

Exploring the Path of Multi-dimensional Collaborative Education in Vocational Education in the Context of High-Quality Development

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Abstract: High-quality development is the epochal theme of Chinese education in the new era. High-quality development of vocational education is the urgent requirement for building a skill-based society, and multi-principal participation in vocational education collaborative education is an important measure for realizing high-quality development of vocational education. Under the background of high-quality development, collaborative parenting creates a new orientation for the vocational knowledge, vocational ability and vocational life of vocational education talents. The process of collaborative parenting still exists the problems of unclear rights and responsibilities of multiple subjects of parenting, a single form of collaboration, and insufficient coordination and integration of talent cultivation. Multi-subject collaborative education should return to the nature of education, clarify the management rights and responsibilities of the main subjects of collaborative education, enrich the forms of multi-subject participation in collaborative education, and coordinate multi-subject participation in the process of integrative education, in order to cultivate high-quality technical and skilled talents and realize the high-quality development of vocational education.

Keywords: Collaborative education, High-quality development, Pathways, Vocational education.

1. Introduction

China is in a new era of transformation from high-speed development to high-quality development, and the high-quality development of the economy and society has put forward higher requirements for vocational education. In October 2021, the General Office of the Central Committee of the Communist Party of China (CPC) and the General Office of the State Council issued the Opinions on Promoting the High-quality Development of Modern Vocational Education [1], which explicitly puts forward the requirements for building a high-quality education system, pointing out that it is necessary to enhance the adaptability of vocational and technical education, deepen the vocational and universal integration, integration of industry and education, school-enterprise cooperation, vigorously cultivate technical and skilled personnel, and comprehensively promote the construction of a skill-based society by 2025, and the strategic goal of basically building a skill-based society by 2035. Vocational education is the type of education that is most closely connected with the society and industry. With the concerted participation of the government, enterprises, society and schools, vocational education cultivates tens of thousands of high-level professionals and high-quality laborers for China's high-quality development every year. In the context of high-quality development, it has become necessary to accelerate the construction of a high-quality multi-dimensional collaborative education system, continuously improve the quality of vocational education personnel training, better serve economic and social development, and realize the high-quality development of vocational education.

2. New Positioning of Vocational Educators in The Context of High-quality Development

Vocational education as an important part of the national education system. It is the education implemented to equip the educated with professional knowledge, technical skills and vocational ethics and other vocational comprehensive qualities needed to engage in a certain occupation or to realize professional development [2], and undertakes the important task of cultivating application-oriented and skill-oriented talents. With the transformation and upgrading of society and the requirements of high-quality development, the demand for high-level skilled personnel from enterprises is becoming stronger. High-quality economic and social development and the demand for high-quality skilled personnel are promoting each other, and the growth of skilled personnel cannot be separated from the cultivation of vocational education. Vocational education, as the main training base for the output of skilled personnel, plays an important role in cultivating high-quality talents and promoting the high-quality development of economy and society with the joint participation of the government, enterprises, society and other diversified subjects. In the context of high-quality development, collaborative cultivation produces a new orientation for the vocational knowledge, vocational ability and vocational life of vocational education talents.

2.1. Knowledge orientation: active acquirer of professional knowledge

Vocational knowledge mainly refers to the vocationally related knowledge that the educated need to master, mainly including basic cultural knowledge, basic professional knowledge and modern scientific and technological knowledge. The high quality of talent cultivation points to

high-quality technical and skilled personnel adapted to modern advanced technology. To bridge the "gap" between modern advanced technology and students' knowledge mastery is an important manifestation of the high quality development of vocational education and the high requirements and specifications for the quality of skilled personnel. Under the background of high-quality development, vocational knowledge has produced great changes, forcing the new era of secondary students to become active acquirers of advanced knowledge in the age of intelligence. On the one hand, along with the development of vocational society, vocational knowledge is constantly generated and accelerated catalyzed, which forces learners to receive a large amount of new knowledge and master new technologies in a short period of time, and puts forward new requirements for the breadth of students' knowledge learning. On the other hand, the participation of multiple subjects in collaborative education has enriched the process of vocational knowledge production and impartation to a certain extent, which greatly broadens the channels for learners to acquire knowledge. Coupled with the development of modern technology to expand the space of knowledge acquisition, so that the traditional teaching space to the community and enterprises to expand, which to a certain extent enriches the freedom and personalization of vocational school students' learning. Therefore, the change of vocational knowledge in the age of intelligence requires learners to be good at taking the initiative to acquire knowledge according to their needs, turning from passive recipients of knowledge into active acquirers of knowledge, and taking the right to acquire knowledge into their own hands.

2.2. Competency orientation: complex owner of vocational competencies

Vocational ability refers to the professional and methodological ability of the educated person in professional and technical aspects, which is an important indicator of the core competitiveness of an individual and affects the future career development of students. Enhancing students' vocational ability is the starting point and landing point of secondary vocational talent cultivation [3]. Under the model of collaborative education with the participation of multiple subjects, the connection between enterprises, industries and schools has been strengthened, and the vocational knowledge from input to internal processing, from transformation to the application of practical links, which puts forward newer and higher requirements for the professional and methodological abilities of vocational school students. While acquiring vocational knowledge in close contact with enterprises and social industries, vocational school students need to continuously refine their vocational abilities in the midst of knowledge and educational changes. Vocational competencies are changing towards knowledge-seeking, innovation and practice, becoming key competencies that facilitate students' adaptation to future development and lifelong benefits. Vocational education personnel cultivated under the collaborative education model are no longer single knowledge masters and equipment operators, but compound skilled personnel spawned by modern science and technology, with "knowledge of an 'empirical' and 'subjective' nature that is closely related to the actual work process". Subjective' nature of knowledge and ability" [4].

2.3. Life orientation: practical creators of professional life Problems of diversified collaborative education in vocational education

Vocational life is a higher-order element in the goal of vocational education personnel training, including vocational emotion, vocational awareness and vocational will related to the high-quality development of vocational education. Mr. Huang Yanpei interpreted this vocational life from the perspective of personal and social value as "a systematic mutual aid behavior in which one side governs life for itself and one side serves the masses" [5]. In the society, the government and other diversified subjects involved in vocational education at the same time, the generous social values into the scientific knowledge, so that vocational school students learn the vocational knowledge and master the vocational ability to go beyond the needs of the future livelihood, learning to become a kind of escape from the shackles of reality in pursuit of a complete life activities. The process of education is first of all a process of spiritual growth [6], and vocational education is also the process of such spiritual growth. In the process of multiple subjective synergistic participation in vocational education, students in vocational schools pursue themselves in the process of comprehensive contact and close contact with the social industry, transcend the laborers and gradually evolve into the creators of life, establish vocational awareness and feelings, and return to the vocational life to realize vocational ideals and growth of vocational life wisdom.

3. Problems of Diversified Collaborative Education in Vocational Education

The connotation of collaborative education is not the government, enterprises, social resources and other mechanical and simple implantation of school education links, but to build a skill-based society requirements into the cultural knowledge of education, social practice education and other aspects of the current vocational education in China in collaborative education there are still the following problems.

3.1. Lack of clarity on the rights and responsibilities of the main bodies of pluralistic education

The advantage of multiple subjects of collaborative education lies in the richness of the subject, after defining the boundaries of education of the government, enterprises, society and other subjects, a clear attribution of educational rights and responsibilities can better utilize the advantages and characteristics of each education, and has a normative impact on the multiple collaborative education. However, at present, China's vocational education in the collaborative education of multiple subjects, failed to take into full account the advantages and characteristics of the subject and the complementary needs of the subject, to do a good job of clearly defining the attribution of rights and responsibilities for education, so that a number of subjects in the participation of collaborative education, unable to clarify their own identities and play the advantages of the main body, and actively participate in the various aspects of talent cultivation. In addition, enterprises and society have not yet formed a

stable mode of participation in collaborative education, which is reflected in the overlap and deviation of the management standards and cooperative behaviors of each subject, and the problem of duplication and lagging of work content in collaborative education. Therefore, most of the vocational schools and other subjects do not persist in the implementation of the effective collaborative education model, or the implementation of the collaborative education in the form of no practical cooperation content [6], or in the cooperation of the main body of the rights and responsibilities of the problems brought about by the lack of clarity, the formation of standardization and normalization of the education system, affecting the vocational schools collaborative education model of the work of the long term steady progress.

3.2. A single form of synergy among multiple educators

At present, when enterprises, society and other main bodies participate in the process of vocational education, the mode of enterprises participating in joint education in schools is mainly dominated. First, enterprises establish training service bases in schools and adopt the cooperation mode of order classes to seek a balance between student training and industrial business planning. From the viewpoint of collaborative parenting mode, most enterprises still focus on traditional forms such as building internship and training sites, receiving graduates for internships, and sending technicians for guidance, and do not deeply participate in the key aspects of talent cultivation such as the formulation of cultivation objectives, discipline and specialty planning, curriculum and teaching materials development, teaching design and implementation, and the research and development of literacy and skill standards [7]. Therefore, there are problems such as unequal demand for cooperation, lack of synergistic mode of resource integration and poor cooperation, resulting in stagnation and insufficient continuity of the collaborative education link. The second is the cooperation between enterprises and vocational schools to jointly run schools, which is based on the project operation mode formed according to the characteristics of social industries and schools. However, when enterprises and social subjects participate in collaborative education, there is often a lack of sustained market business and projects, so that enterprises and schools have insufficient motivation to cooperate, resulting in the following result: although multiple subjects participate in collaborative education to a certain extent, with the passage of time, there is no in-depth implementation and planning of the content of the cooperation, so that standardized and regular collaborative education has not been achieved.

3.3. Insufficient coordination and integration of personnel training

Along with the rapid development of social economy, one of the manifestations of the modernization of the world of work is to put forward higher goals and requirements for talent training, which is also an inevitable requirement for the construction of a skill-based society and the realization of high-quality development of vocational education. However, at present, the problem of insufficient coordination and integration has arisen in the multi-dimensional collaborative education of vocational education. Firstly, the degree of matching between vocational school curriculum and social industry is low. The modern social industry technology

development speed far exceeds the education column, the training of talents to adapt to the changes in new technologies requires more rapid and complex and comprehensive. Part of the middle and high vocational colleges and universities in the professional, curriculum standards and enterprise employment standards there is a disconnect, enterprise technology conditions, mode of operation, organizational changes brought about by changes in job occupational ability failed to be fully reflected in the professional and curricula [9]. Curriculum content and teaching do not adapt to the rapidly changing requirements of the industry, resulting in a lack of practical knowledge and practical skills of graduates, thus bringing employment problems. Second, interdisciplinary and cross-field cooperation is insufficient. The current vocational schools and industry and enterprise docking has a strong geographical and similarity, the school teaching standards, resources are also mostly concentrated in a certain enterprise or a certain type of enterprise, and different institutions of the same professional direction of the talent training specifications of the big differences, articulation is not close, the students across the semester of education to varying degrees of deficiencies and faults in the knowledge and skills [10]. In addition, the lack of certification and evaluation standards to integrate the main body, resulting in students' vocational knowledge structure and cross-domain migration ability to a certain extent limited.

4. Path of Multi-dimensional Collaborative Education for Vocational Education in The Context of High-quality Development

Collaborative education in vocational education is an important initiative to cultivate high-quality technical and skilled talents, and it is also a necessary way to realize the high-quality development of education in China. In response to the problems of unclear authority and responsibility of multiple educators, single form of collaboration, and insufficient coordination and integration of talent cultivation in the process of collaborative education, it is necessary to clarify the management authority and responsibility of multiple subjects, enrich the form of collaborative education, and coordinate and integrate education. Multiple subjects should clarify the management rights and responsibilities, enrich the form of collaborative parenting and coordinate and integrate parenting, in order to cultivate high-quality technical and skilled talents and realize the high-quality development of vocational education.

4.1. Clarifying the management rights and responsibilities of the main bodies of collaborative education

Clarifying the management authority and responsibility between the various synergistic subjects involved in vocational education talent cultivation can provide favorable institutional support for vocational education talent cultivation and enhance the quality of multi-subject synergistic education. This process not only needs the government's leading support, but also to strengthen the school's main consciousness and professional attributes, forming a school-centered, government-led, industry and society and other elements of the joint collaborative education

mechanism. First, the government should strengthen the support and leadership. The government should make clear the identity of the leader, coordinator and coordinator of multiple subjects, and gather resources and create conditions for the construction of the collaborative education system of multiple subjects in vocational colleges and universities. Before the construction of collaborative education system in vocational schools, the government should supervise and guide vocational schools to carry out self-assessment, including talent cultivation programs, faculty planning, etc. At the same time, it encourages enterprises to actively participate in the construction of school professions and joint education, to build bridges and links for vocational schools to build a collaborative education model, and to provide advice and help in education management and implementation. Secondly, social and industrial enterprises should propose relevant education management and parenting programs for vocational colleges and universities according to their own talent application needs and future production and operation planning. At the same time, social enterprises should increase their support for teachers and students of vocational colleges in terms of hardware facilities such as class venues and equipment, assist teachers in completing the school's prescribed lesson plans, and regularly communicate with the school and provide feedback on students' learning information and ability mastery in enterprise positions, so as to make overall planning and adjustment of collaborative parenting in the future. Finally, vocational schools should set up a professional planning and implementation team for collaborative education according to the government's requirements, and on the basis of the current advantages and status of vocational education personnel in the school, flexibly design and adjust the theoretical course teaching and optimize the management and evaluation of students' practical courses in accordance with the needs of different enterprises, and adopt a flexible graduation-counterparts' employment assessment policy, so as to flexibly adjust the planning of educational cooperation.

4.2. Enriching the forms of collaborative education with the participation of multiple actors

The high-quality development of vocational education has put forward new requirements for all the subjects of vocational school education, and on the basis of clarifying their own rights and responsibilities, the subjects of multiple collaborative education need to innovate the mode of cooperation and strengthen the links between the subjects, and carry out various forms of collaborative education planning and implementation, so as to enrich the mode of participation of multiple subjects in collaborative education. First, the school gives full play to the role of the main body of collaborative education, earnestly implement the government-led policy, a comprehensive understanding of the enterprise culture and resource advantages, take the initiative to innovate the daily communication channels, and use a variety of forms to flexibly grasp the student's ideology and learning status during the period of the enterprise, behavior and physical and mental development, to strengthen the enterprise communication and education and guidance, and to integrate the enterprise understanding of the work and the joint plan into the school's work plan. Secondly, multiple subjects are involved in the development of common standards for collaborative education. Each subject should

establish joint research and development centers for schools, enterprises and society based on social development and changes in the supply and demand of talents, and oriented by the needs of talents, and the development centers can set up research and innovation cooperation projects, including curriculum development, application of educational technology, industry research and other aspects. On this basis, the government, schools, markets and other multi-interested subjects are prompted to integrate resources and collaborate to promote the integration of industry and education and school-enterprise cooperation, so as to safeguard the appropriateness and effectiveness of talent cultivation [11]. At the same time, data and information should be shared between subjects with the help of data and information sharing technology and equipment, etc., in order to mobilize multiple subjects and multiple ways to participate in vocational school talent cultivation and education research, and to enrich the way of multi-dimensional collaborative parenting. Third, more subjects, such as social organizations, educators and even students themselves, should be included in the assessment and improvement of collaborative parenting. The Centre's social organizations should coordinate all kinds of social resources, provide educators and students with standards and conditions for regular assessment, actively expand the space for social education, and focus on cultivating students' spirit of innovation and practical ability, thereby improving the quality of diversified collaborative education.

4.3. Coordinating the participation of multiple actors in the process of integrating human development

The establishment of an ecological nurturing system for vocational education with the collaborative participation of multiple subjects requires each subject to clarify its own identity, rights and responsibilities and to set up a coordinated nurturing mechanism for close cooperation, which will be carried out throughout the entire nurturing process, so as to ensure that the different subjects can work in a synergistic and effective manner, improve the quality of talent training and meet the requirements of high-quality socio-economic development. First, strengthen industry consultation and cooperation. Vocational schools should actively establish partnerships with key industries that promote high-quality development, and adopt the methods of specializing in research or hiring industry experts to do surveys and researches on the technological needs of the industry and hot trends in the future. On this basis, schools should strengthen the construction of laboratory facilities and the transformation of results according to the latest technologies and trends responded to by the industry, regularly review and update the curriculum, and realize the seamless linking of the disciplinary layout and professional settings with modern industries, market sectors, and emerging occupations [7]. Second, carry out interdisciplinary education. The government-led pluralistic parenting body should increase the publicity of cases in which cooperation between different areas of society and schools has produced remarkable results, and encourage research institutions to carry out education and research in schools. On the basis of establishing collaborative research with research institutions, schools should provide teachers and students with a platform of opportunities to participate in interdisciplinary seminars, workshops and competitions, so that they can learn to integrate

interdisciplinary knowledge and skills in the process of participating in interdisciplinary projects, and collaborate in solving complex problems in the industry, so as to achieve the purpose of understanding and applying knowledge and skills in different fields. Finally, a flexible multi-mentor program. We have launched the Enterprise Mentor, Social Mentor and Career Counselor Program, forming mentor teams with educators from different disciplinary backgrounds, and carefully selecting and matching mentors for students, guiding them to accurately locate their career goals and actively plan for internships and employment, and acquiring lifelong vocational competencies closely related to actual work experience and the industry, by means of regular meetings or online conferences and co-guidance.

5. Conclusion

High-quality development is the current theme of the times for national development. High-quality development of vocational education is an urgent requirement for the construction of a skill-based society, and plays a pivotal role in building a high-quality education system and promoting economic and social development in China. Vocational education multi-dimensional collaborative parenting is an organic whole, and vocational education-related schools, enterprises, and society are all indispensable parts of the synergistic body, which have both cross overlap and their own characteristics and advantages, and the multiple parenting bodies are interdependent, coordinated, and promoted throughout the whole synergistic parenting link. At present, there is still a need to make many substantive and even experimental efforts to improve the vocational education system with Chinese characteristics and to help the economic and social development of high quality.

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