Research on school enterprise cooperation mode under the mechanism of “craftsman leading and collaborative education”

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Abstract: School enterprise cooperation, as an important way of vocational education personnel training, builds a practice platform through school enterprise cooperation to realize the close combination of students' theoretical learning and practical operation, so as to improve the quality of education and students' comprehensive quality; Build a student employment platform through school enterprise cooperation, enhance the possibility of two-way choice between enterprises and students, and finally promote the common development of schools, enterprises and students. However, there are still many difficulties in school enterprise cooperation. By analyzing the causes of insufficient school enterprise cooperation, this paper puts forward the school enterprise cooperation mode under the mechanism of "craftsman leading and collaborative education", which provides ideas for deepening the integration of industry and education and improving the quality of talent training in Higher Vocational colleges.

1 Introduction

Compared with undergraduate education, higher vocational education pays more attention to the cultivation of students' technical skills, and has a great demand for technical skills practice. Due to the natural practice conditions of enterprises, school enterprise cooperation in education has become an inevitable choice for vocational colleges. School enterprise cooperation means that schools and enterprises jointly participate in the training of students, jointly formulate talent training programs, provide theoretical guidance and skills practice, and cooperate in educating people, so as to complete the training of high-quality technical and skilled talents [1]. Through this mode, students' theoretical learning and practice can be closely combined. At the same time, students' technical skills learning can be closely combined with the needs of enterprises' post skills based on the cooperation of enterprises, so as to improve the quality of students' education and comprehensive quality, enhance the two-way choice between enterprises and students, and finally achieve high-quality employment and development of students.

At the 2020 National Model Worker and Advanced Worker Commendation Conference, General Secretary XI emphasized that "we should vigorously promote the spirit of model workers, labor spirit and craftsmanship", stimulate the role of the working class and the working masses as the main force, so as to build a high-quality workforce [2]. In recent years, the salary and social status of "craftsmen" in enterprises have also been significantly improved. Enterprise craftsmen, as practitioners of craftsmanship spirit, can well serve as a link for communication and cooperation between schools and enterprises, and inheritance of craftsmanship spirit between teachers and students. How to give full play to the role of enterprise craftsmen as a link between school enterprise cooperation has become an urgent problem to be solved. This paper discusses the difficulties of school enterprise cooperation, analyzes the causes of the lack of in-depth school enterprise cooperation, and puts forward a school enterprise cooperation mode under the mechanism of "craftsman guidance, collaborative education", which provides ideas for deepening the integration of industry and education and improving the quality of talent training in higher vocational colleges.

2 Difficulties in school enterprise cooperation

As an important mode of educating people in higher vocational education, school enterprise cooperation has made remarkable achievements after nearly 20 years of development. However, current research shows that there are still many obstacles in the school enterprise cooperation education in higher vocational education, which limits the deepening and promotion of the school enterprise cooperation education mode. The existing problems are analyzed as follows:

2.1 School enterprise cooperation is not deep enough

At present, there are still many obstacles to the promotion of school enterprise cooperation. The reason...
is that the enterprise side lacks obvious interest drive in the school enterprise cooperation, which leads to low enthusiasm and initiative in the school enterprise cooperation [3]. The school enterprise cooperation is superficial. As far as enterprises are concerned, they emphasize the pursuit of profits, technology and talents. However, vocational education has a long cycle, and it is difficult to generate profits in the short term. Moreover, the technical and skilled talents cultivated are still highly mobile. Due to these considerations, enterprises are obviously lack of motivation to participate in vocational education, which makes the school enterprise cooperation of many colleges and universities in the primary stage [4]. The school only organizes students to the enterprise to complete the "post practice" task in the talent training program: Enterprises only come to schools to recruit graduates, and they do not really participate in the training of students. They have little effect on the quality of students' talent training. This is only a shallow level of school enterprise cooperation. The starting point of school enterprise cooperation should be that when students are in school, enterprises should be integrated into the talent training of the school to achieve cooperation in production and education [5].

2.2 Lack of effective incentive mechanism for school enterprise cooperation

At present, from the perspective of the practical effect of various vocational colleges in exploring school enterprise cooperation in educating people, school enterprise cooperation has not established an effective incentive mechanism, which significantly inhibits the improvement of school enterprise cooperation. The reason is that school enterprise cooperation is mostly promoted in the form of task. From the setting of top-level documents to the specific implementation stage, it needs to span multiple job levels. However, in the real cooperation stage, the implementation is not in place, which leads to the reduced effect of school enterprise cooperation. In the case that enterprises cannot see the short-term benefits of school enterprise cooperation, the determination and strength of school enterprise cooperation have decreased significantly. Under this negative feedback, the implementation of school enterprise cooperation on the enterprise side is weak. Therefore, exploring the long-term incentive mechanism of school enterprise enterprise employee tripartite cooperation has become an important topic. As the inheritor of craftsman spirit, technical skills and corporate culture, "craftsmen" will play an irreplaceable role in the tripartite cooperation of schools, enterprises and employees.

2.3 The stability of students is worrying, and school enterprise cooperation faces challenges

The important factor that affects the substantial promotion of school enterprise cooperation is that the current mobility of front-line technical and skilled talents is still on the high side. The enterprise is worried that after investing human, material and financial resources, the trained talents cannot enable the development of the enterprise, or even be used by competitors, so there is no need to take risks. The mobility of front-line technical and skilled talents is on the high side. The poor living conditions and low social recognition of front-line technical and skilled talents for a long time have led to an increase in the flow frequency and scale of front-line personnel. At present, promote the spirit of model workers and craftsmen, and create a glorious social atmosphere of labor and a dedication atmosphere of excellence [6]. The salary and social status of the "craftsmen" in the enterprise have been significantly improved, but their influence on students still needs the guidance of the "craftsmen" in the enterprise. The "craftsmen" teachers, combined with their own work experience, guide students, play a leading role in the guidance and design of students' career, guide students to love their majors, and cultivate students' good professional quality to lay a solid foundation for future development.

3 Reform measures of school enterprise cooperation mode

3.1 Relying on the modern apprenticeship system, implement the cooperation between schools and enterprises, and explore the long-term incentive mechanism of the school enterprise enterprise "craftsmen" tripartite cooperation

At present, most of the school enterprise cooperation remains on paper, without substantial promotion. It only provides internships and jobs, and does not give full play to the training role of the front end of school education. The reason is that the school enterprise cooperation is mostly promoted in the form of task. From the setting of top-level documents to the specific implementation stage, it needs to span multiple job levels, and the implementation is not in place at the real cooperation stage [7]. This should give full play to the role of modern apprenticeship, give full play to the guidance and guidance role of enterprise "craftsmen" teachers, and establish a solid participatory teaching mechanism with the theme of "training, leading, enlightening, guiding". Through front-line "craftsmen", we will establish a link between students, schools and enterprises, so as to improve the compatibility between the needs of graduates and employers, save the training time cost of students after their entry, improve the employment efficiency of enterprises, and promote the rapid growth of students. In the past, the school enterprise cooperation based on task distribution was lack of effective drive, especially in the front end of students' learning in the school, and the enterprise participation was lower. For this reason, the school invited the students to come in and gave them the glorious talent training task and the mission of teaching and educating people. In addition, the school will also give certain rewards to the enterprise "craftsmen" who provide guidance according to the cooperation effect to achieve a win-win situation.
3.2 Improve students’ professional ability and quality, with the goal of post matching and students’ growth

Through the explanation of "craftsman" teachers in combination with their own experiences, it is more helpful for students to know the industry, recognize the major, clarify the employment direction and determine the career orientation; Through the words and deeds of the "craftsman" teachers, it is helpful to cultivate students' good professional quality, have a clearer understanding of students' professional development and future career development, and also enable students to better understand the matching degree of the corresponding enterprise's work tasks, work nature, and enterprise culture with their own development goals, so as to make two-way choices in advance, which will effectively improve the matching degree of students and posts, reduce the possibility of personnel mobility. Schools and enterprises jointly cultivate employees who adapt to the development of enterprises. The introduction of "craftsman" teachers in advance will also achieve positive incentives for students in higher vocational colleges. For schools, the introduction of craftsman guidance and collaborative education will also expand professional employment channels.

3.3 Improve the cultivation of students’ sustainable learning ability

For cooperative enterprises, the most important resources provided by vocational colleges are graduates and interns who can meet the production needs of enterprises. These human resources will bring direct production benefits to enterprises; Secondly, the necessary teachers who can provide support for enterprise training or enterprise staff ability improvement are the core resources for enterprise technology skill improvement. Different from other industries, the rail transit industry has a strict system of employment with certificates. The sustainable cultivation of students is reflected in the ability promotion stage. Compared with enterprise teachers, college teachers are better at theoretical training. Through the practical training complementation with enterprise teachers, the pass rate of students’ examination will be effectively improved and the future competitiveness of students will be improved [8].

4 Specific measures and advantages analysis

The education and training form of school enterprise joint training is carried out with the carrier of "craftsmen leading and collaborative education". Led by the "craftsman" of the enterprise side, the enterprise side provides real-time, rich, detailed and cutting-edge learning resources to guide students to more accurately and timely grasp the knowledge, quality, technology and ability requirements of the post, and take this as the basis for targeted thematic teaching training and career development guidance [9]. At the same time, the accumulated training cases can enrich the teaching resource library of railway locomotive operation and maintenance specialty. Relying on the guidance of craftsmen, enterprises deeply participate in professional construction, regularly guide the revision of professional talent training program, the adjustment of teaching plan and the improvement of curriculum standards, and establish a teaching and education ecology centered on professional ability. In the promotion stage of students' post competition, with the help of the advantages of college teachers in theoretical training, the practical training complements with enterprise teachers, which will effectively improve the pass rate of students’ examination and enhance their future competitiveness. Specific measures and advantages are analyzed as follows:

4.1 Specific initiatives

4.1.1 Establish school enterprise cooperation relationship with relevant enterprises, and jointly formulate top-level documents of school enterprise cooperation

Taking the railway locomotive operation and maintenance specialty as an example, its employment direction is locomotive crew and locomotive maintenance posts. By inviting a number of proposed cooperative enterprises, students are selected according to the number of graduates that the enterprise can accept, in-depth analysis is made of the ability requirements of technical and skilled talents required by the enterprise, and cooperation is made to develop a talent training program to achieve one enterprise, one project. General courses and basic courses have universal applicability. There is no need to teach in different classes. For specialized and refined courses, whether to promote them to other students of the major is determined according to the practicality and applicability of the courses, so as to achieve targeted and applicable talent training, and ultimately achieve high-quality employment and development of students.

4.1.2 Introduce enterprise "craftsman", intervene in school education and teaching in advance, rely on modern apprenticeship mode, teach students technical skills, and inherit enterprise craftsman spirit

The cultivation of students' "craftsmanship spirit" needs guidance. The modern apprenticeship model will effectively enhance the influence of enterprise "craftsman" teachers, guide students through enterprise "craftsman" teachers in combination with their own work experience, play a leading role in students' career guidance and design, guide students to understand the industry, analyze the major, clarify the employment direction, determine the career orientation, and guide students to love the major, Cultivate good professional quality and lay a solid foundation for future development.
Professional quality refers to the internal norms and requirements of the profession, and is the comprehensive quality displayed in the professional process, including professional ethics, professional skills, professional behavior, professional style and professional awareness [10]. As the link between school and enterprise cooperation, the "craftsman" teachers of enterprises are invited in by the school to give them the glorious task of talent training and the mission of teaching and educating people. In addition, the school will also give certain rewards to the "craftsman" of enterprises providing guidance according to the results of cooperation to achieve win-win results.

4.1.3 Enterprises accept graduates for internship and employment, and continue to complete the training of modern apprenticeship system

According to the top-level document of school enterprise cooperation, the enterprise accepts the corresponding internship students. Through the words and deeds of the "craftsmen" teachers and with the help of the real practice and working environment of the enterprise, it helps to cultivate the students' good professional quality, have a clearer understanding of the students' professional development and future career development, and also enable students to better understand the work tasks of the corresponding enterprises. The nature of the work and the matching degree between the corporate culture and their own development goals should be selected in advance, which will effectively improve the matching degree between students and posts, reduce the possibility of personnel mobility, and the school and enterprise should jointly cultivate employees who adapt to the development of the enterprise.

4.1.4 The school cooperates with enterprises to complete the continuous training of students and provide necessary guidance in the stage of improving students' ability

Different from other industries, the rail transit industry has a strict system of employment with certificates. The sustainable cultivation of students is reflected in the ability promotion stage. Compared with enterprise teachers, college teachers are better at theoretical training. Through the practical training complementation with enterprise teachers, the pass rate of students' examination will be effectively improved and the future competitiveness of students will be improved.

4.2 Advantage analysis

Taking the railway locomotive operation and maintenance specialty as an example, starting from the actual situation of the specialty, we will explore the collaborative innovation education mode of schools and enterprises, effectively use enterprise resources, and integrate them into the professional talent training mechanism, so as to explore a long-term, stable and implementable school enterprise cooperation education system, so as to achieve the goal of multi win vocational education in schools, enterprises and students. 1. School: acquire cutting-edge and rich enterprise practice resources, improve the school's teaching resource library, improve the quality of talent training and enterprise applicability through school enterprise cooperation, and improve the matching rate and employment quality of students; 2. Enterprise: The enterprise participates in the whole process of talent cultivation, effectively grasps the situation of students, cultivates students' good professional quality through the words and deeds of the enterprise's "craftsman" teachers, conducts two-way selection in advance to reduce the cost of graduate selection, effectively improves the matching between students and posts, reduces the possibility of personnel mobility, and obtains good human resource reserves; 3. Students: get the opportunity to contact the real work scene of the enterprise, test the theoretical level in practice to improve the learning effect, improve professional skills and the ability to solve practical problems, cultivate students with good professional quality through the words and deeds of the enterprise's "craftsman" teachers, have a clear understanding of their own profession and future career development at the school stage, understand the work tasks of the corresponding enterprise. The nature of the work and the matching degree between the corporate culture and their own development goals should be selected in advance. At the same time, students will get more high-quality job opportunities and comprehensive career development guidance from enterprise "craftsmen" teachers. In the ability enhancement stage, through the practical training complementation among enterprise teachers, the pass rate of students' examination will be effectively improved, and the future competitiveness of students will be enhanced.

5 Conclusion

This paper discusses the difficulties of school enterprise cooperation, analyzes the causes of the lack of in-depth school enterprise cooperation, proposes to implement the school enterprise cooperation based on the modern apprenticeship system, explores the long-term incentive mechanism of the school enterprise "craftsman" tripartite cooperation, proposes the school enterprise cooperation mode under the mechanism of "craftsman guidance, collaborative education", and takes the use and maintenance of railway locomotives as an example, proposes specific measures and analyzes the advantages. It provides ideas for deepening the integration of production and education and improving the quality of talent training in higher vocational colleges.

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