

The Practice of School-enterprise Collaborative Education Mechanism of Modern Apprenticeship under Multiple Platforms

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Abstract: Modern apprenticeship is the hot point in the current vocational education reform in our country; the cooperative education is the core of the modern. Apprenticeship and active exploration and practice in our diverse platform of modern apprenticeship university-enterprise collaboration are an effective means of training. Talents, in accordance with the specifications, the modern apprenticeship training play between the two sides in the process of cultivation of talents advantages, explore the talent training scheme from double subject development, build the curriculum. System and practice base, characteristics of co-construction and sharing of teaching resources, the double tutorial system class management, collaboration between. Colleges double mentor teaching team, make joint student assessment and evaluation system of six aspects, to build a school-enterprise collaborative education mechanism based on modern apprenticeship system, and to provide theoretical reference and practical basis for the innovation and development of technical talents in China.

1. Introduction

The report to the 19th National Congress of the Communist Party of China (CPC) proposed to improve the system of vocational education and training, deepen the integration of industry and education, and the cooperation between schools and enterprises. Social demand for talent is the development trend of diversification, build to market demand as the guidance of the cooperative education mechanism and innovation synergy between colleges education model, promote enterprise cooperation in running schools, colleges and universities and industry cooperation education, employment, cooperation and development, economic development under the new normal is the inevitable choice of higher vocational talents training mode reform, also is the world trend of talent training mode reform.

This topic since January 2017 project, on the basis of extensive research and comparative analysis, the level of project construction in taizhou vocational and technical college modern apprenticeship seven professional pilot study and practice to explore, for example, relying on established college "garden university-enterprise cooperation in running schools council and taizhou vocational education association of university-enterprise cooperation platform, according to the characteristics of the modern apprenticeship, adhere to the university-enterprise cooperation concept of" win-win cooperation "and" cooperation "by service of university-enterprise cooperation ideas, continuously explore profound cooperation system and mechanism, explore the construction of double subject college, according to each branch themselves professional characteristic and educational condition, Create distinctive talent training model, formed a "period of training, engineering alternation, more collaborative education" of the modern apprenticeship training mode, in the course development and construction, teaching team construction, practical base construction, practice teaching organization and management, etc, and the depth of the industry enterprises to carry out all-round cooperation, made a series of reform innovation practice progress.

2. Established the School-enterprise Collaborative Education System and Operating Mechanism

Depends on the school of "park - enterprise - institute of university-enterprise cooperation platform, such as cooperation in running schools council insisted that the university-enterprise cooperation concept of" win-win cooperation "and" cooperation "by service university-enterprise cooperation ideas, centered on talent training, building" the government leading, enterprise participation, all the interaction between colleges, research depth fusion "long-term cooperation mechanism; Perfect college "university-enterprise cooperation council, the council - professional committee (group) and co-management" three-level cooperation platform, constructing professional "enterprise closely - teaching - field work enterprise" three levels of university-enterprise cooperation system, the school formed a "garden university-enterprise cooperation in running schools council as the top of the tower, the council for tower waist, each professional construction committee for Kentucky pyramid top level as a whole, in charge of the work mechanism, university-enterprise cooperation together constitute the college education of effective operation mechanism.

Docking actively explore profound and long-term mechanism of cooperation, revise and improve professional build condominium committee work rules, professional and curriculum construction system, students practice system, each other and mutually between employees and training system, scientific research and technical service system, students' cooperative employment system and so on, the construction of teaching, scientific research, information, service and employment "five one" university-enterprise cooperation management platform. According to the characteristic of cooperative enterprises and advantage, take different cooperation mode and content, issued "about building the" close cooperative enterprises - teaching - field work enterprise "three level system of university-enterprise cooperation guidance documents, accurate positioning in the contractual joint venture, in seven key professional comprehensive promotion on a trial basis, and achieved good results, firmly grasp the basic demand, cooperation between colleges implement university-enterprise cooperation.

Cooperating with large and medium-sized enterprises, we have built five double-body colleges: yangzijiang college, angel college, zhengtai college, zte communication information college and Goethe business school. Institute of "double main body" to "two-way four fusion" education, to explore cooperation in running schools with large and medium-sized enterprises established public higher vocational colleges in the new model, the full implementation of the management integration, integration, innovation, production and education integration, culture integration, improve the planning and management, the joint construction and sharing together results, risk mechanism, realize the win-win. Especially in the school of mechanical and electrical technical college and college of pharmacy and the Yangtze river pharmaceutical group co., LTD. The depth of cooperation, to build "the Yangtze river institute" the common implementation of two professional materials to "modern apprenticeship" with high satisfaction and student satisfaction of enterprise, to stay in the group work of graduate employment quality, and the state is higher, and as a typical case reports submitted to the ministry of education enterprise.

The school-enterprise cooperation center was established, which was responsible for the unified guidance, coordination and management of school-enterprise cooperation. Constantly improve the "school-enterprise cooperation management website", build a network exchange and management platform for school-enterprise cooperation, release important cooperative enterprise information, timely report school-enterprise cooperation information and results, etc. System (repair) formulated a series of guarantee operation system, mainly including: "school-enterprise cooperation management measures", "school-enterprise cooperation reward measures", "school-enterprise cooperation assessment rules", "double-main body college management measures" and so on.

3. Formed a Modern Cooperative Mode of Training Talents through Apprenticeship with Distinctive Features of "Segmented Training, Alternating Work and Study, and Collaborative Education"

Under the guidance of the talent training mode reform of "one unified, two double and five docking" of the college (one unified: serve the transformation, upgrading and integrated development of local industries as the main line to lead the talent training work. Five docking: professional and industrial docking, course content and professional standards docking, teaching and production process docking, academic certificate and vocational qualification certificate docking, vocational education and lifelong learning docking). We have integrated core socialist values, innovation and entrepreneurship education, and the spirit of craftsmen into the whole process of talent training. Such as pharmaceutical production technology professional "three division team, engineering alternation, dogon rotational" modern apprenticeship training mode, electromechanical integration technology professional "four period of training, engineering alternation, cooperative education" modern apprenticeship training mode, construction engineering technology specialty "1 + 3 + N" of "three period of training, cooperative education" modern apprenticeship training mode ("1 + 3 + N" form apprenticeships enterprise network, "1" refers to the profound integration platform of production and education of civil engineering, "3" is based on three large super enterprise is given priority to, make group, jiangsu a build, build a game, "N" is N medium-sized construction enterprises is complementary, mainly "jiangsu yongtai building", "jin hui group", "Thai construction group", etc.), the nursing of "protection of teaching fusion, alternate" modern apprenticeship training mode, the mobile communication technology professional "(student/apprentices/prospective employees) of the trinity, the dogon training in rotation" modern apprenticeship training mode, hotel management professional, modern apprentice "three, four joint personnel training mode.

4. Set up a Series of Management System of School-enterprise Collaborative Education

Is gripper with double subject construction of the college, in seven major modern apprenticeship in the process of the implementation of the pilot program, developed a series of various management system between colleges, such as the modern apprenticeship system of the working group in consultation with, "modern apprenticeship selection system", "students, school and enterprise three parties agreement", the development of modern apprenticeship curriculum system, the modern apprenticeship teaching quality guarantee system, the system of students (apprentice) internship management, "modern apprenticeship recall system", "modern apprenticeship instruction manual evaluation (including content), the system of modern apprenticeship to leave. Formulated the "modern apprenticeship master selection criteria of enterprises", "modern apprenticeship school teacher job", "excellent teacher selection rules and rewards method" apprentice teacher and school teacher management system, such as the educational work, standardizes the synergy between colleges fully arouse the enthusiasm of the school and enterprise collaborative education, formed to professional teachers and staff double interaction, the dual together, common good atmosphere of curriculum development, implementation and evaluation, provides institutional guarantee for the cooperative education between colleges.

5. The Program of Professional Talents Training and Teaching Standards Suitable for Modern Apprenticeship have been Formulated

The core of major construction is talent cultivation program, and the emphasis is curriculum construction. In common between colleges for professional training target, on the basis of school organizational experts and industry enterprises jointly developed suitable for modern apprenticeship for university key teachers from the talent training scheme, teaching, curriculum standard master, post standard, enterprise standard, the standard of the quality control and the corresponding implementation plan, through the joint between colleges teaching and teaching management, to

ensure that training high technical skills to meet the needs of industry transformation and upgrading of talent.

6. Built an Excellent "Engineering-oriented" Teaching Team that Combines Professional and Part-time Teaching

High-quality teacher team is the core of professional construction, is the key to determine the success of professional construction, through the following measures, to build a combination of professional and excellent teaching team.

Improve the teaching team building system and mechanism; We will make arrangements for teachers to go abroad for training and degree training, and keep up with the forefront of professional technology and vocational education reform. Arrange teachers to participate in various types of vocational education training through multiple channels to cultivate teachers' advanced vocational education concepts and professional skills; To strengthen the incentive mechanism and assessment system for teachers to practice in enterprises and improve their practical ability and technical service ability; Strengthen the employment of part-time teachers in industrial enterprises, and make them play a better role in teaching through incentive policies. Encourage teachers to actively participate in professional construction and curriculum reform; Advanced management culture construction.

Through the implementation of the "continuous double-qualified" project and the "temporary employment of large and complex projects" project, full-time teachers will regularly go into the front line of the project, deeply experience the enterprise culture, and improve their engineering practice ability and practical teaching guidance ability. The project of "improving vocational education ability" has been implemented to carry out regular theoretical training on vocational education teaching for part-time teachers to improve their teaching ability. At present, a dynamic "resource database of part-time teachers" has been established for about 200 people.

Master teacher famous studio university-enterprise cooperation project, and each other and mutually credentials the exercise, two-way, constructing university-enterprise teachers collaborative training mechanism, the total set course teaching team and typical synergy in actual engineering projects construction, promote the between teacher and teacher answers, complement each other, mutual promotion, guide them jointly carry out professional training project construction, development and carry out horizontal joint technology research and development. It has a resource base of 58 famous teachers and 136 excellent enterprise talents, 15 master (famous teacher) studios, 3 industry professors in jiangsu province and 39 part-time professional leaders in enterprises. Each branch organizes famous teachers to participate in professional construction, education and teaching reform, teacher pair training and other work, giving full play to the important role of enterprise talents in talent training. Two teaching teams of architectural engineering technology and mechatronics technology were awarded as "blue engineering" excellent teaching team of jiangsu province.

7. Developed Core Curriculum Teaching Resources and Modern Apprenticeship Training Programs

On a large number of real integration programmes, such as "programming and debugging of PLC control system", "building materials inspection and acceptance", etc., by a mix of double head between colleges teaching team, in the actual engineering project as the guidance, focusing on ability training, integrated into the content of the relevant professional qualification standards, the development of the corresponding project materials and typical case, bank micro video library, problem sets, paperless test system for examination and assessment of relevant teaching resources, etc.

For modern apprenticeship training project, according to "phases, hierarchical, and gradually in-depth work situation", the principle of common development between higher vocational colleges and the construction based on vocational ability training has the characteristics of modern

apprenticeship "special skills", "comprehensive practical skills", "working skills" three series of training program and the corresponding training practice and skill examination exercises test library and related practice teaching resources. At the same time, the system of "dynamic updating of teaching resources" has been established to timely increase teaching resources reflecting new materials, new technologies, new techniques and new standards of the industry, so as to ensure the typicality, progressiveness, inspiration and innovation of course teaching resources.

8. "Park, School and Enterprise" are Jointly Built and Shared to Build a Six-in-one Comprehensive Practice Platform of "industry-university-research-development-innovation-competition"

Profound fusion concept as a guide, with the garden "park - school - enterprise" depth fusion, multiple inputs, tripartite cooperation sharing, follow the "sharing of resources, talents produced, achievements and common sharing, Shared accountability management, collaborative development" the principle of overall planning the school practice base construction, promote the optimal allocation of resources and sharing, the professional team, the argument on the basis of investigation and invited both universities, industry experts to carry out the construction plan of the enterprise, scientific decision making construction plan, strive to comprehensive practice platform can meet the current group of teaching, training, scientific research and technical services, such as need, It can also take into account the needs of professional dynamic adjustment and optimization. The campus training base will be built into a comprehensive practice platform integrating production and education with six functions, including first-class facilities, first-class environment, first-class management and first-class service.

Nearly three years, big butt area health industry and intelligent manufacturing industry chain, for the pharmaceutical technology, intelligent manufacturing, health care, commerce and trade circulation, information services, construction technology of "six professional group, an annual investment of more than 4000 ten thousand yuan, total 120 million yuan has completed the" workplace, intelligent, informatization, marketization "characteristics of the" drug manufacturing, intelligent manufacturing, nursing rehabilitation, commerce and trade circulation, information technology, construction engineering technology "six big comprehensive practice platform. The platform includes 131 comprehensive experiment and training rooms, with a total area of 85,485.71 square meters. The total value of teaching equipment and equipment assets is 130,363,600 yuan, with 15,124 sets of equipment. The average value of teaching and research equipment is 14,300 yuan per student.

We will strengthen institutional building, introduce resources from industrial enterprises, and invest more in them. Based on the concept of enterprise virtual management and market operation, we should innovate the management system and operation mechanism of the integrated practice platform, build the information service management system of the integrated practice platform, promote the management information and open service, and constantly improve the use efficiency, service capacity and level of the training base. The college has issued the management measures for school-enterprise cooperation, the operation management and performance appraisal measures for the training room, and the implementation opinions on the open sharing of resources, effectively ensuring the operation and sharing of the comprehensive practice platform.

9. Improved the Evaluation and Monitoring Mechanism based on Informatization and Diversification

University-enterprise jointly developed the "professional courses aiming at ability evaluation, process evaluation as the means, multiple evaluation method, comprehensive effect for the word" assessment standards and the implementation plan, perfect the "project orientation, task driven, competence-based, students main body" teaching quality monitoring system, the establishment of a dynamic, flexible, diverse collaboration between colleges quality monitoring system of talents cultivation, establish information monitoring platform, the formation of the quality of the fast and

efficient action mechanism.

10. Conclusion

Profound cooperation, the collaborative education training system and the establishment and perfection of the mechanism is a long-term process, the current college management system construction, only in the cooperative education between colleges fusion education training platform construction, the combination of ZhuanJian teaching team construction, modern apprenticeship, coordinated development between higher vocational colleges and professional talent training mode core curriculum has made some preliminary research and exploration, etc. In the process of deepening cooperation between universities and enterprises, there will be many new problems and new topics, which require us to continuously explore and study in practice.

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