

Research on the mode of school-enterprise cooperative education for electromechanical talents in technical colleges

Feng Yan, Yitong Hu, Baochang Wang

Shandong Industrial Technician College, Weifang 261021, China

Abstract: With the continuous development of China's mechanical and electrical industry, the market demand for high-quality mechanical and electrical personnel quantity and quality are constantly improving. In this context, the construction of school-enterprise collaborative education model has been widely used in the mechanical and electrical professional teaching of technical colleges, and has played a huge role in improving the quality of talent training, promoting students' professional skills, professional literacy and promoting the development of students' employment. This paper analyzes the value significance and practice path of the school-enterprise collaborative education mode for mechanical and electrical talents in technical colleges, which is only for reference by relevant people.

Key words: Technical colleges; Mechanical and electrical talents; School-enterprise cooperative education; Value significance; Practice path

As an important training base for mechanical and electrical talents in our country, it can be described as an important "talent treasure house" for mechanical and electrical talents. However, in these years with the continuous development of society, the demand for talents in the mechanical and electrical industry continues to improve, coupled with the lack of deep connection between traditional teaching and enterprises, leading to the problem of "difficult employment" for students and "difficult recruitment" for enterprises. In this context, the General Office of the Central Committee of the Communist Party of China and The General Office of the State Council issued the Opinions on Strengthening the construction of high-skilled talents in the New Era and other documents clearly proposed to actively promote school-enterprise cooperation and build a school-enterprise collaborative education model. It can be said that school-enterprise collaborative education is the only way to improve the quality of mechanical and electrical talents training in technical colleges. In the new era, we should deeply grasp the value implication of this model, based on the characteristics of mechanical and electrical majors, and explore effective school-enterprise collaborative education mode and path, so as to improve the quality of mechanical and electrical talents training at the same time. To cultivate more high-quality and compound mechanical and electrical talents for the society.

I. The value and significance of school-enterprise collaborative education mode for electromechanical talents in technical colleges

1. Cultivating students' ability and promoting all-round development

Objectively speaking, the education of technical colleges belongs to a kind of vocational education for social talents, which also requires that the teaching of mechanical and electrical majors should always start from the perspective of market talent needs, focus on the training of students' professional practice ability and comprehensive ability, build a good image of mechanical and electrical professional talents, and give full play to the social service efficiency of technical colleges. However, in the teaching of mechanical and electrical majors, if you simply rely on the strength of the school to carry out talent training, it is easy to lead to the "decoupling" between education and teaching and the talent needs of mechanical and electrical enterprises and the job requirements, resulting in the emergence of students "employment difficulties" and enterprises "recruitment difficulties". The characteristic of the school-enterprise cooperative education mode is that it can effectively connect the teaching objectives and contents of mechanical and electrical majors with the quality of talents demand and the work process of enterprises, so as to create a new system of talent training based on market demand, promote the cultivation of students' professional ability and employment competitiveness, and escort them for better employment and comprehensive development in the future.

2. Promote education reform and improve teaching quality

Under the school-enterprise cooperative education model, the teaching of mechanical and electrical majors in technical colleges will gradually change and reform in the direction of modernization and diversification. On the one hand, the teaching of mechanical and electrical majors can innovate the teaching objectives and teaching modes, and improve the interest and effectiveness of teaching; On the other hand, mechanical and electrical majors can rely on the strength of enterprises to achieve innovative development. For example, in the teaching process, teachers can draw on the strength of enterprises to optimize and innovate the talent training objectives, talent training plans and course teaching contents, so as to improve the connection and adaptability between the teaching of the major and the needs of social talents, provide students with a "professional" learning space, and promote their integration of "learning", "thinking" and "doing". Effectively improve the teaching quality of the major's foundational education. At the same time, under this model, teachers can be more connected with enterprises, which also helps teachers to have a deeper understanding of the most cutting-edge technology and development trends, and constantly enrich their professional cognition and comprehensive ability. Moreover, from the overall professional perspective, school-enterprise collaborative education can also improve the teacher structure and build a high-quality service team. This will certainly promote professional teaching reform and innovation, and help the teaching quality of this major to a higher level.

3. Promote the development of enterprises and drive the regional economy

The starting point of school-enterprise collaborative education is to achieve a win-win situation between schools and enterprises. It is a characteristic education model that can drive the development of the industry and inject high-quality talents into the regional economy. At present, with the continuous development of China's mechanical and electrical industry, the market demand for high-quality, comprehensive mechanical and electrical talents is also constantly improving. In this context, the previous mechanical and electrical teaching model of technical colleges has been unable to meet the needs of the market. The promotion of school-enterprise collaborative education mode can fully improve the effective connection between the cultivation of talents for mechanical and electrical majors and the talents needs of mechanical and electrical enterprises, promote the improvement of the degree of correlation, adhesion and integration between schools and enterprises, so as to improve the training quality of talents for this professional, while conveying a large number of high-quality, high-skill and comprehensive talents for mechanical and electrical enterprises, effectively promote the development of enterprises. Drive the high-quality development of regional economy and even the overall economy of our country.

II. Practice path of school-enterprise collaborative education mode for mechanical and electrical talents in technical colleges

1. Based on industrial practice, clear education objectives

The goal is the forerunner of action, and the clear education goal is the important foundation of the teaching reform of mechanical and electrical majors in technical colleges. In this regard, in the practice process of promoting the construction of school-enterprise cooperative education model, we must base on the work practice of industry and enterprise to clarify the education goal, and lay the foundation for the improvement of the quality of subsequent talent training. To be specific, first of all, electromechanical professional teachers should actively connect electromechanical enterprises, call and industry, understand their specific information in talent standards, job workflow and other aspects, grasp the new trends of industry development, on this basis, combined with the characteristics of the profession to set the goal of comprehensive, high-quality, application-oriented talent training, help professional personnel training quality improvement. Secondly, professional teachers should focus on starting from the perspective of students, combined with the students' employment intention in the mechanical and electrical industry, together with enterprise personnel to formulate clear learning goals for students, guide them to do a good career planning as soon as possible, so that they can understand their goals and shortcomings, and then provide effective help for their follow-up better learning and growth.

2. Optimize the education system to ensure the effect of education

For mechanical and electrical majors in technical colleges, the optimization of the education system should be fully done under the school-enterprise cooperative education mode, so as to effectively guarantee the training effect of professional talents. In this regard, we must first do a good job in the optimization of the curriculum system. Professional teachers should base on school-enterprise cooperation, fully communicate with mechanical and electrical majors, establish a new bilateral relationship based on cooperation between production and education, develop a variety of education models such as the integration of engineering and work, integration of production and education, provide students with more high-quality post practice and internship opportunities, and promote their post ability and professional ability. At the same time, teachers should also pay attention to the optimization and innovation of teaching content. For example, they can introduce some digital and intelligent knowledge of mechanical and electrical courses based on the actual situation of the current mechanical and electrical enterprises in terms of job standards, content and requirements, so that students can learn more useful knowledge and promote the connection between teaching content and actual work. Secondly, it is necessary to do a good job in sketching the practical teaching system. Here, teachers can cooperate with personnel from mechanical and electrical enterprises to build production-education integration classes under school-enterprise cooperation, unite professional practice teaching and industrial practice, and lay a foundation for the cultivation of students' vocational ability and professional accomplishment. In addition, we should fully optimize the teaching mode. Professional teachers can build modular, project-based vocational education models based on school-enterprise cooperation, introduce some teaching models based on enterprise post work flow into the classroom, promote the integration of students' teaching, and lay a foundation for the cultivation of their professional comprehensive ability. In addition, teachers should also pay attention to the optimization of assessment models. On the basis of teacher evaluation, the evaluation subject should be expanded, student groups and enterprises should be introduced into the evaluation, and a variety of evaluation modes such as group evaluation and enterprise evaluation should be developed. During this period, it is necessary to focus on the integration of enterprises and vocational skill level certificates and other subjects in the evaluation. Here, professional teachers can cooperate with enterprise personnel and vocational skill level certificate institutions to jointly conduct mechanical and electrical professional evaluation. At the same time, they can also build new evaluation modes under the vision of skills competition and 1+X level certificates, so as to optimize the evaluation system. Promote the improvement of students' vocational ability and vocational certificate examination, and provide effective help for their better employment and development.

3. Improving the construction of teachers and raising the quality of education

The strategy of education is teacher-oriented. In the teaching process of mechanical and electrical majors in technical colleges, teachers, as an important guide, have an important impact on students' learning, employment and growth. In order to further promote the cooperation between schools and enterprises, technical colleges should also actively promote the construction of teachers, so as to promote the quality of talent training. To be specific, first of all, we should innovate and promote the work of teachers' internal companionship. On the one hand, we should actively guide teachers to carry out exchanges and promotion among each other, organize "new and old mutual belt" and "pass

along” activities, create a “learning” team of mechanical and electrical professional teachers, and promote the improvement of teachers’ overall educational ability and quality. On the other hand, it is necessary to actively draw talents from enterprises, jointly train teachers based on the post practice and development situation of the mechanical and electrical industry, update the vocational education concept of teachers, and promote the improvement of their educational ability. Secondly, we should constantly improve the structure of teachers and build a high-quality teacher team. On the one hand, we should actively organize school teachers to carry out practical learning and substitute teaching in mechanical and electrical enterprises, improve the structure of teachers and promote the improvement of their professional quality. On the other hand, we can introduce enterprise teachers to act as part-time teachers, create a professional and combined system structure, and improve the overall level of teachers. Moreover, it is necessary to actively promote the cooperation between school teachers, enterprise teachers and personnel of vocational skill level certificate institutions, such as guiding them to communicate with each other, setting up team organizations such as “teaching and research group”, “cross-professional group” and “famous teacher studio” to jointly explore the effective promotion path of school-enterprise collaborative education, so as to comprehensively improve the quality of mechanical and electrical talents training.

4. Strengthen the construction of the base and integrate education resources

In the teaching of mechanical and electrical majors in technical colleges, the practice base, as an important position module, plays a key role in cultivating students’ practical ability and professional quality. In this regard, in the process of promoting the school-enterprise cooperative education mode, technical colleges should also strengthen the construction of the base based on the resource advantages of both schools and enterprises, integrate the education resources of both sides, and innovate the education mode of the practice base. To be specific, first of all, technical colleges should establish a strategic cooperative relationship with mechanical and electrical enterprises, and rely on the resource advantages of enterprises in professional technology, talents and funds to establish a number of modern “school in the factory” and “school in the factory”, laying the foundation for the high-quality promotion of school-enterprise collaborative education model. Secondly, technical colleges and enterprises should also work together to improve the management system of the practice base. For example, both sides can assign professional teachers and technicians to serve as the management positions of the mechanical and electrical professional practice base to provide students with professional guidance and promote the cultivation of their professional literacy. Moreover, technical colleges should also cooperate with enterprises and base on the background of the current digitalization and intelligent transformation of the mechanical and electrical industry, and introduce a large number of advanced technical equipment and management systems to meet the diverse needs of the study, employment and development of technical students under the background of the new era, so as to effectively promote the professional practice and practice of students and promote the cultivation and development of their comprehensive ability.

In short, in the new era, actively promoting and implementing the school-enterprise collaborative education model has become an important reform goal for mechanical and electrical majors in technical colleges. In this regard, the majority of technical colleges and electromechanical teachers should deeply grasp the practical value of school-enterprise collaborative education mode, on this basis, clear education objectives, optimize education mode, build a double professional team, improve the construction of the base, build a characteristic school-enterprise collaborative education mode, comprehensively improve the quality of mechanical and electrical talents training, and help students better employment and development in the future.

Reference:

- [1] Wenli Wu, Yingtian Xie. Research on the practice path of Deepening school-Enterprise Cooperation and Integration of Industry and Education in Vocational colleges [J]. Chinese and Foreign Enterprise Culture, 2023, (10): 205-207.
- [2] Jing Wang. Exploration on the mode of university-Enterprise Cooperation in vocational colleges -- Taking Transportation colleges as an example [J]. Journal of Hubei Open Vocational College, 2023, 36(19): 72-74.
- [3] Jie Chang. Research on Teaching Reform Strategy of Mechanical and Electrical Major in secondary vocational schools under the background of integration of Industry and Education [J]. Paper Making Equipment and Materials, 2023, 52(07): 241-243.
- [4] Zongbao Xia, Xingling Peng. Analysis on Strategies of Deepening school-Enterprise Cooperation in Vocational Colleges [J]. Automobile Maintenance and Repair, 2020, (10): 61-62.