

Innovation and Practice of Talent Cultivation Based on "1 + N" Skills of Industry and Education

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Abstract: By expounding the specific measures of the integration of production and education to build an "integrated teaching" training base and the construction of "integrated teaching" faculty, we will introduce the implementation plan of the "1 + N" innovative talent training for the integration of production and education skills, and promote "people" Everyone can be talented, everyone can show their talents. The characteristic practice of good education environment, clarify that the teaching content of higher vocational education should come from the production practice, and must follow the technological innovation of enterprise projects, and the teaching content is often taught new and new. The integration of study and research is a prerequisite.

1. Introduction

"Cultivating people and cultivating people for them" is the first goal to be clarified in the training of talents in higher vocational education. "Where to teach, what to learn, where the content of teaching comes from" is the precondition for determining the goal of training talents in higher vocational education. It is the key to professional talents to enter the industrial chain by transforming the production and application practices of enterprises into teaching resources and making the teaching content and the direction of industrial common technology development.

The initiatives such as "Made in China 2025" and "Belt and Road" put forward higher requirements for the quantity and quality of artisan skills innovation talents. Higher vocational colleges need to jump out of "professional" and build vocational education and industrial industry demand to connect and deepen production. In order to promote the integration of the talent chain, the industrial chain and the innovation chain, the combination of theoretical knowledge and practical ability, the integration of cultural literacy and technical skills, and the combination of innovative entrepreneurship and professional education, "1 + N" Innovate talents to achieve "everyone can be talented and everyone can show their talents"[1]

2. Jointly build an "integrated teaching" training base

The construction of vocational training base is the necessary basic condition for cultivating high-quality technical and skilled talents, and it is also an important part of higher vocational education. Therefore, in order to meet the needs of practical teaching, our electronic professional strengthens

contact with enterprises and continuously expands the off-campus training base. On the basis of extensive research and full argumentation, we have chosen enterprises with advanced production technology, strong technical force, high management level, sufficient production tasks and meeting the requirements of electronic professional training, and adopted the joint construction of schools and enterprises. The school and enterprise co-construction and school-enterprise co-management, which integrates enterprise production and training, are integrated. The school and enterprise win-win production and education integrates the off-campus training base, making the school training base become the “factory middle school” . At present, more than 10 stable off-campus training bases have been established, which can be used for cognitive internships, electronic instrumentation training, electronic instrumentation training, electronic measuring instrument training, electronic skills comprehensive training, and post-training And to achieve employment[2].

Based on the principle of “production, openness, and sharing”, the construction of the campus training base has jointly created a factory-based training base and a workshop-style training room, creating a true “enterprise” education environment. Cooperated with the enterprise to complete the transformation of the old equipment in the school, and built a comprehensive training base in which the typical teaching products are the real production tasks of the enterprise, integrating teaching, training, skill appraisal and production technical service functions. Focus on the construction of "training center", "teaching factory", "technical application center", "college student innovation and entrepreneurship center", "social service training center" and "enterprise expert workstation" 6 types of platforms. It not only satisfies the needs of the college for integrated teaching, on-site teaching, simulation training, and innovative practice, but also meets the needs of the college for the skills training of enterprise employees, and can use the equipment conditions of the training base to organize students to complete enterprise orders. To make the school's training base a "school in the school." The training base is arranged according to the style of the production workshop of the enterprise, and hangs and posts production marks, operating procedures, professional behavior norms, etc., so that students can be influenced by the rich professional environment as soon as they enter the training base[3].

The construction of the production and education integration training base has realized the integration of theoretical teaching and practical teaching places, the integration of theoretical teachers and practical guidance teachers, the integration of teaching content and production tasks, the integration of students and employees, teaching and research. Integration of integration, training and identification. Schools and enterprises jointly built a training base, enriched the practical teaching resources, promoted the simultaneous upgrading of professional education and industrial technology development, cultivated students' ability to innovate and innovate, enhanced the ability of the vocational education service industry, and opened up a wide employment market.

3. Co-constructing the "integrated teaching" faculty

3.1. Created a "three divisions, three can be combined" high-level teaching team

Relying on the College Teacher Development Center and the “famous teacher” training program, we will build a platform for teachers to grow and strengthen the cultivation of outstanding key teachers. We will build a “Educational Teaching Ability Enhancement and Cultivation Platform”, “Production Practice Ability Enhancement and Cultivation Platform” and “Social Service Ability Enhancement and Cultivation Platform”. 3 large platforms. The implementation of the "famous teacher project", the establishment of "famous teacher studio", to achieve the training of young backbone teachers. Organize teachers to participate in educational and teaching activities competitions, and improve teachers' teaching and teaching abilities. At the same time, the young

and middle-aged teachers will be organized to participate in the vocational skills competition, and the teachers' practical ability will be assessed according to the standards of the employees, and the teachers' practical ability will be improved. Relying on the Virtual Instrument Application Technology Center and the Intelligent Measurement and Control Technology Collaborative Innovation Center, more than two "Enterprise Expert Workstations" were established in the school to train and improve the technical service capabilities of teachers. At the same time, the "three down" system for young teachers will be implemented for a long time, and the practical training room, the lower applied technology center, and the lower enterprises will carry out practical exercises, and focus on cultivating the "three-in-one" ability of professional young backbone teachers.

3.2. Schools and enterprises have jointly established a faculty team of "School-enterprise integration, mutual engagement and mutual engagement"

Strengthen in-depth cooperation with electronics companies, implement professional leadership talent introduction programs, and introduce two industry enterprise experts as professional leaders. Relying on the college's "workable craftsman to enter the campus plan", the company hired the skilled craftsmen to be part-time teachers, introduced the enterprise project into teaching, and promoted the "double tutor" teaching of professional courses. More than 30% of the professional courses were taught by part-time teachers. At the same time, it strengthened the training of part-time teachers' educational concepts, teaching methods, teaching theories, etc., and continuously improved the ability of part-time teachers to teach and educate, thus greatly enhancing students' ability of innovation and entrepreneurship. Intensify the incentive policies for part-time teachers, strengthen the training and management of part-time teachers, and introduce part-time teachers to participate in teaching research projects to improve the teaching ability of part-time teachers. Relying on backbone electronic cooperation enterprises, we have established more than three "teacher practice workstations" in Huafu Thermal Power, Dandong Sikai Electronic Development Co., Ltd. and Liaoning Dongfa Electronic Technology Co., Ltd., participating in enterprise project research and training to improve teachers' skills. Service capabilities.

4. Conclusions

Based on the innovation and practice of "1 + N" talent training in the combination of art and education, it has the characteristics of co-construction, openness, sharing and innovation. It has built a school-enterprise joint construction, school-enterprise co-management, school-enterprise win-win, and teaching and training. , the vocational training appraisal, technical service, production as one of the training base, innovatively carry out the "modern apprenticeship class" and "order class", the construction of "factory middle school" and "school in the factory", created "enterprise experts The "Workshop" and "Teacher Practice Workstation" vigorously promoted the "double excellent, double class, double high" mode, established the "excellent technician class" and promoted the "professional mentor system". Rationalize the content of teaching and learning, optimize the environment of teaching and research, and realize the integration of teaching, research and service. Students in the project-oriented training room and enterprise work site with real career situations, work-learning and vocational skills training, in accordance with the electronic industry standard procedures for rigorous assessment, enhance the students' professional skills, cultivate the students' craftsmanship, and improve The students' innovative and entrepreneurial ability has formed a "1 + N" talent cultivation innovation model with students as the main body, the school and the enterprise as the guides, "learning to do, doing middle school", and teaching and production interaction. The products such as "Digital Voltmeter", "Intelligent Instrument" and "Digital Frequency Meter"

produced by students in the “Integration of Production and Teaching, Integration of Engineering and Learning” are very representative. Students can master the professional skills of electronic majors and complete the products. Can also be sold, students feel a sense of accomplishment, and beneficially mobilize the enthusiasm of students. Through the implementation of the innovative practice of “1 + N” talent training in the skills of industry and education, the students' vocational skills have been greatly improved. Up to now, more than 1,000 intermediate-level assessments have been completed, the intermediate qualification rate has reached 100%, and the senior qualification rate can reach over 99%. The training effect is very good. Relying on the "Virtual Instrument Application Technology Center" and "Intelligent Measurement and Control Technology Collaborative Innovation Center", we carried out technical services and project promotion work, and cooperated with electronic enterprises to complete projects such as design and development of electronic measuring instruments, commissioning and maintenance of intelligent instruments, and transformation of electronic process production lines. Complete 4 to 5 technical service projects each year. Students who have received the “1 + N” talent training of the industry and education integration craftsmanship have won many awards in the National Vocational College Skills Competition (Higher Vocational Group) and the National Undergraduate Electronic Design Competition. Among them, in the 2018 National Undergraduate Electronic Design Competition, won the first prize of Liaoning Higher Vocational College.

Based on the innovation and practice of “1 + N” talent training in the combination of art and education, the company participates in the whole process of professional construction, curriculum construction, education and teaching, talent quality evaluation and employment and entrepreneurship, and reconstructs the results-based (OBE The curriculum system has created a good environment in which “everyone can be talented and everyone can show their talents”, and jointly cultivate the “1 + N” talents of the production and education integration craftsmanship skills (ie, a specialized professional talent training program, N individualized training programs, including micro-professional training programs, excellent technician training programs, skills competition training programs, research assistant training programs, and Sanchuang (creative, innovation, entrepreneurship) training programs, etc.). At the same time, according to the development needs, continue to expand the individualized personnel training program. It has created the talent cultivation characteristics of “integration of production, study and research, integration of teaching and competition, and mutual exchange of engineering and learning”, and promoted the spirit of artisans and jointly cultivated innovative talents of artisans.

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