II, and the German government played a powerful role in promoting the development of the “dual system”. In 1948 and 1969, laws and regulations were promulgated, clearly defining the “dual system” model as a talent training model, and the system was institutionalized and legalized in the *Professional Education Law*. Thus, the “dual system” developed rapidly because of the vigorous promotion of the government, and it became a booster for Germany’s economic development and helped in training of a large number of applied talents. In the “dual system”, one party is a school that is responsible for imparting professional knowledge, and the other is a company that is mainly responsible for cultivating professional skills.

Cooperative education in the United States began with a bold attempt by Professor Herman Schneider in the Engineering College of University of Cincinnati in 1906. After entering the school, freshmen first learn about the theoretical knowledge in the university for half a year, and then conduct skill training in the company as well as theoretical study in the school for two months. Before graduation, they will teach in the school and complete the graduation design. This model can effectively reduce the university’s burden on the construction of experimental training conditions and enable students to have the ability to work before graduation.

3.2 Talent training model of school-enterprise cooperation in higher vocational education in China

The “quasi-employee 2+1” talent training model refers to a kind of talent training model in which students learn theoretical knowledge and basic skills in the school for two years, and practice post internship in the company in the last school year. This talent training model is called the “quasi-employee 2+1” because the students participate in the post internship as quasi employees.

3.3 Enlightenment from foreign experiences to China

We can get the inspiration as shown in Figure 1 by considering the American cooperative education model that focuses on system innovation and is school-based as well as the German dual system which is enterprise--oriented, and by taking the development of China into consideration.

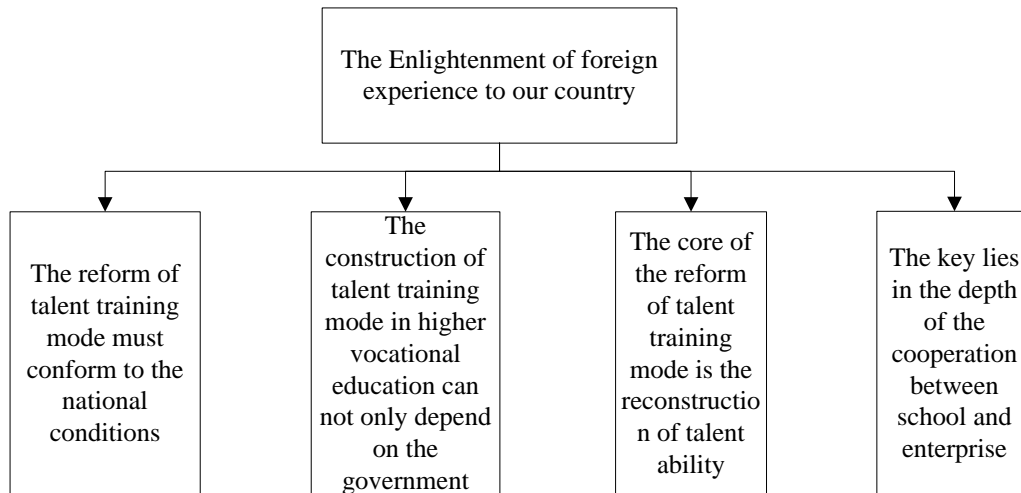


Figure 1. The enlightenment of foreign experience to our country

4. Results and discussion

4.1 Study on the development environment and development strategy of talent training model in higher vocational education in China based on SWOT analysis

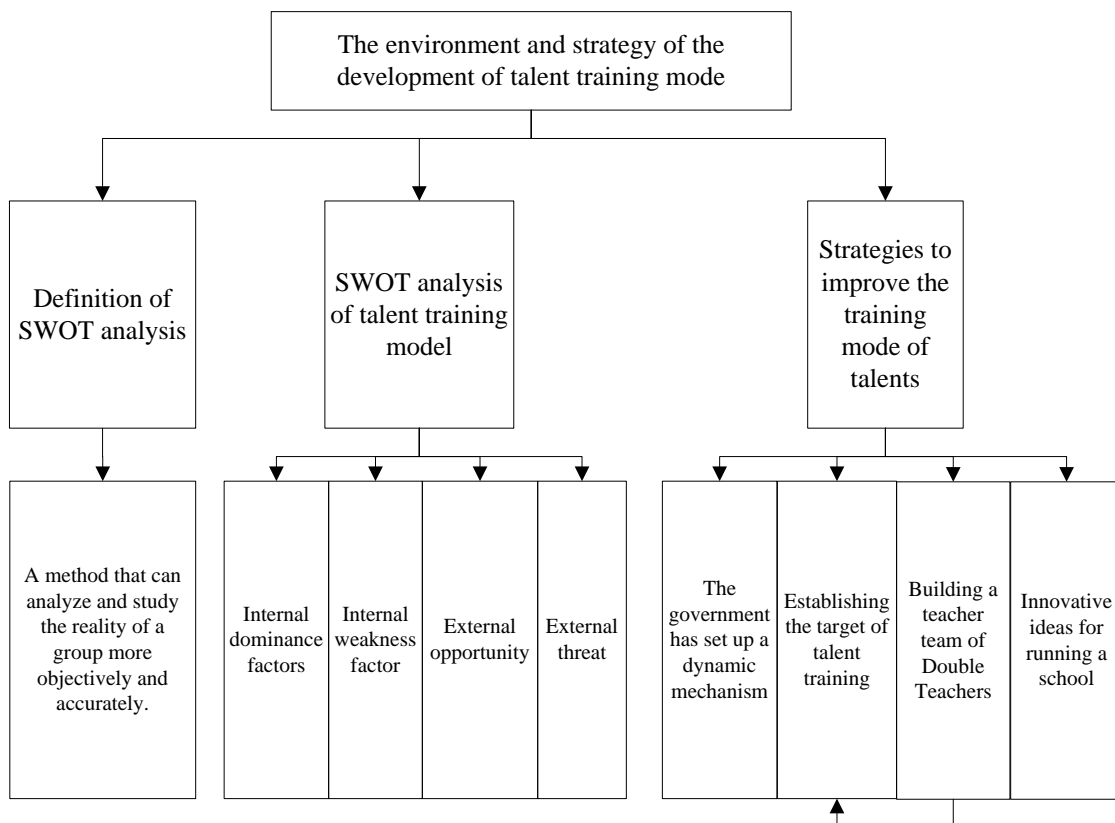


Figure 2. The environment and strategy of the development of talent training model

Under the current background of global economic integration, the competition between many countries and regions is a competition between science and technology and human resources in essence. With the continuous development of Chinese economy and the increase in educational investment, higher education has shifted from elite education to mass education, but the quality of talent training has been limited by various reasons. Higher vocational education which accounts for half of the higher education, shoulders three important tasks of cultivating skilled talents that are adapted to social needs, scientific research, and serving local economic development. They are not

only the basic tasks of higher vocational colleges, but also the foundation for the survival and development of higher vocational education. In order to improve the quality of talent training in higher vocational education, we must formulate scientific and reasonable strategic plans and draw on advanced foreign experience in accordance with China's national conditions, and build a talent training model with Chinese characteristics that suits the needs of domestic economic development. The Chinese government is vigorously developing higher vocational education at present, so improving and exploring the training model for talented people is an intrinsic requirement for improving the quality of talent cultivation in higher vocational education in China. It is also an inevitable requirement for perfecting the talent training system in vocational education in China as well as an urgent need for sustainable development of the higher vocational education. Therefore, it is of far-reaching significance to construct the talent training model for higher vocational education with Chinese characteristics.

This paper will use the SWOT analysis method to analyse the environment of higher vocational talent training model in China and propose a development strategy, which is shown in Figure 2.

4.2 “Quasi-employee 2+1” talent training model

According to the national conditions in China, the fundamental way to solve these problems mentioned above is to vigorously promote the cooperation between governments, industries, universities and research institutes, to promote the integration of schools and enterprises, and to innovate and implement the practice of “quasi-employee 2+1” talent training model. The design and implementation of the “quasi-employee 2+1” talent training model is shown in Figure 3.

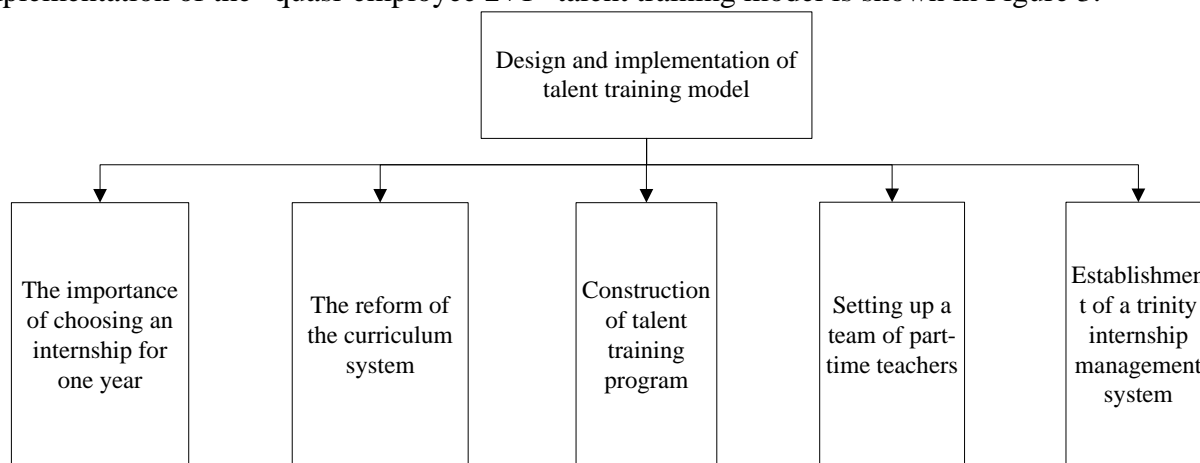


Figure 3. Design and implementation of talent training model

4.3 Ways and safeguards for implementing the “quasi-employee 2+1” talent training model

The lack of long-term and stable safeguard mechanism for cooperative education between schools and enterprises has become an important factor restricting the development of higher vocational education. This kind of cooperation is often based on the relationship between human beings. The economic efficiency of the company and the replacement of managers often lead to the instability of this relationship, which is not conducive to the consolidation and development of the practice bases. For this reason, many schools have conducted explorations. For example, the Qiqihar Engineering College implemented the strategy of “Opening a major, running an entity, building an institute, and creating a brand”. So 21 companies have been set up, covering all of the 43 majors, and each company conducts independent accounting. As the Qiqihar Engineering College is a private college, the main body of the school management is more flexible than that of public institutions. Although there are still institutional obstacles to the promotion of this training model to the public higher vocational schools, we can explore a more advanced and more flexible school-enterprise cooperation talent training model on the basis of this one, that is, school-enterprise integration education (as shown in Figure 4).

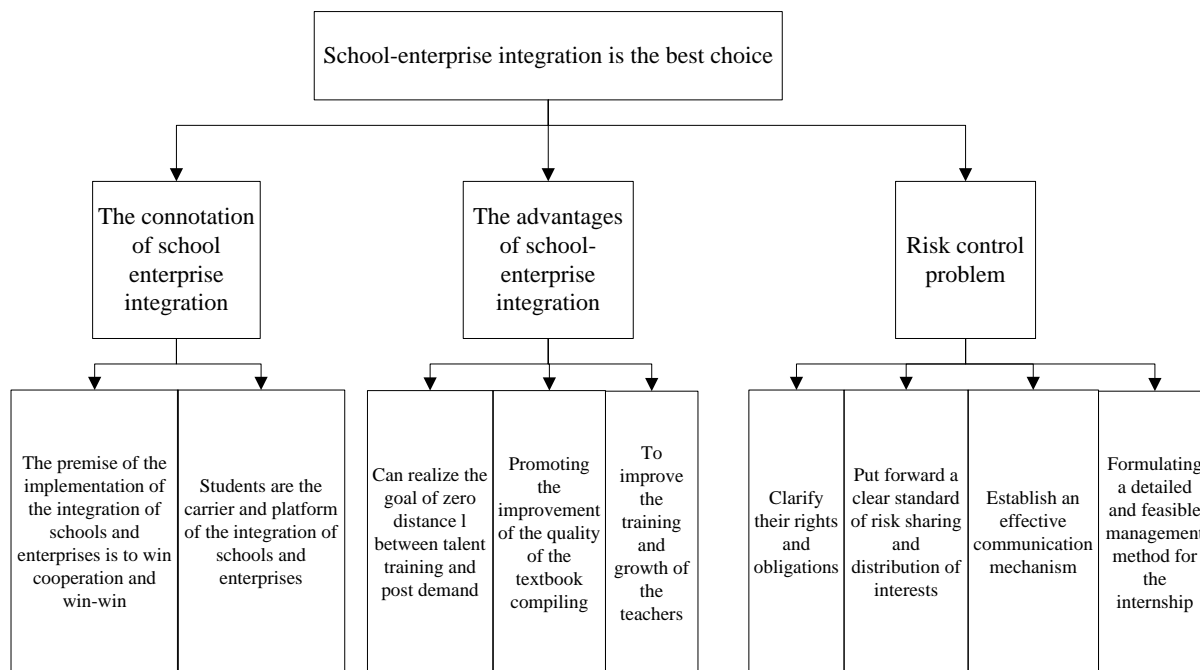


Figure. 4 School enterprise integration is the best choice

4.4 Construction of “quasi-employee 2+1” talent training model assessment system

Jiao Gao [2006] Document No. 16 pointed out: “We should vigorously implement work-integrated learning, highlight practical ability cultivation, reform talent training model, and actively promote learning models that combine productive labour and social practice. We should take the combination of work and study as an important breakthrough point for the reform of the talent training model in higher vocational education in order to push forward speciality adjustment and construction, and guide the reform of curriculum setting, teaching content as well as teaching methods.” In order to highlight the cultivation of students’ practical abilities, the Ministry of Education requires that “Higher vocational colleges and universities must ensure that students spend at least half a year in work as an intern in the company.”

Many years of practice proved that the “quasi-employee 2+1” talent training model helps to cultivate students’ professional qualities and skills, and it solves the students’ problem of disconnection between theory and social practice. However, due to the multi-party participation of the schools, enterprises and students, the model has the characteristics of diversified management subjects, decentralized internship locations, and diversified internship content etc. How to do a good job in management and in monitoring of the students’ post internship and to build a post internship assessment system adapted to the talent training program have become the consensus of higher vocational colleges. The main elements suitable for building the assessment system are shown in Figure 5.

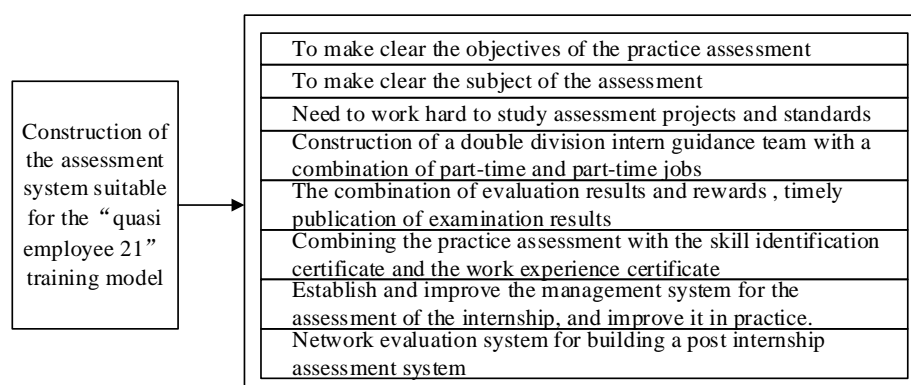


Figure 5. Construction of the assessment system suitable for the “quasi-employee 2+1” training model

4.5 Rational thinking on the “quasi-employee 2+1” talent training model

Since the promotion of the “quasi-employee 2+1” talent training model in Shandong Vocational Institute of Commerce and Technology in 2005, the quality of its talent training has been greatly improved; the school-resource integration as well as the overall educational capabilities has been significantly improved. The problems that the institute encountered in the course of practice mainly include the difficulty of student management, the fluctuation of students’ mentality, and the difficulty of selecting excellent professional counterpart enterprises. Figure 6 lists the suggestions and countermeasures for solving the problems encountered in the practice of the “quasi-employee 2+1” talent training model.

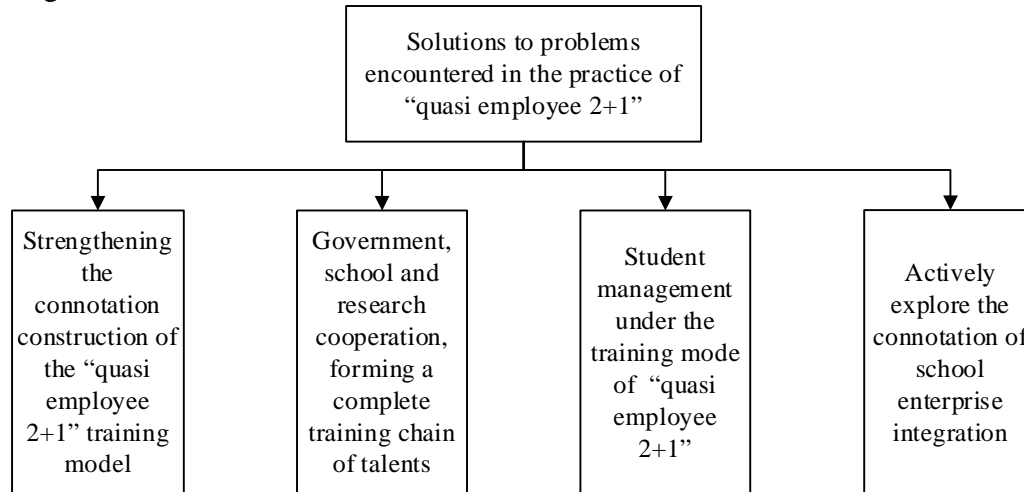


Figure 6. Suggestions and countermeasures for solving problems

5. Conclusion

Firstly, several successful talent training models in foreign vocational education are systematically analysed, and the problems existing in the current process of talent cultivation in higher vocational education in China are summarized through an analysis of several major talent training models in China at present. Also, the enlightenment of foreign experience to our country is discussed. Then, the SWOT analysis method is used to analyse the current strategic environment of higher vocational education in China, and the strategic planning of the talent training model of higher vocational education under the new situation is put forward. Finally, suggestions and thoughts on the construction and implementation of the “quasi-employee 2+1” talent training model are put forward. Practice has proved that this training model can improve students’ employment rate and promote the construction of school-teacher team as well as deepen the curriculum system reform.

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