

Research on the Cultivation Path of Modern Apprenticeship "Double Tutor" from the Perspective of School-enterprise Community

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Abstract

The construction of "Double Tutor" teaching team is the key to the cultivation of high-quality technical and skilled talents in modern apprenticeship system, but it is also the difficulty to promote modern apprenticeship system. The construction of the modern apprenticeship "double tutor" teaching team requires the two sides to establish the mechanism of talent recruitment and mutual use, and realize the sharing of talent resources. It is necessary to strengthen the assessment and evaluation of the teaching ability and professional technical ability of professional teachers and enterprise masters from both sides of the school and enterprise, and establish an admittance-evaluation-withdrawal mechanism. It is necessary to establish a sound "double mentor" daily management system and relevant institutional contracts to ensure the legality and standardization of the implementation of modern apprenticeship.

Keywords

University-enterprise Community; Double Mentor; Cultivating Way.

1. Introduction

The central committee of the CCP, the State Council on deepening the reform of the new age teachers team construction comprehensive opinions (found [2018] no. 4) pointed out: in order to meet the development of relative industries, meet the demand of global industrial competition, strong support for vocational colleges to set up the teacher flow, implementation of fixed and mobile establishment teacher job management system reform, vigorously introduce industry enterprise senior technical personnel and skilled personnel and senior management personnel, as vocational colleges part-time teacher. Therefore, it is an important task for the pilot work of modern apprenticeship to build a team of teachers by schools and enterprises [1].

The teaching team of modern apprenticeships is made up of school teachers and business masters, who share the teaching tasks. The construction of School-enterprise "double mentor" team is one of the key factors for the smooth development of modern apprenticeship, because under the talent training mode of modern apprenticeship, "double mentor" team plays an irreplaceable role in the formulation of talent training standards and teaching standards, the construction and development of curriculum system, and the examination and evaluation of teaching implementation. Because in recent years, schools for the "double type" teachers team construction the importance of continued to deepen, the proportion of vocational college "double type" teachers improve, but because of the restriction of the realistic factors, and the lack of a scientific project of cultivating "the double teacher" and selection, standards, the authority of the vocational colleges teachers team construction is still very prominent problems, and to a certain extent, affected the modern apprenticeship "the double teacher" team construction. First, most professional teachers in vocational colleges and universities graduate from ordinary colleges and universities. After graduation, they go to teaching posts directly.

After working, they are less likely to work in enterprises, thus lacking in professional skills and practical ability. 2 it is enterprise selection apprentice chef, to master the business skills as the main basis, to "technical experts" and "industry elite" as an apprentice chef, apprentice chef is good professional skills, but insufficient understanding of connotation of the modern apprenticeship, and no relevant education knowledge and methods, teaching ability is insufficient, lack of effective quality monitoring the teaching process. On the whole, although the "double tutor" team has been formed, high quality teaching results cannot be achieved due to the lack of effective communication between the tutors of both sides and the separation of teaching links. Third, the incentive and promotion mechanism of enterprise masters has not yet been formed, and it is very difficult for the assessment, reward and promotion of enterprise masters to be incorporated into the internal assessment system of enterprises. For enterprise masters, they have to undertake the task of training apprentices while completing their own work, which requires more learning and efforts. However, the incentive and promotion standards for apprentices in enterprises are still in the absence of a state, resulting in low enthusiasm of enterprise masters. For example, the furniture pilot major in our school has established a "double tutor" team together with the enterprise, but because the enterprise itself needs to put into production, the number of mentors and the time devoted to teaching are very limited. Fourth, enterprise masters do not have a proper understanding of higher vocational education and the importance of collaborative education. They think that the training of students should be the school's business, did not understand that attention to education, understanding education, in-depth education is the cause of social concern, there is no unity in thinking [2].

2. The Innovation of the School-enterprise Co-education "Double Tutor" Mode

In the whole pilot process of modern apprenticeship, the main body that undertakes the education function is the school and the enterprise, that is, the School-enterprise cooperation education, the student is the only object of the "double tutor" education, while the government and the industry association play more peripheral support and promotion role. According to the pilot experience of modern apprenticeship system in China and the practice of our school's self-pilot, the "dual mentor" education mode is mainly realized through the following "six common" : To work out a plan of recruit students employment integration for (such as Rayleigh integration class implementation agreement), jointly set the pilot scheme of talent cultivation, to establish a professional talent training standards (e.g., product process quality acceptance standard, apprentice learning summary evaluation standard, design presentation skills certificate examination standard, drawing advanced skills assessment standard, the text language elementary skills assessment standard, image language skills assessment standards, etc.), common to write related professional curriculum, to form a "double teachers" teaching team, joint consultation, formulate a set of related management files (such as mentoring weekly working procedures, the apprentice Negotiation standards, Apprentice daily meeting procedures, Apprentice dropout procedures, attendance management procedures, etc.).

3. The Measures of "Double Tutors" in School and Enterprise Education

3.1. Open up Channels to Establish a Mechanism for Mutual Employment of Teachers between Schools and Enterprises

Schools need to pilot modern apprenticeship system, and both schools and enterprises need to jointly complete this task. Reciprocity between the two sides lays a foundation for the construction of School-enterprise mutual recruitment of teachers [3]. In the construction of

professional teachers, the combination of training inside and outside the school is adopted, and the two sides jointly establish the situation of training "double tutors". Professional teachers in the school go to the enterprise to participate in industrial training, enterprise management and technical operation, and professional teachers will learn from the enterprise into the classroom, to further improve the timeliness and practicability of teaching. At the same time, it is also necessary to employ enterprise management personnel with solid theoretical knowledge and rich management experience to participate in the formulation of courses and the construction of practical teaching in the school as enterprise masters. In terms of training professional teachers, we should also make use of the advantages of both platforms to train a group of teachers who have both theoretical knowledge and practical experience, so as to achieve the training goal of high-quality skilled personnel.

3.2. Pay Attention to Evaluation and Develop the Teaching Evaluation Standard System of "Enterprise Master"

First, according to the professional teaching standards of the school, the practical teaching work of "enterprise masters" should be evaluated reasonably, and the "enterprise masters" should be carried out in accordance with the teaching evaluation standards, and the evaluation mode of development evaluation and performance quantitative evaluation should be implemented as far as possible. Through the combination of qualitative and quantitative assessment, and the combination of performance evaluation and development prospect, it provides a realistic basis for the teaching evaluation mechanism of "enterprise master". Second, according to the school "evaluation" requirements, reasonable evaluation of students' learning state and effect, to help students improve their learning; Promote "enterprise masters" to change ideas, improve teaching methods, improve teaching quality; Adhere to the "evaluation of learning" as the focus, "evaluation of teaching" and "evaluation of learning" combined principle, reasonable establishment of "enterprise master" teaching evaluation system.

3.3. Establish a Scientific System and Improve the Daily Management System of "Double Tutors"

Taking the furniture major pilot program of our school as an example, this major has developed a relatively complete management system in the pilot process of modern apprenticeship system. First, formulated the "apprenticeship management standard" the apprentice to the company standards, "the" management procedure of check on work attendance "" attendance management standard" the apprentice management standard "" point management standard" the apprentice rewards and punishment standard "the apprentice reward standard" the apprentice school program "and a series of apprentice daily management procedures and standards, specific provision apprentice work period, and make clear rules to discipline and discipline, and ensure that learning rules-based during" the apprentice ". Second, formulated the "master weekly meeting program" "teacher and pupil weekly work program" "standard of teacher and pupil weekly work" the apprentice, meeting the program "the apprentice meeting standard" the apprentice work shows the standard "the apprentice learning summary evaluation standard" the textbook learning evaluation criteria such as study, work process control procedures and standards, real-time monitoring apprenticeship days, weeks of completion of the plan. Thirdly, the assessment standards such as "Design Expression Skills Certificate Assessment Procedure", "Skills Certificate Examination Work Procedure", "Design Expression Skills Certificate Assessment Criteria", "Drawing Language Primary Skills Assessment Criteria" have been formulated to enable students to obtain corresponding vocational qualification certificates during the "apprenticeship" period. Finally, established the "Wenzhou furniture of Wenzhou vocational and technical college school teachers management mechanism, the" Wenzhou furniture of Wenzhou vocational & technical college school teacher management mechanism for implementation of the master station's handbook and other

important management files, specify recruitment and expansion of modern apprenticeship "double teachers" teaching team, is a professional modern furniture apprenticeships provide institutional guarantee pilot work.

3.4. Set Indicators and Build the Access Mechanism for "Enterprise Masters"

School after consultation and cooperation with enterprises, by reference to professional teachers ability requirements and measures for the management of practical teaching, from strengthen teachers' professional morality, teaching ability, professional and technical, practical ability in four aspects to develop "business masters" access index and content of specific indicators, such as "corporate masters" age, educational background, technical skills, qualifications, technical level, technical services, job skills, etc., and its target as "enterprise masters" understand teaching content and teaching ability of access. Secondly, the cooperative enterprise selects technical experts and management backbone to undertake the post practice teaching task according to the four aspects of teacher ethics, teaching ability, professional technology, practical ability and so on. Thirdly, for the "enterprise master" recommended by the cooperative enterprises, the school adopts flexible employment methods in combination with the management methods of part-time teachers of the school to further standardize the appointment procedure of "enterprise master" and form the access mechanism of modern apprenticeship system "enterprise master" [4].

3.5. Collaborate with Enterprises to Build a Curriculum System based on Production or Work Process

School in the construction of curriculum system, it must be bold and get rid of the traditional subject system, or work around the production process in the restructuring of the knowledge and ability, to the students' professional knowledge, cultural quality, professional skills, professional ethics and other organic merged into the field of curriculum system, and joint development between higher vocational colleges teaching materials and handouts joint arrange the teachers teaching, training and joint use of campus off-campus practice teaching practice and field work alternates, outstanding secondary school, learning to do, do in this way can we truly learning process as opposed to a production process, to narrow the gap between what they have learned in school and the enterprise used, To lay a solid foundation for the future employment and entrepreneurship of apprentices [5].

4. Effectiveness and Experience of the "Dual Tutor" Mode of School-enterprise Co-education

4.1. Support from the Government, Industry Associations and Enterprises is the Premise for the Effective Operation of the "Dual Mentor" Model

We can directly draw the conclusion from several specialties of modern apprenticeship pilot in our school that the effective operation of modern apprenticeship "dual mentor" mode requires the initiative of relevant departments of local government, industry associations and enterprises. Such as Ryan's school of Raleigh materials to modern apprenticeship, can truly achieve the recruitment of students recruitment integration is the most thorough execution, first of all, the local government's support, support the inner need of the development of the enterprise transformation, feeling the enterprise most in need of professional skills, technical personnel, is the most effective for local businesses, industry and urgent support, therefore, ruian bureau of education on behalf of ruian government, involved in the pilot modern apprenticeship agreement of party government, promote the modern apprenticeship the signing of the agreement, through higher in the effective implementation of the modern apprenticeship, barriers to effective breakthrough in the enrollment system; Followed by Raleigh group as a ruian first-class enterprise, due to the needs of the development of

enterprise itself, from strategic attention to the cultivation of professional talents and supply, there is no doubt enhance the common desire to develop talent, enterprise and school are willing to financially support the development of the pilot project, this is the "double tutors" mode to keep the most important and necessary conditions; There are mainly small and medium-sized enterprises in wenzhou region economy is given priority to, like Yu Ruili group with annual sales of tens of billions of enterprises, so the industry association play a role of bond becomes particularly important, wenzhou is a industry association is very developed area, known as the next government, to the enterprise's influence is big, can fully mobilize the power of the industry leading enterprises, forming resultant force.

4.2. Starting from Professional and Enterprise Needs is the Logical Starting Point for the Practice of "Double Mentor" Mode

From the pilot situation of modern learning system pilot major in our school, the school should support the major from the characteristics and needs of professional teachers, according to the actual needs of enterprise teachers, self-pilot, pay attention to practical results. From the point of view of professional skills, the majors that require continuous in-depth development of skills and continuous accumulation of learning are suitable for the "dual tutor" model of modern apprenticeship. In professional design classes in our school, for example, choose furniture design and manufacturing professional pilot, such inheritance, need quality need to continue to accumulate, the professional teachers require after a certain period of teaching practice as the "master" in the industry, and the teacher's point of view, from the enterprise in the industry to become the "master" after can play the function of teaching in colleges and universities and was awarded the title of "visiting professor", is also on its achievements in his career.

4.3. Selecting Cooperative Enterprises is the Key to the Successful Operation of the "Dual Mentor" Model

From the experience of foreign modern apprenticeship, enterprises need to go through registration or some identification procedures to participate in apprenticeship. As one of the important subjects of apprenticeship talent training mode, enterprises' own scale, training ability and the quality of enterprise masters are greatly related to the quality and effect of apprenticeship training. Therefore, qualification requirements should be set for enterprises participating in apprenticeship training, and the "soft" and "hard" conditions of enterprises should be reviewed or registered. Select management advanced enterprise cooperation is the prerequisite for the implementation of modern apprenticeship, cooperative enterprise should choose the local leader in technology and management representative, such companies in order to guarantee the lead of the industry, about the quality of the talents demanding and school pilot professional cooperative enterprises impulsion are from enterprise demand for high quality employees. In terms of human resource management, this kind of enterprise pays attention to the development of employees, and has a relatively perfect internal employee development and training system, and a special team of trainers. For example, among the enterprises cooperating with the pilot majors of our school, Ruili Group has a large scale and relatively standardized management. Therefore, it is easier to reach an agreement with the school in the cooperation, and the interests can converge. Another example is CRRC Corporation, which has world-class production level. Therefore, the enterprise can provide sufficient work stations, enterprise teachers and training materials, and students' safety and management can be fully guaranteed in the process of internship and study in the enterprise. Secondly, enterprises should have strong scientific research and training capabilities. Modern apprenticeship requires cooperative enterprises to participate in the whole process of recruitment, education and teaching, assessment, employment and other personnel training. Cooperative enterprises should also have a certain degree of visibility and scale, which determines the attractiveness and training scale of enterprise apprenticeship training. In

addition, through the coordination between the government and the industry, enterprises of the same kind can be united to build a vocational education group, so as to enhance the strength of enterprises to participate in the modern apprenticeship system.

4.4. The Reform and Innovation of Teaching Mode is the Driving Force for the Practice of "Double Tutor" Mode

In the pilot process of modern apprenticeship system, through the "dual" structure of school and enterprise, build a curriculum system in line with professional characteristics and industry needs; Double teachers as the main body, to build a hierarchical teaching team; The introduction of enterprise quality management system, implementation of project-based teaching management and assessment, and other ways to promote the reform and innovation of teaching mode. For example, in the pilot program of furniture design and manufacturing in our school, the School-enterprise "dual responsible person system" is implemented. With apprentices as the top service object, three service departments of "classroom (studio)", "workshop" and "administration" are established. The tasks of each department are clearly divided and responsibilities are clear, and the flat operation is implemented. The project guidance team composed of "double teachers + senior students" implements the "wrong grade" type guidance, which effectively alleviates the contradiction of "fewer teachers and more students". Taking productive and R&D projects of enterprises as the teaching carrier, teaching is carried out in the whole process of docking with the content of work posts; Introduction of enterprise three tables in teaching management to effectively connect and monitor enterprise teaching projects; The weekly meeting system is implemented in daily teaching, which is conducive to real-time monitoring of learning results and effective training of apprentices' organizing, summarizing and expressing abilities. Achievement assessment with exhibition as the core, to encourage apprentices and enterprise masters to constantly improve themselves. Through the above effective reform and innovation, the pilot of furniture design and manufacturing has greatly improved the quality of personnel training and the adaptability to the needs of the industry and enterprises. The average starting salary of graduate apprentices is 60,000 RMB/year. The apprenticeship achievements have participated in international furniture exhibitions for four consecutive years, and the training mode has been highly recognized by industry experts.

5. The Contract and Management System is an Important Guarantee for the Operation of "Double Tutor" Mode

All the pilot majors in our school have signed relevant contracts or agreements with the government, industries and enterprises during the pilot process. For example, Ruili Pilot Class has signed the Four-party Agreement on Integration between Ruili College and Ruili Group, Letter of Intent for Enrollment of Ruili Order Class, Implementation Agreement for Ruili Integrated Class, and Agreement for Pre-employment Class on Integration of Industry and Education of Ruili Group Co., Ltd. Yalong signed the Wenzhou Polytechnic --zhejiang yalong education equipment co., LTD. University-enterprise cooperation agreement Modern apprenticeship pilot cooperation agreement, "Wenzhou Polytechnic --zhejiang yalong education equipment co., LTD. Modern apprenticeship --mentoring pair agreement" and Wenzhou Polytechnic --Zhejiang yalong education equipment co., LTD. Modern apprenticeships University-enterprise cooperation agreement pilot tripartite cooperation agreement protocol. The agreement clearly stipulates the responsibilities and division of labor of all parties in the promotion of close School-enterprise cooperation and collaborative education. Clarifying the implementation steps of job demand provision, talent training program formulation, government-School-enterprise joint enrollment, School-enterprise joint talent training, employment orientation, etc. At the same time, we should establish and perfect the teaching

organization and management system of "combining hardness and softness". The implementation of modern apprenticeship requires a flexible process of teaching organization. Rayleigh pilot class, for example, in the process of pilot formulated the "Ryan school University-enterprise co-building school implementing rules for the management of practice training bases, such as management system, organization, practice base practice position selection process, the students in a mechanism, the personnel training mode of" modern apprenticeship "management, equipment management and behavior rules.

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