

Reform and Practice of Talent Training Mode Based on Modern Apprenticeship

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Abstract

With the effective supply of high-quality technical talents as the goal, this paper develops the training mode of high-quality technical talents based on the modern apprenticeship system. Under the background of the supply-side reform, this paper discusses the reform scheme to solve the supply of highly skilled talents in China. Under the background of the transformation of new and old kinetic energy, China is vigorously promoting supply-side structural reform. China's higher vocational education is in the process of changing the past talent training mode with schools as the main body. It has become a hot and difficult point to explore how to change the role of enterprises in the marginalization of vocational education for a long time.

Keywords

Supply-side reform; Enterprises; Vocational education.

1. Introduction

At present, the reform of higher vocational talent training mode can not meet the needs of supply-side structural reform. There is a big deviation between the skill level of the required talents and the actual ability demand of talents. Students' knowledge is narrow. Their professional quality can not meet the requirements, which leads to their lack of competitiveness in the job market with diverse needs [1-3]. The knowledge standard is deep-rooted, while the ability standard is strong. In advocating and practicing the curriculum concept of professional quality standard, it is bound to meet the opposition in concept and difficulties in practice, especially in the case of insufficient conditions of higher vocational colleges. Therefore, the reform of personnel training mode is facing severe challenges.

2. The Reform of Personnel Training Mode

2.1. School-enterprise Cooperation Mechanism

At present, in the process of talent cultivation in China's higher education, enterprises generally lack participation. The main reason is that enterprises have a low voice in the process of talent cultivation and can not cultivate high skilled talents according to their own needs. As a result, the funding channels of Chinese enterprises to higher vocational colleges are not smooth and the scale of investment is small. Learning from the mature experience of German training enterprises, under the background of the integration of industry and education in China, the fundamental problem of the lack of motivation for enterprises to participate in the modern apprenticeship system of vocational education is the foothold of the research [4].

2.2. Professional Talent Training and Regional Economic Development

The training of professional talents should give full play to the local characteristics and advantages, to meet the needs of the school area. In addition, we should fully integrate the

regional information resources, human resources, and material resources, increase the flexibility of the professional curriculum and strengthen the communication and contact with local economic construction [5, 6]. At the same time, to achieve the goal of coordinated development of higher vocational education and regional economy, higher vocational education should establish the concept of providing the society with the service of training talents and education and teaching.

2.3. Improving Teaching Methods

Teaching theory should serve teaching practice well. The root cause of unsatisfactory teaching methods lies in the disconnection between teaching theory and teaching practice. Teaching methods should not become the bottleneck of restricting classroom teaching [7, 8].

2.4. The Reform of Modern Apprenticeship Training Mode

In the face of the rapid development of modern science and technology, there is a lack of effective support for the cultivation of high-quality technical talents. However, the traditional talent training mode still has its rationality, so there are still some worthy of today's inheritance. It is necessary to analyze the differences between the traditional talent training mode and the modern apprenticeship talent training mode based on the supply-side reform. This kind of research can promote the effective transformation of talent training mode.

2.5. Cooperative Education Mechanism of Multiple Subjects

There are many participants in the collaborative education of multiple subjects in higher vocational colleges, including schools, enterprises, industries, and governments. The behavior of any party may become an important factor affecting the overall operation quality. The key to achieving the synergy effect is to correctly grasp the role and role of each subject in the process of collaborative education, reasonably coordinate all subjects, and give full play to the advantages of all parties. Up to now, the multi-agent collaborative education model is still in the process of continuous development and improvement. It is also difficult to grasp this dynamic development and judge its operation law. The school of mechanical and electrical engineering has jointly built craftsmanship classes with enterprises such as Caterpillar, Weichai, and goer Co., Ltd. The education system mechanism based on Modern Apprenticeship gives full play to the role of each subject in the process of collaborative education.

2.6. Reform Ideas

Guided by the goal of serving the equipment manufacturing industry of Shandong Peninsula Blue Economic Zone, we promote the supply-side structural reform of talent training. The key task of our research is to reform the training mode of mechanical and electrical professionals. It is our fundamental goal to cultivate high-quality technical talents who meet the requirements of the intelligent manufacturing field. We should establish a systematic mechanism of human body education, which is composed of one center, two platforms, three main bodies, four guarantees, and six modules. Among them, one center refers to the overall sustainable development of students as the center; The two platforms are: one is a high-quality technical talents training platform composed of the modern apprenticeship training center, engineering practice base, skill master studio, technical innovation base, and vocational education group; Another platform is a multi-channel international development platform composed of caterpillar, Weichai Power, Goethe Co., Ltd. and Singapore high-end employment training base. The four guarantee mechanisms are the dynamic mechanism based on interest driving, the operation mechanism based on innovation organization, the guarantee mechanism based on multiple linkages, and the evaluation mechanism based on quantitative assessment. The six modules respectively refer to the general quality curriculum, the professional curriculum based on the life universality, the professional basic curriculum, the professional directional

curriculum, the developmental quality curriculum, and the extracurricular practical activities module inside and outside the school, which constitute the curriculum system of higher vocational education.

3. Specific Reform Measures

3.1. The Reform of Modern Apprenticeship Personnel Training Model under the Background of Supply-demand

In the past, most of the researches on the training mode of modern apprenticeship in higher vocational education only focus on the reform of higher vocational education, or the promotion of higher vocational education to the economy. These researches are based on the perspective of demand. From the perspective of the supply-side, this paper studies the current situation of talent supply in higher vocational education. This paper analyzes the new changes in the demand for talents in the labor market, and integrates it with the modern apprenticeship talent training mode, to provide a new perspective for the reform of talent training mode. By enhancing the supply capacity of innovative and technical talents in line with social needs, will ensure the long-term sustainable development of the economy.

3.2. The Problems Faced by Enterprises in the Development of Vocational Education Are Discussed

Enterprise is an important part of the modern apprenticeship system in China. Give full play to the role of enterprises, which is of great significance to improve the quality of vocational education personnel training process. Finally, it promotes the modern apprenticeship to be brilliant in the process of building a mature society.

3.3. Three Stages of Learning Process

Under the background of the supply-side reform of higher vocational education, the craftsman class jointly built by colleges and enterprises is taken as the carrier. This paper studies the learning process of modern apprenticeship talent training from the perspective of comprehensive quality improvement and sustainable career development of higher vocational students. Higher vocational education is divided into three learning stages: general education stage, specialized training stage, and diversified training stage. In the stage of general education, we should lay a solid foundation and realize the integration of knowledge in different majors; in the stage of professional training, we should study the professional knowledge and expand the field of vision; In the stage of diversified training, we should choose the right development path for the development of graduation.

3.4. Innovating the System and Mechanism of Multi-subject Cooperative Education in Higher Vocational Colleges

We have carried out exchanges and cooperation in cooperative education with well-known enterprises such as Goethe, caterpillar, and Weichai Power, and studied the new system and mechanism of cooperative education by multiple subjects such as enterprises, schools, government, and society. Through the application of the new system and mechanism to the craftsmanship class, it provides a new idea for the reform of modern apprenticeship talent training mode.

4. Conclusion

We should establish a systematic mechanism of human body education, which is composed of one center, two platforms, three main bodies, four guarantees, and six modules. Among them, one center refers to the overall sustainable development of students as the center; The two

platforms are: one is a high-quality technical talents training platform composed of the modern apprenticeship training center, engineering practice base, skill master studio, technical innovation base, and vocational education group; Another platform is a multi-channel international development platform composed of caterpillar, Weichai Power, Goethe Co., Ltd. and Singapore high-end employment training base. The four guarantee mechanisms are the dynamic mechanism based on interest driving, the operation mechanism based on innovation organization, the guarantee mechanism based on multiple linkages, and the evaluation mechanism based on quantitative assessment. The six modules respectively refer to the general quality curriculum, the professional curriculum based on the life universality, the professional basic curriculum, the professional directional curriculum, the developmental quality curriculum, and the extracurricular practical activities module inside and outside the school, which constitute the curriculum system of higher vocational education.

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References

- [1] Peng Du. Analysis of the Current Situation of Higher Vocational Talents Training Mode[J]. *Frontiers in Economics and Management*,2021,2(2).
- [2] Z.Q. Wu: New Requirements and Path Innovation of Human Capital Development Based on Rural Revitalization, *Theory and Reform*, vol. (2020) No.06, 44-52. (In Chinese)
- [3] Peng Du. Research on the Development Path of Rural Human Capital[J]. *Scientific Journal of Economics and Management Research*,2021,3(2).
- [4] J.P. Zhang: Research on High-quality Development of Higher Vocational Education under the Background of Supply-side Structural Reform, *Vocational and Technical Education*, vol. 40(2017) No.31, 18-24. (In Chinese)
- [5] Peng Du. Research on the Reform Path and Countermeasures of Vocational Education[J]. *International Journal of Social Science and Education Research*,2021,4(5).
- [6] Peng Du. Exploration and Practice of Diversified Talent Training Mode in Vocational Colleges based on the Supply-side Structural Reform[J]. *International Journal of Social Science and Education Research*,2021,4(4).
- [7] X.Zhang, J.E. Guo, K.B. Hao: Research on the Comprehensive "The Supply Front" Reform of Higher Education Promoting the Development of Innovation and Entrepreneurship , *Journal of Xi'an Jiaotong University(Social Sciences)* , vol. 36(2016) No.1, 26-35. (In Chinese)
- [8] J.P. Zhang: Research on High-quality Development of Higher Vocational Education under the Background of Supply-side Structural Reform, *Vocational and Technical Education*, vol. 40(2017) No.31, 18-24. (In Chinese)