

# *Research on the Paths and Strategies of Higher Vocational Double-Ability Teacher Construction in the New Situation*

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**Abstract:** The construction of high-level teachers is an important goal and main way for higher vocational colleges' high-quality connotative development in the new era. Based on the questionnaire survey, the paper discusses problems of higher vocational double-ability teachers' team construction such as focusing on quantity over quality, lack of quality and innovation ability, and poor ecological environment for talents, and then proposes higher vocational double-ability teachers' construction paths, such as creating excellent teacher development environment, attaching importance to the construction of double-ability teacher teams, improving teachers' information literacy and ideological and political ability, optimizing double-ability teacher teaching evaluation and professional title evaluation and employment system.

## **1. Introduction**

*The National Implementation Plan for Vocational Education Reform* clearly defines the goals, requirements and implementation measures for the construction of a double-qualified teacher team. The plan also proposes a double-high-plan, with the construction of high-level teachers becoming the main task of the "double high" construction unit, with the focus on the construction of "double qualified" teachers. [1] *The Notice of the Ministry of Education and the Ministry of Finance on the Implementation of the Plan for Improving the Quality of Teachers in Vocational Colleges (2021-2025)* requires that efforts be made to cultivate a high-quality double-qualified teacher team with noble professional ethics, exquisite skills, a combination of full-time and part-time skills, and full of vitality. Building a high-level double-qualified team is an important goal and key task for the connotative development of higher vocational education.

## **2. Investigation on the Construction of Double Teacher Teams in Vocational Education**

### **2.1. Questionnaire Design and Structure**

Referring to the questionnaire star *Questionnaire on the Construction of Teachers in Higher Vocational Colleges (Teacher Chapter)*, a *Questionnaire on the Construction of Double Qualified Teachers in Higher Vocational Colleges* was designed. The questionnaire is divided into three parts. The first part is the personal information of teachers, including age, gender, teaching experience,

teaching profession, educational background (degree), professional title; The second part consists of 15 single choice questions and 5 multiple choice questions, with a total of 20 sub questions, mainly involving teachers' information literacy, dual qualification quality, enterprise experience, innovation ability, career planning; The third part is an open question, mainly about teachers' views on the construction of the school's teaching staff, their views on the future development trend of vocational education, and suggestions for the construction of dual teacher. There are 5 sub questions in total.

Among the multiple choice questions:

Question 1 which type of double qualified teacher do you belong to? (1)Double professional titles (lecturer or above + engineer or accountant or above); (2) Double certificates (teacher qualification certificate + industry vocational qualification certificate or skill level certificate); (3) Double abilities (theoretical teaching quality and ability + practical teaching quality and ability); (4) Dual integration: dual certificates + dual capabilities; (5) other.

Question 2 The main forms of participating in enterprise practice are as follows: (1)a form of total disengagement, devoting oneself to practice; (2) In the form of semi full-time employment, it is necessary to complete school teaching tasks; (3) Taking advantage of winter and summer vacations or teaching breaks without taking off work; (4) Not carried out.

Question 3 How effective is the mutual employment between the school and the enterprise? (1) The effect is very good, which can comprehensively improve the dual division ability; (2) The effect is good, which can better improve the ability of dual division; (3) The effect is average, which can improve the ability of dual division to a certain extent; (4) The effect is not ideal, and the improvement of dual division ability is not obvious; (5) Form prevails over content; (6) Not carried out.

Question 4 what is the ability that vocational teachers need to improve most? (1)Professional theoretical and practical knowledge; (2)Practical operation ability in industry and enterprise positions; (3)Research and application technology development capabilities of industry, university and research institutes; (4)Theoretical knowledge of vocational education; (5)Educational and teaching ability of vocational education; (6)Vocational education curriculum development ability; (7)Management ability; (8)Vocational guidance ability; (9)Foreign language ability; (10)other.

Question 5 what are the difficulties for teachers to practice in enterprises? (1)Heavy teaching tasks and lack of energy; (2) Families have a heavy burden and no time; (3) Schools do not have funding support or funding is too small; (4) No change in treatment; (5) other.

Question 16: the current situation of the construction of the double qualified team in higher vocational education is as follows: (1) Insufficient understanding of the concept of "double qualified" teachers, and a large number of teachers lack practical experience; (2) There are few places and opportunities for teachers to practice; (3) Inadequate process management; (4) The theoretical teaching task is heavy, and the practical teaching time is sharply reduced; (5)Lack of high-level double qualified teachers; (6) The integration of enterprise, industry, and education is not close, and the achievement transformation mechanism is not perfect; (7) Teachers' "job burnout", lack of professional ideals, complacency and passive development; (8) Inadequate top-level design and specifications of the school; (9) Other.

Question 17 what other aspects do you think the education authorities should strengthen in the construction of the double qualified team in higher vocational education? (1) Clarify the entry threshold and construction standards for double qualified teachers in higher vocational education; (2) Strengthen the top-level design of double qualified teacher training in higher vocational education; (3) Promulgate detailed rules for the implementation of double qualified teacher training; (4) Introduce more incentive policies to mobilize the enthusiasm of industry enterprises to participate in the cultivation of double qualified teachers in vocational colleges; (5) Multi-departmental coordination and issuance of portfolio policy support; (6) More funding support; (7) Other.

## 2.2. Implementation of Research and Data Collection

260 questionnaires were issued to full-time teachers in double high schools and provincial high-level vocational colleges, and 245 valid questionnaires were retrieved. The average age of the teachers receiving the questionnaire is 37.7 years old, and the average teaching age is 13.8 years old. Men account for 44.08%, women account for 55.92%, primary professional titles account for 11.02%, intermediate titles account for 79.5%, and senior titles account for 9.48%. According to the questionnaire, 84.49% of full-time teachers are double qualified teachers, 59.59% have less than one year of enterprise practical experience, and 24.90% have more than one year of enterprise practical experience. Among the units that teachers practice in enterprises, 48.58% belong to the service industry, 51.42% belong to the manufacturing industry, and 6.53% belong to the advanced manufacturing industry.

From the questionnaire, it can be seen that young and middle-aged teachers have relatively short experience in enterprise practice, and less experience in enterprise practice in advanced manufacturing and modern service industries. Their understanding of new technologies, new energy, new materials, and new processes is relatively superficial. The questionnaire reflects issues such as a single source of dual qualification, impeded two-way flow between schools and enterprises, prominent structural contradictions, inflexible management systems and mechanisms, low professional practical ability, and a shortage of dual qualification teams.

Take multiple choice of Question 16 as an example. The selection rate of each option (1)-(8) in the question has reached more than 90%, fully illustrating the unclear concept of "double qualified" teachers, inadequate process management, few practical opportunities for teachers, heavy teaching tasks in theoretical courses, lack of high-level double qualified teachers, incomplete integration between production and teaching, incomplete achievement transformation mechanism, occupational burnout of teachers, and insufficient top-level design of schools.

Among the multiple choice and open question questions, the most common problems reported by teachers were heavy teaching tasks, low labor benefits, more miscellaneous tasks unrelated to teaching, heavy scientific research tasks, and a low likelihood of rising professional titles. Teachers in higher vocational education undertake multiple tasks such as classroom teaching reform, specialty construction, and curriculum construction, new forms of teaching materials construction, information resource library construction, and serving the society. The above issues will undoubtedly become the bottleneck of the innovative development of higher vocational education. [2]

## 3. Analysis on the Construction of Double Teacher Team in Higher Vocational Education

The newly revised and implemented *the Vocational Education Law* provides clear requirements for the construction of teacher teams, laying an institutional guarantee for the innovative development of modern vocational education and the construction of high-quality double qualified teams. In the new development stage of improving quality, cultivating excellence, adding value, and empowering in higher vocational education, it is necessary to place the construction of higher vocational teacher teams in the strategic position of vocational education innovation and development, focus the focus of connotative development in higher vocational education on the construction of high-level double qualified teams, and shift the focus of double qualified team construction from reaching the standard in quantity to excellent in quality. Shift the focus of dual division team management from within the school to school-enterprise cooperation. [3]

### **3.1. Focusing on Connotation and Solving the Problem of Double Division Team Construction that Emphasizes Quantity but Neglects Quality**

In the past, many higher vocational colleges implemented diversified development strategies. As diversified development exposed many risk issues, schools gradually realized the importance of their core competitiveness and gradually shifted the competitiveness formed by diversified development to focused development, connotative development focusing on quality. The diversified development strategy of schools has also brought a lot of confusion to teachers. In the context of connotative development, higher vocational colleges should promote supply side reform, deepen quality connotation, focus on the overall quality improvement of dual qualification, increase the quality improvement of dual qualification in the dimensions of school running mechanism, teaching reform, scientific research environment, incentive policies, and enhance core competitiveness.

### **3.2. Learning from Each Other's Strong Points to Solve the Problem of the Lack of Quality and Innovation Abilities of Dual Teachers**

Guided by the vocational education development theory, quality management theory, and teacher professional development theory with Chinese characteristics, promote teacher professional identity, and promote the modernization of teacher quality governance. There are some problems in the double qualified team in higher vocational education, such as insufficient teachers' basic quality and ability and teaching innovation ability. A high level of theoretical and practical teaching ability is the basic quality and ability that dual teachers should have. Therefore, it is necessary to test the differences in teachers' basic quality and ability, theoretical teaching ability, enterprise practical ability, teaching innovation ability, and other abilities, find gaps, supplement weaknesses, and strengths, promote the comprehensive improvement of teachers' teaching competence, innovation ability, information literacy, and dual teacher literacy, and enhance the effectiveness of high-quality construction of schools with high-level dual teacher. *The Vocational Education Law* officially stipulates that vocational colleges that meet certain conditions can implement vocational education at the undergraduate level upon approval. The requirements for the construction of high-level teacher teams in higher vocational colleges include deep integration of production and education, distinctive school-running characteristics, and higher training quality.

### **3.3. Balanced Development to Solve the Problem of Poor Ecological Environment for Double Teacher Talents in Higher Vocational Education**

The development of vocational education cannot be separated from the stability and development of the first resource teacher team. [4] The stability and development of higher vocational teachers cannot be separated from the active support of vocational education related policies and the high recognition of vocational education by the economic society. China's vocational education has long experienced various objective differences between economically developed and underdeveloped regions, eastern and western regions, and urban and rural areas. There are significant differences in the scale, speed, and level of different types of vocational education, such as secondary vocational education, vocational college education, and vocational undergraduate education, resulting in significant differences among teachers in professional development, staffing benefits, and professional title evaluation, which to some extent affects the enthusiasm of teachers to take root in the field of vocational education to establish morality and cultivate talents. The Ministry of Education's *Catalogue of Vocational Education Specialties (2021)* has a total of 19 major categories, 97 major categories, and 1349 majors. The dual teacher industry and professional coverage in teaching is extremely broad. There are also significant differences in

the level recognition, job requirements, and performance evaluation of double qualified teachers carried out by various schools in accordance with *the Basic Standards for Double Qualified Teachers in Vocational Education (Trial)* issued by the Ministry of Education. Inadequate talent flow between schools and enterprises, inadequate job staffing, and large wage differences have also become the main factors impeding the stability and growth of the double division team. The continuous optimization of the development environment of dual teachers in the field of vocational education can enhance the social status and treatment of vocational teachers, enhance their sense of honor and achievement, promote the return of teachers' motivation, and stimulate their internal driving force.

## **4. Paths and Measures for the Construction of Double Teacher Teams in Higher Vocational Education**

### **4.1. Build a Talent Development Environment for Double Qualification and Strengthen the Construction of Double Qualification Teams**

With the accelerated pace of economic restructuring and upgrading in China, the demand for high-quality and highly skilled talents in the whole society has multiplied, and the deepening reform of higher vocational education has provided a good internal and external environment and development opportunities for the improvement of the quality of the teaching staff. The development environment for double qualified talents has been greatly improved. Therefore, it is necessary to further deepen the reform of decentralization, management, and service in the field of vocational education, study and solve the still existing problems of unclear positioning and unequal responsibilities in the system and mechanism of vocational education, increase policy supply for the double qualified group, optimize service paths, create and construct a good double qualified talent development environment, and promote the modernization of vocational education governance. [5]

Strengthen the construction of the double division team. Implement a project to improve the quality of teachers, promote both introduction and training, and strengthen the construction of double qualified teaching famous teachers and teaching innovation teams. Actively explore a new model of building a mixed double teacher team that employs and trains each other between schools and enterprises, and adopt a new method of building a mixed teacher team to improve the collaborative development of school enterprise teachers and the quality of education and teaching in the new era. [6] Distinguish between teaching oriented, teaching and research oriented, scientific research and social service oriented teacher categories, implement differentiated dual teacher job requirements, clearly define teacher professional development and job orientation, and attract more artisan masters, industry professors, and senior engineers to participate in the dual teacher team.

### **4.2. Deepen the Connotation of Higher Vocational Teacher Quality and Refine the Double Qualified Teacher Standard**

#### **4.2.1. Deepen the Connotation of Teacher Quality**

The country proposes to steadily develop high-level vocational education, and the demand for high-level teachers, especially dual teachers, will also become increasingly high. In the face of the future development situation of vocational education, the existing double teacher teams in schools will have shortcomings in terms of age structure, knowledge structure, ability structure, etc. Therefore, vocational colleges should focus on connotation based development, closely adhere to the logical basis point, ability factors, and promotion strategies for the generation of teacher quality, open up the double teacher career development channel, and create a high-level double teacher team

with a reasonable structure, a combination of full-time and part-time, and strong practical ability. The concept of dual qualified and dual competent teachers is the expansion and extension of dual qualified teachers in the field of vocational education in China in the field of applied undergraduate universities. Higher vocational colleges can learn from the path and measures of building a "double qualified and double qualified" faculty from application-oriented undergraduate universities to further improve the quality of application-oriented talent cultivation. [7]

#### **4.2.2. Refine the Double Teacher Standard**

Double qualified teachers defined in *the National Vocational Education Reform Implementation Plan* are teachers with both theoretical teaching and practical teaching abilities. *The Implementation Plan for Deepening the Reform of the Construction of Double Qualified Teachers in Vocational Education in the New Era* proposes 12 requirements for the construction of double qualified teachers, including four dimensions of Morality, Knowledge, Ability, and Conduct, which include the elements of Double Qualified talent quality standards. *The Basic Standards for Double Qualified Teachers in Vocational Education (Trial)* further details the hierarchical standards for double qualified teachers. Higher vocational colleges should be guided by quality standards, based on their own educational levels, major categories, and specific professional settings, combined with the actual situation of school-enterprise cooperation and integration of production and education in their own units, refine the dual qualification identification standards and implementation methods for professional course teachers and internship guidance teachers, take the quality and ability of dual qualification teachers as the first measurement standard, highlight the comprehensive investigation of theoretical and practical teaching abilities. Teachers at three different levels, intermediate and senior, are evaluated by classification. And dynamically adjust the "double qualification" standard based on the application ability requirements of cutting-edge new technologies, new processes, new materials, and new equipment in industries such as advanced manufacturing and modern service industries.

### **4.3. Strengthen the Training of Double Teachers to Enhance Teachers' Innovative Awareness and Ability**

#### **4.3.1. Strengthen the Cultivation and Training of Double Teachers**

Double qualified teachers' quality and ability improvement training should be carried out focusing on the development of teachers' innovative abilities, combining the factors of teachers' academic degrees and abilities. We should open up two-way flow channels between schools and enterprises, and jointly build a double qualified teacher training platform, training base, and teacher enterprise practice base. Promote education and training cooperation with overseas production capacity partners, actively introduce high-quality vocational education institutions from overseas to cooperate in running schools in China, and promote the localization and re innovation of international vocational education experience.

#### **4.3.2. Improve Innovation Awareness and Ability of Teachers**

It is important to strengthen the academic and moral education and management of the double qualified team, improve the basic research and original innovation ability of teachers, and promote the overall quality of the teacher team. It is also important to implement a combination of performance management and flexible management, support double qualified teachers and teams to carry out teaching reform research, serve for a long time, and actively engage in basic research and original innovation. Currently, the field of vocational education is actively promoting

school-enterprise cooperation and deep integration of industry and education, and accelerating the construction of new modes of education such as modern apprenticeship with Chinese characteristics and new enterprise apprenticeship. Teaching and research in vocational education classrooms, institutional innovation and technological innovation in school-enterprise cooperation need to be actively tried and continuously verified to promote the upgrading and transformation of industrial production capacity. In the process of building the double teacher team, promoting the improvement of innovation awareness and innovation ability can not only improve the quality and efficiency of education supply side, but also ensure that teaching innovation can better meet the actual needs of students' personalized development.

#### **4.4. Strengthening Teachers' Information Literacy and Improving the Teaching Ability of Curriculum Ideological and Political Education**

##### **4.4.1. Strengthen Information Literacy in the Intelligent Era**

Fully promoting the digitization of vocational education and reshaping the new ecology of vocational education through digital transformation cannot be separated from the active input and action of teachers. [8] Informatization, digitization and intelligence have endowed vocational education with new connotations of double qualified teachers, opening up a new path for the construction of double qualified teacher teams. The construction of high-level vocational double qualified teacher team should start from the perspective of information platform construction, innovation of information evaluation means, information talent matching, and vigorously promote the new form of "internet+" and "intelligence+" education. [9] By conducting information technology training for all employees, the application of new generation information technologies should be promoted such as the Internet of Things, cloud computing, big data, and artificial intelligence, improve the information literacy of double qualified teachers, and accelerate the entire process of deeply integrating information technology and intelligent technology into theoretical and practical teaching. Improve teachers' ability to build and develop new forms of teaching materials such as loose-leaf, workbook, and integrated media. [10]

##### **4.4.2. Improve the Teaching Ability of Curriculum Ideological and Political**

Ideological education is the core of ideological and political work in colleges and universities. Higher vocational colleges should focus on improving the ideological and political qualities and moral qualities of all teachers, and improve their curriculum ideological and political teaching ability. Integrate and implement the teacher standard teacher with ideals and beliefs, moral sentiments, solid knowledge, and a benevolent heart in the double teacher standard, improve teachers' great ideological and political ability in both ideological and intellectual dimensions, and enable teachers to integrate moral education, labor education, professionalism, and craftsmanship spirit into the entire process the education. [11]

#### **4.5. Promote the Reform of Dual Teacher Education and Teaching Evaluation and Implement a Targeted Professional Title Evaluation and Employment System**

##### **4.5.1 Promote the Reform of Dual Teacher Education and Teaching Evaluation**

In terms of education evaluation, vocational colleges often follow the education and teaching evaluation model of undergraduate universities, thus ignoring the positioning and characteristics of vocational education itself. Under the situation of modern development of vocational education, higher vocational colleges should actively construct a new evaluation system that adapts to the

innovative development of vocational education, and implement classified evaluation, value-added evaluation, and diversified evaluation. [12] A scientific research evaluation system, performance evaluation system, and professional title evaluation system for double qualified teachers have been introduced. Linking burden reduction with double qualified teacher performance assessment, clarifying job responsibilities, reducing non-teaching tasks or non-educational management work content, enabling double qualified teachers to focus on theoretical teaching, practical teaching, teaching research, and integrating production, learning, research, and application. Clarify the value oriented role of teaching achievement awards, skill competitions, and teacher honors, promote double qualified teachers to actively carry out teaching competitions, guide student competitions, promote teaching and training through competitions, and maximize the positive role of double qualified teachers in the integration of industry and education, and the cultivation of applied talents. [13]

#### 4.5.2 Implement a Targeted Professional Title Evaluation and Employment System

It is necessary to establish and improve the system of post setting and post (title) evaluation and employment of teachers in line with the characteristics of vocational education. [14] The autonomy of higher vocational colleges in running schools should be further implemented and expanded, and the structural reform of the supply of dual qualification talents should be promoted in higher vocational colleges. Properly handle issues such as the occupation of teachers' professional titles by management positions, and the staffing of teaching staff. Effectively implement the principle, innovate the promotion and evaluation mechanism for double qualified talents, set a new standard for double qualified talents, and enable double qualified teachers who contribute to classroom teaching reform, have the ability to conduct teaching research, and serve the society effectively to have a sense of achievement and sense of achievement.

### 5. Conclusions

With the acceleration of economic and social development and industrial transformation and upgrading, the demand for high-quality applied talents is undergoing tremendous changes, which also puts forward higher requirements for the construction of double qualified teams in higher vocational education. Therefore, it is necessary to further implement the spirit of documents such as *the Implementation Plan for Deepening the Reform of the Construction of Double Qualified Teachers in Vocational Education in the New Era*, continuously optimize the double qualified development environment, improve the double qualified team construction mechanism, strengthen the double qualified team construction, promote educational evaluation, reform the professional title evaluation system, provide a strong double qualified guarantee for cultivating high-quality applied talents, and accelerate the modernization of vocational education.

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