

The Connotation, Dilemma and Path of "double-quality teachers" Teacher Team Construction in the Perspective of School-Enterprise Collaboration

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Abstract – The core goal of education reform in higher vocational colleges and universities is to cultivate "double-high" talents, and "double-teacher" teachers are the key factors for cultivating "double-high" talents. How to build a high-level "double-quality teachers" teacher team under the perspective of school-enterprise cooperation, highlighting the characteristics and connotation of higher vocational education, is the core content of school-enterprise cooperation. At present, the construction of "double-quality teachers" teachers in higher vocational colleges and universities is characterized by the lack of systematic policies, deviation of entry conditions, distortion of identification and evaluation, imbalance of teacher structure, multicultural conflict, and lack of unity of the value and goal of the main body of the construction, etc. The top-level design should be strengthened, and the construction of "double-quality teachers" teachers should be improved. The top-level design should be strengthened to improve the systematic policy of "double-quality teachers" teacher team construction; innovative mechanisms should be used to stimulate the vitality of the main body of "double-quality teachers" teacher team construction; school-enterprise collaboration should be used to optimize the "double-quality teachers" teacher team identification and evaluation. The school-enterprise collaboration optimizes the evaluation system of "double-quality teachers" teachers; the school-enterprise integration builds the collaborative cultivation path of "double-quality teachers" teachers.

Keywords – school-enterprise collaboration; dual-teacher teachers; connotation; dilemma; way forward

I. INTRODUCTION

"Synergy theory" believes that many subsystems constitute social systems, and there is synergy between subsystems, (Harken. 2013). Synergy theory, once proposed, has a profound impact on the development and implementation of education policy in Western countries, foreign scholars gradually apply the synergy theory to education issues and launched many studies. China's government has also gradually paid attention to the synergy theory, and the academia has also introduced it into the field of education and become a hot research topic in recent years.

At present, as the basic system of vocational education, the form and content of industry-education integration have been extended from the initial internship training to project cooperation, talent training, teacher training and sharing, etc. The "double-quality teachers" teacher team of vocational colleges and universities has been working closely with each other. As a key subsystem of industry-education integration, the construction of "double-quality

teachers" teachers in vocational colleges and universities plays a central role in the cultivation of technical and skilled talents in vocational colleges and universities, and it is one of the most important contents of realizing the development of the type of vocational education. How to combine the needs and social functions of enterprises, higher vocational colleges and other collaborative educators, clarify the logic of "double-quality teachers" teacher team construction, recognize the bottlenecks of "double-quality teachers" teacher team construction, and build a "double-quality teachers" teacher team based on the collaboration between schools and enterprises? To clarify the logic of "double-quality teachers" teacher team construction, to recognize the bottleneck of "double-quality teachers" teacher team construction, to build the path of "double-quality teachers" teacher team construction based on school-enterprise collaboration, and to contribute to the cultivation of "dual-high-type" talents for vocational education is the current practice theme for higher vocational colleges and universities to adapt to changes, take the initiative and contribute to the value of their work.

II. PROBLEM STATEMENT

Evolution of the connotation of "double-quality teachers" teachers

The term "double-quality teachers" teacher was first proposed by scholar Wang Yicheng in China, and in 1995, the former State Education Commission incorporated the expression "double-quality teachers" teacher into the policy system for the first time at the national level, and "double-quality teachers" teacher became a "policy discourse" with Chinese characteristics, distinguishing between general higher education and vocational education teachers in China. In 1995, the former National Education Commission incorporated the expression "dual-teacher type" into the policy system for the first time at the national level, and "dual-teacher type" teachers have the characteristics of "policy discourse", and have become the core concept with Chinese characteristics to differentiate between teachers in general higher education and vocational education in China (Xu, 2020).

In this paper, we use "teacher team construction", "dual-teacher teacher team construction", "vocational education" as keywords, and the policy text published on the national government website as the database for searching. In the search results, 53 policy texts on the construction of "double-quality teachers" teacher teaching force were sorted out by secondary screening according to the issuing unit of national government departments. An

overview of the above policy texts reveals that the existing policy texts have mainly clarified the concept of "double-quality teachers" teachers, the core connotation, the identification criteria, the core qualities, the accreditation system, and the construction of the teaching force in various policies step by step. Many domestic experts and scholars have also explored the content of "double-quality teachers" teachers from a theoretical perspective based on the policy texts of different periods. However, the concept of "double-quality teachers" teacher has not formed a unified standard, and there are still different perspectives and preferences for the concept of "double-quality teachers" teachers at different stages. At different stages, the connotation of the concept is still biased by people, time and events. However, the connotation of "double-quality teachers" teachers in general has been constantly updated and improved, and has gradually evolved with the characteristics of the times, especially the policy changes in the field of education, mainly experiencing "double-quality teachers" teacher, "dual-competence", "double-quality teachers" teacher, "dual-competence", "dual-competence", and "dual-competence". It has mainly evolved through the stages of "dual teacher", "dual competence", "dual identity", "dual quality", "dual title" and so on. Representative views mainly include "double-quality teachers" teacher that is "dual-certification", "double-quality teachers" teacher that is "dual-quality" and so on, (Xiao, & Zhang, 2012). "Dual teacher" means "dual certificate", meaning "dual teacher", i.e., the superposition of lecturers and engineers, and it is believed that teachers engaged in teaching in higher vocational colleges and universities should not only have the title of lecturer and above, but also obtain the technical skills vocational qualification of the relevant positions in the specialty. It is believed that teachers engaged in teaching in higher vocational colleges should have both the title of lecturer and above, and also obtain the professional qualification of technical skills for the relevant positions in the specialty, but it ignores the differences between the two in terms of work object, social status and knowledge structure, skills and techniques, and attitudinal competence and literacy, and defines the superposition of the "double-quality teachers" teachers only in terms of the form, and unilaterally believes that the professional qualification is equivalent to the actual competence and practical skills, which has led to the emergence of "getting certificates" in vocational education in the past. Vocational education has seen a boom in "getting certificates".

The term "double teacher" means "double quality", meaning that vocational college teachers who have both the quality of education and teaching teachers and the quality of practical teaching skills are "double teachers". The quality of education and teaching mainly refers to the ideological quality, political quality, teacher ethics, teaching methods, subject knowledge structure. Practical teaching skills refers to a certain depth and breadth, after a certain length of time in the enterprise line or project operation in the cumulative formation of technical operation, guidance capabilities.

To summarize, the evolution of the connotation of "double-quality teachers" teachers is not only the interpretation of the gradual clarification of the

differentiation of the categories of teachers in general higher education and vocational education in China and the admission standards, but also the process of the evolution of the main ability and quality of teachers in vocational education, which is a vivid interpretation of the cross-boundary nature of vocational education. The interpretation of the nature of vocational education cross-border attributes, requiring teachers engaged in vocational education, in the teaching process, both professional teaching and job practice skills in two aspects of knowledge and skills. Therefore, the logic of the evolution of the connotation of "double-quality teachers" teachers, in essence, is the internal unification process of vocational education personnel training goals and teacher definition standards (Li, 2018).

Difficulties in the construction of "double-quality teachers" teacher teaching force

The absence of systematic policies has led to frequent internal conflicts in the construction of the "double-quality teachers" teacher teaching force.

China's existing "double-quality teachers" teacher team construction policy has included the definition of core concepts, teacher classification and management, teacher access, teacher training, qualification, etc., the policy arrangements have been gradually improved, in the process of vocational education development has also played a positive and effective results. However, the existing policies in China are often based on "opinions" and "methods", and are not implemented uniformly at the policy or legal level, and there is often diversity in practice in various places due to differences in external conditions and subjective understanding. At the same time, there is a lack of "endogenous" policies that match the existing policies, such as the construction of the teaching force has not been systematically echoed with the curriculum construction, education and teaching reforms and other core aspects of talent cultivation, resulting in a disconnect between the policy design of the construction of the "double-quality teachers" teacher teaching force and the teacher cultivation of the institutions of higher education. As a result, the policy design of "double-quality teachers" teacher team construction and the teacher training of higher vocational colleges and universities are out of touch with each other and fail to move in the same direction, (Zeng, Lu, & Ai, 2021).

In addition, there are policy bottlenecks for "double-quality teachers" teachers in terms of personnel relations between enterprises and higher vocational colleges and universities, appointment, title promotion, income and treatment, etc. In terms of teachers' introduction, evaluation and assessment, titles and positions, schools put "double-quality teachers" teachers and ordinary teachers into the same system, subjectively believing that "double-quality teachers" teachers are the same as ordinary teachers, and that "double-quality teachers" teachers are the same as ordinary teachers. Schools in the introduction of teachers, evaluation and assessment, titles and positions, etc. "double-quality teachers" teachers and ordinary teachers into the same system, the subjective

view that there is no difference between the two or there is a small difference, a serious impact on the "double-quality teachers" teacher team's motivation and creativity, but also discourage the subjective initiative of the ordinary teachers to the "double-quality teachers" teacher conversion. Finally, the existing policy lacks incentives for enterprises and other "double-quality teachers" teachers to build the main body, which often leads to the "industry and education do not synergize" between enterprises and higher vocational colleges and universities, "enterprises do not take the initiative", multiple participation in the training of teachers, and the development of the "double-quality teachers" teachers. The pattern of pluralistic participation in the cultivation of teachers has not been formed (Kong, & Liu, 2023).

Entry conditions deviation leads to the imbalance in the structure of "double-quality teachers" teachers.

At present, in the establishment conditions of China's higher vocational colleges and universities, the number, qualification, technical skills and teaching quality of "double-quality teachers" teachers are not regarded as mandatory conditions, (Zhang, & Wang, 2022). Based on this, the current higher vocational colleges and universities in the process of teacher introduction, often undergraduate colleges and universities teacher introduction standards, such as academic qualifications, subject rankings, etc. as the primary conditions for the entrance of higher vocational teachers, academic qualifications have become a higher vocational colleges and universities teachers to enter the "knock on the door".

2022, located in a county on the east coast of a higher vocational college open recruitment listed 14 teaching positions, the requirement of doctoral degree positions reached 10, master's degree researchers generated the minimum threshold of academic requirements, only three positions on the work experience requirements, four positions on the relevant work experience to be given priority to consider the personnel, seven positions did not make any requirements for vocational and technical skills. The introduction of higher vocational colleges and universities teacher team is just like shouting the slogan of "double-quality teachers" teacher, while the standard of "only academic light practice" is consistent. As an important source of "double-quality teachers" teachers, enterprise technicians are blocked from entering higher vocational colleges and universities under the standard of "academic qualifications only", which ultimately leads to the fact that teachers in higher vocational colleges and universities often have high academic qualifications but lack high skills and work experience in enterprises. Teachers introduced into higher vocational colleges are not "dual-teachers" in the real sense, which makes the ratio of the number of "double-quality teachers" teachers and practical skills "double imbalance".

Distortion of Recognition and Evaluation Affects the Effectiveness of "double-quality teachers" teacher Team Construction

In terms of recognition criteria, many higher vocational colleges and universities mainly recognize teachers from the perspectives of teaching ability, teaching and research or scientific research ability, professional practice ability and professional skills (vocational qualification). Some colleges and universities also recognize them in terms of professional theory, vocational theory and vocational practice according to the requirements of job skills. The multi-dimensional, multi-indicator, multi-direction of the identification criteria, resulting in institutions and enterprises in the process of collaborative cultivation of "double-quality teachers" teachers in the absence of a unified norms and objectives, "double-quality teachers" teacher standards proliferate (Li, 2019).

In terms of assessment and evaluation, the existing assessment indexes of "double-quality teachers" teachers are mainly in the aspects of scientific research projects, thesis, teachers' individual awards, teachers' guiding students' awards, and teachers' skill qualification certificates, etc., while the assessment indexes of applied skill teaching, practical skill formation, and practical experience in enterprises have become alternatives. In the assessment of the main body, higher vocational colleges and universities often occupy a dominant position, the enterprise group as the core body of practical skills training, but often rarely involved in the assessment, the overall presentation of a single evaluation means, evaluation indicators one-sided, evaluation of the main body of the lack of evaluation, evaluation of the results of the bias, etc., greatly weakened the "double-quality teachers" teachers' initiative and enthusiasm, deviated from the "double-quality teachers" teachers, the "dual-teachers" teachers. It has greatly weakened the initiative and motivation of "double-quality teachers" teachers and deviated from the original intention of "double-quality teachers" teacher characteristics and positions in vocational colleges and universities.

The way forward for the construction of a "double-quality teachers" teacher teaching force

Top-level design, sound systematic policy on the construction of "double-quality teachers" teacher teaching force

The policy text on the construction of "double-quality teachers" teachers in the previous article shows that the existing policy design on the construction of "double-quality teachers" teachers in China has been gradually scientific and systematic, but there are still problems such as the absence of important core policies and the ambiguity of concepts in the policy text. However, there are still problems such as the absence of important core policies, vague concepts in policy texts, and insufficient support for policy groups. Optimizing the top-level design and improving the policy system is the first task for the construction of "double-quality teachers" teachers, (Huang, & Zeng, 2019).

First of all, on the connotation of "double-quality teachers" teachers, the existing policy mainly on the "double-quality teachers" teachers should have the quality

or ability to title and other aspects of the explanation, but the policy text does not have a high-quality "double-quality teachers" teacher definition, in the follow-up to the "double-quality teachers" teacher definition of the "double-quality teachers" teacher. However, the policy text does not define high-quality "dual-teacher type". In the subsequent documents, it should be clarified with the specific requirements of teachers in the new era of higher vocational colleges and universities in terms of teacher ethics, competence, quality and skills, professionalism, innovation, titles and certificates, and so on.

Secondly, the existing policies on the recognition standards mainly focus on the macro requirements of the number of teachers, academic title requirements, and practice level, but lack the micro level definition of the standards for high quality "double-quality teachers" teachers. The administrative department in charge of education should be based on the micro level, in the comprehensive research on the social demand for talents and skills, from the policy level to clarify the higher vocational colleges and universities should be introduced with "what kind of" theoretical level, competence, skills and technology of teachers, and based on the existing policy bottlenecks, to open up the school-enterprise teacher interoperability, collaborative training of teachers of the system barriers. Thirdly, the national administrative department should put in place a macroscopic system for the training of teachers.

Thirdly, the national administrative department should take macro-control, coordinate and reform the education system internally and promote it externally in cooperation with relevant departments, further clarify the responsibilities and functions of all parties involved in the construction of the "double-quality teachers" teacher teaching force, and improve and form a policy system with continuity and development, so as to form a horizontal and vertical synergy, and to solve the existing problems of teacher construction. It will also improve the policy system to form a sustainable and developmental policy system, form horizontal and vertical synergies to overcome the existing gambling points and pain points in the construction of the teaching force, provide policy supply in the areas of teachers' treatment, teachers' power, teachers' access and exit, and build a systematic policy group for the construction of the teaching force in higher vocational colleges.

Innovative Mechanisms to Stimulate the Vitality of the Main Body of "double-quality teachers" teacher Teaching Team Construction

The report of the 20th National Congress clearly puts forward those enterprises are another main body of the construction of "double-quality teachers" teacher teaching force in addition to the government and higher vocational colleges and universities, and are also the core practitioners of the integration of industry and education. This requires that enterprises should take the initiative to participate in the revision of talent training programs of higher vocational colleges and universities, determine talent training objectives, adjust professional design, revise teaching syllabus, prepare practical teaching

materials, participate in practical skills teaching, and provide top internships, etc., so as to closely integrate the needs of enterprises with the objectives and processes of talent training of schools, and truly integrate them into the design and implementation of teaching in schools. Higher vocational colleges and universities should further innovate the cultivation mechanism, stimulate the vitality of teachers and enterprises in the introduction of enterprise teachers, assessment of "double-quality teachers" teachers, title evaluation, teacher training, talent sharing, etc., so as to truly realize the fusion of teacher training with industry, teaching and practice, and to realize the integration of the teaching process and production process of "double-quality teachers" teachers. The teaching process of "double-quality teachers" teachers is docked with the production process, and the teaching content is docked with the job objectives. Through the collaborative promotion of enterprises and higher vocational colleges and universities, the enhancement of the individual quality of "double-quality teachers" teacher and the enrichment of the group structure will be finally realized.

Collaboration between Schools and Enterprises to Optimize the Recognition and Evaluation System of "double-quality teachers" teacher Teaching Teams

The State Council has clearly stipulated in the "Overall Program for Deepening Education Evaluation Reform in the New Era" that the recognition, employment and assessment of "double-quality teachers" teachers must emphasize the level of practical skills and professional teaching ability. Therefore, how to build a scientific and reasonable evaluation system has become the core of teacher construction.

First of all, higher vocational colleges and universities should formulate the admission standard of "double-quality teachers" teachers in accordance with the goal and orientation of talent cultivation, which is in line with the category of vocational education. In the process of identification, full-time teachers and part-time teachers, enterprise teachers and higher vocational colleges and universities should be categorized in the division of responsibilities in the main body of the implementation of the apprenticeship system in higher vocational colleges and universities, and the standards of educational and teaching ability and professional skills ability of the "double-quality teachers" teachers should be benchmarked, which is the basic basis for the identification of the access. Secondly, higher vocational colleges and universities should closely contact with enterprises, jump out of the existing "research-led" evaluation path, learn from the assessment system of enterprises in practical skills, and fully focus on the "practice-oriented" and "teaching-oriented" orientation. "Orientation, the completion of the quantity and quality of teaching work, guiding students to participate in practical skills competitions as the core assessment indicators, and according to the individual strengths of teachers, teachers are divided into teaching-oriented, teaching R & D and other categories, to be categorized management, categorization and assessment (Zhai,2022).

School-enterprise integration to build a collaborative training path for "double-quality teachers" teacher team

In 2023, the General Office of the Central Committee and the State Council proposed that the cultivation of "double-quality teachers" teachers should focus on "synergistic" training, which essentially means that "double-quality teachers" teachers in vocational colleges and universities have to jump out of vocational education and go deep into enterprises, and actively build a path of circulation with teachers from enterprises. In essence, it means that "double-quality teachers" teachers in vocational colleges and universities should go beyond vocational education, go deep into enterprises, actively build paths for teachers to circulate with enterprises, and adopt the methods of talent introduction, artisan masters' leadership, and introduction of part-time teachers to form a high-level team of teachers who have a balance of age, qualifications, and practical skills, and to improve the structure of teachers. At the same time, higher vocational colleges and universities should also actively dock with enterprises, break through the existing system barriers, and form an optimized management mechanism in the links of higher vocational colleges and universities' teachers' in-depth part-time work in enterprises, on-the-job exercise, technical and skilled talents of enterprises' employment to higher vocational colleges and universities' part-time teaching, and development of vocational education teachers' cultivation courses.

Secondly, vocational colleges and universities should also build a hierarchical and categorized cultivation system based on practical skills and teaching skills according to the requirements of "double-quality teachers" teachers' job skills, and according to the differences in the dimensions of teachers' sources, teaching skill levels, and teachers' practical skill levels, etc. For example, part-time teachers from enterprises have to work part-time because of their jobs. For example, due to the changes in the work object and environment, part-time teachers in enterprises need to have the knowledge and ability of education and teaching under the vision of modern information technology, which requires that higher vocational colleges and universities should carry out training based on the education and teaching ability and quality of the part-time teacher group. Enterprises, as the main body of "double-quality teachers" teachers' practical skills training, should open the way for enterprises and schools to integrate with each other in the form of training such as on-the-job training and project practice. In the process of teacher training, vocational colleges and enterprises should also fully consider the conflict between the teacher culture based on theoretical knowledge teaching in vocational colleges and the teacher and apprentice culture based on practical skills teaching in enterprises, and guide the transformation of "cultural conflict" to "cultural identity" until finally reaching "cultural integration". Until finally reach "cultural integration"(Zhong,2021).

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