

# Probe into the Construction Path of “Double qualified” Teachers in the Perspective of the Deep Integration of Production and Education

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**Abstract:** Promoting the deep integration of production and education in higher vocational colleges and strengthening school enterprise cooperation are effective ways for higher vocational colleges to improve the quality of talent training, achieve sustainable development of students and better serve the development of local regional economy. By interpreting the connotation of the deep integration of industry and education, this paper analyzes the importance of “double qualified” teachers in the deep integration of industry and education, and in view of the problems existing in the construction of the current “double qualified” teacher team, puts forward such paths as standardizing the identification criteria, widening the way of talent introduction and optimizing the team structure, deepening the cooperation between colleges and enterprises, improving the assessment and incentive guarantee mechanism and improving the training system.

**Key words:** deep integration of production and education; vocational education; “double qualified” teachers

## 1. The relationship between the deep integration of production and teaching and the construction of "double-qualified" teachers

Promoting the deep integration of production and education in higher vocational colleges and strengthening school-enterprise cooperation are effective ways for higher vocational colleges to improve the quality of talent training, realize the sustainable development of students and better serve the development of local regional economy.

The deep integration of production and education is a cooperative education model between higher vocational colleges and industrial enterprises. The two sides actively cooperate, share resources, complement each other's advantages, and organically integrate to cultivate real high-level applied talents and better serve regional economic development. Further analysis of the deep integration of production and education, there are mainly three levels of integration: First, the integration of education and industry, higher vocational education for enterprises to transport talents and intellectual services, industry for higher vocational education to provide a practical platform and the corresponding material guarantee; The second is the integration of subjects. Both sides implement the deep integration of production and education through school-enterprise cooperation, and complement each other's advantages through resource sharing; The third is the integration of classroom and work site, carrying out the teaching content design based on the work process, and directly connecting the classroom video to the production process, realizing the docking of the teaching process and the production process, and the docking of teaching content and post requirements.

## 2. The necessity of the construction of "double-qualified" teachers

### 2.1 The construction of "double-qualified" teachers is the need of The Times

With the transformation and upgrading of industrial structure, China's industrial enterprises need a large number of high-skill compound talents if they want to realize the leapfrog development from the traditional production mode to the automatic and intelligent mode. However, the traditional skilled talents cultivated by higher vocational colleges cannot meet the needs of industrial transformation and upgrading, which leads to the phenomenon of labor shortage. On the other hand, it is difficult to find employment. Due to the implementation of policies such as higher vocational enrollment expansion and the implementation of multi-channel enrollment policies such as general enrollment, classified enrollment and social enrollment, the number of students is increasing year by year. The increase in enrollment means the increase in the number of graduates, while the job market can provide limited suitable positions, and fewer graduates meet the requirements of enterprise post ability, resulting in employment difficulties. The above phenomenon of labor shortage and employment difficulty shows that the talent training standards of higher vocational colleges are inconsistent with the requirements of enterprises for talents, and the talents cultivated by higher vocational colleges are not the talents needed by enterprises. The key to solving this problem is that higher vocational colleges should formulate talent training programs according to the needs of enterprises and cultivate the talents needed by enterprises, and the key to talent training is teachers. In particular, to cultivate a group of excellent "double-qualified" teachers, only a group of excellent "double-qualified" teachers can cultivate talents that meet the needs of enterprises, and these talents can enter the corresponding positions of enterprises, and can support the smooth realization of corporate structural transformation and upgrading.

According to statistics, by May 2022, the number of full-time teachers in China's vocational schools has increased from 1.11 million in 2012 to 1.29 million in 2021 (among which: There were 695,000 full-time teachers in secondary vocational schools, 57,000 in vocational colleges, and 25,000 in vocational schools at the undergraduate level, with an increase of 17%. From the perspective of the proportion of "double-qualified" teachers in professional teachers, they all exceeded 55% (56% in secondary vocational schools, 59% in vocational colleges, and 59% in vocational colleges), reaching the requirement of more than half. It provides strong support for the high-quality development of vocational education.

### 2.2 The construction of "double-qualified" teachers provides a guarantee for the quality of personnel training

An important measure for the connotation development of higher vocational education in the new era is the deep integration of

production and education and the cooperation between schools and enterprises, to improve the quality of personnel training, and to cultivate skilled talents with high professional quality, solid professional theoretical knowledge and strong practical ability to truly meet the needs of society. The key to realize this measure is to see teachers, and a group of excellent "double-qualified" teachers are the guarantee for the realization of connotation development.

"Double-qualified" teachers have high professional quality, solid professional theory, high teaching level and rich enterprise experience. Through the integration of practical teaching, students can master professional knowledge and also master certain vocational skills, so that the students cultivated are the real needs of enterprises.

### 2.3 The construction of "double-qualified" teachers ensures the improvement of teaching quality

To improve the teaching quality, the key is to improve the comprehensive quality of teachers. Only with high professional quality, excellent professional knowledge and rich practical experience can teachers carry out real enterprise case teaching in the classroom, carry out simulation teaching based on the work process, and carry out practical training activities to guide students to do it themselves, so as to greatly improve the quality of classroom teaching. In addition, due to the increase in the number of students brought about by the expansion of enrollment, the teacher-student ratio is seriously unreasonable, and it is difficult to guarantee the teaching quality requirements with limited teachers. Due to their strong practical ability and rich practical experience, "double-qualified" teachers can break the shackles of the curriculum system, combine theory and practice, and teach different courses of the same major in one semester. At the same time, they integrate enterprise culture, professional quality and production technology into teaching, which improves the teaching quality and guarantees the teaching effect.

## 3. Current situation and existing problems in the construction of "double-qualified" teachers in higher vocational colleges

3.1 The identification standards of "double-qualified" teachers are different, and the characteristics of "double-qualified" teachers are not fully reflected in the teacher assessment

The identification criteria for "double-qualified" teachers is an important basis for the construction of teacher teams. However, up to now, there has been no authoritative and clear definition of the identification criteria for "double-qualified" teachers. Therefore, different colleges and universities in different regions have different understandings of the identification criteria of "double-qualified" teachers. This cannot fully reflect the construction goal of "double-qualified" teachers, and the identification criteria formulated by each school according to its own situation are not comprehensive and systematic enough, and the characteristics of "double-qualified" teachers are not taken as the basis for identification in the assessment of professional title promotion, and the traditional indicators such as "scientific research and academic achievements" are still taken as the basis for assessment, ignoring the assessment of teachers' practical operation skills. In addition, many higher vocational colleges in the identification of "double-qualified" teachers in order to ensure that the number and proportion of "double-qualified" teachers meet the administrative standards, did not cultivate the real sense of "double-qualified" teachers with the organic integration of education and teaching theory, professional knowledge, technical application ability and practical operation ability.

### 3.2 The structure of "double-qualified" teachers is unreasonable

Due to the existing system reasons, coupled with the requirements of the teacher standards for the construction of high-level universities, the number and proportion of vocational college teachers' academic qualifications and titles are stipulated. Although they have rich experience in enterprise work, excellent senior technicians in industrial enterprises cannot enter colleges and universities to teach because of their low academic qualifications. At present, most higher vocational colleges are still "academic experience" in the introduction of talents, following the model of research universities to recruit teachers, ignoring talents with enterprise work experience. In this mode of talent introduction, although the introduced teachers have strong theoretical knowledge, they have weak practical ability. It is difficult for such a team of teachers to cultivate highly skilled talents with practical hands-on ability. Such a talent introduction channel makes the team structure of "double-qualified" teachers unreasonable.

### 3.3 The scale of teachers is insufficient and the ability of scientific and technological services is not strong

Due to the increase of enrollment channels in higher vocational colleges, such as general enrollment, social enrollment, classified enrollment, and "3+2" matching enrollment in technical secondary schools, the enrollment scale continues to expand, while the scale of teachers is insufficient, the teacher-student ratio is seriously unreasonable, the teaching workload of teachers continues to increase, and they are tired to cope with classroom teaching, teaching quality is difficult to guarantee, and they cannot meet the normal teaching needs. Under this background, teachers in higher vocational colleges have no time and energy to improve the ability of "double teachers". Although some schools organize teachers to take temporary positions in enterprises or participate in national and provincial enterprise practice courses every summer, due to the short practice time and more stay in observation and learning, it is difficult to achieve in-depth practice. In addition, the general scientific research level of teachers in higher vocational colleges is not high, and they can not help enterprises carry out technology research and development and solve technical problems.

### 3.4 No perfect training system has been established for the training of "double-qualified" teachers

From the above composition of "double-qualified" teachers in higher vocational colleges, the main source of teachers is colleges and universities, and this kind of teacher enterprise has limited work experience and lacks practical experience. According to the requirements of the construction of "double-qualified" teachers, it is necessary to train such teachers, and there are two main ways of training, one is national training and provincial training projects, and the other is to take up temporary posts in school-enterprise cooperation units. Among

them, the national and provincial training projects rely on colleges and universities, the participation of industrial enterprises is not enough, and the content of training courses focuses on theoretical teaching, and the practice part of enterprises is less. Although there are enterprise practice courses, most of them stay on visiting enterprises, and theoretical teaching is disconnected from enterprise practice. In addition, due to the different concerns and interest demands of the university and the enterprise in the cooperation, more attention is paid to the internship of students. The university solves the internship destination of students, the enterprise obtains relatively cheap labor force, and the students obtain necessary skills and meager income in the internship process. However, in terms of teacher training, it is difficult for enterprises to provide suitable positions for teachers to take up temporary posts, and most of them are mere formalities. The above two aspects, whether it is national training, provincial training, or enterprise training base, are not perfect in the "double teacher" training system, which hinders the improvement of the professional practice ability of the "double teacher" team.

#### 4. Construction path of "double qualified" teachers

To promote the deep integration of production and education in higher vocational colleges and strengthen the cooperation between schools and enterprises is an effective way for higher vocational colleges to improve the quality of talent training, realize the sustainable development of students, and better serve the development of local regional economy, as well as an effective way for the construction of "double-qualified" teachers.

##### 4.1 Clarify the connotation of "double-qualified" teachers and standardize the identification standards

The standard is the reference is the basis, and the standard is the quality assurance of the construction of "double-qualified" teachers. First of all, it is necessary to issue corresponding documents from the national level to uniformly define the connotation and identification methods of "double teacher" teachers, and the school seriously understands the spirit of the document and formulates clear and specific "double teacher" identification standards according to the actual situation of the school. In order to ensure that the standards formulated are practical and operational, the school can invite skilled craftsmen from industrial enterprises, professional leaders from brother colleges and universities, experts in the field of vocational education, etc., to participate in the formulation of the identification standards for "double-qualified" teachers, highlighting the evaluation of professional knowledge and vocational skills. The teachers with professional teaching level, technology research and development level, enterprise practice level and social service level are selected.

##### 4.2 Expand talent introduction channels and optimize the "double-qualified" team structure

When introducing talents, higher vocational colleges should not only pay attention to academic qualifications and professional titles, but also take enterprise work experience as a prerequisite for talent introduction. After the introduction of talents through the public foundation, performance test and other written examinations, in the interview process, the school should not only examine the teacher's ethics and teaching ability of the applicant, but also conduct practical tests to examine their professional practice ability, so as to ensure that the introduction of talents with double professional quality. In addition, in addition to the above usual talent introduction channels, higher vocational colleges can introduce outstanding enterprise backbone to work in the school through in-depth integration of production and education with enterprises, school-enterprise cooperation opportunities, cooperation in teaching and research projects, joint training of order classes and other ways, bring the actual working standards, processes and methods of enterprises into the classroom, and carry out teaching design together with the school teachers. Realize the purpose of educating people together.

##### 4.3 Strengthen school-enterprise cooperation and increase the number of "double-qualified" teachers

Due to the increase in the number of students brought by the expansion of vocational colleges, the existing teachers are limited, most teachers have multiple jobs or take several professional courses, and generally adopt large class teaching, teaching quality is difficult to guarantee. The most effective solution is to hire external teachers, and to hire technical experts from enterprises to serve as part-time teachers after teacher pre-service training, which not only enriches the team of teachers, but also facilitates the cultivation of students' professional practice ability and improves the quality of talent training. On the other hand, as part of the teaching tasks of professional courses are undertaken by external teachers, the teachers of our school can have time to take temporary training in enterprises. They can not only overcome difficulties together with technical personnel of enterprises, but also improve the technical service ability and professional practice level of professional teachers of our school, so that the teachers of our school can grow into real "double-qualified" teachers and expand the team of double-qualified teachers. And further improve the quality of talent training in higher vocational colleges.

##### 4.4 Establish and improve the evaluation and incentive mechanism of "double-qualified" teachers

A sound and effective evaluation and incentive mechanism provides a system guarantee for the high-quality development of "double-qualified" teachers, which is conducive to improving the enthusiasm of professional teachers in practical teaching and enhancing their practical ability. Based on the actual situation of higher vocational education, the assessment system of "double teacher" should be constructed. According to the characteristics and objectives of talent training in higher vocational colleges, the comprehensive quality of "double teacher" should be emphasized (teacher ethics, humane education, professional theory, practical teaching ability, teaching research, technology research, etc.) to form a classified assessment model that conforms to the characteristics of higher vocational education. Such as in the promotion of the company as a condition for promotion; In the evaluation of professional titles, pay attention to academic theoretical research results, pay more attention to social practice results. In order to ensure the incentive effect of the classification assessment results of the "double-qualified" teachers, the assessment results should be reflected in the post promotion and personal development, and priority should be given to the "double-qualified" teachers in the project application, further training and evaluation. In addition, in terms of the assessment of part-time teachers, it is necessary to understand the importance of part-time teachers in the "double-qualified" teachers.

Considering that part-time teachers come from different enterprises and institutions and their own quality differences, assessment and evaluation methods should be established in line with the characteristics of part-time teachers.

#### 4.5 Improve the "double-qualified" teacher training system

Under the background of deep integration of production and education, schools and enterprises share resources and jointly build teacher training bases, so that teachers have a platform for Posting. On this basis, we should arrange specific temporary posts, formulate temporary goals and specific tasks, ensure that teachers truly participate in enterprise production, truly master and understand new technologies, new processes and new equipment, and promote the improvement of teachers' professional practice ability. At the same time, schools should improve the "double-qualified" teacher training system. According to the needs of professional construction and teaching plan, a certain number of teachers are arranged to take temporary positions in enterprises every year to ensure that every teacher can have the opportunity to exercise.

The construction of "double qualified" teachers is a systematic project, and higher vocational colleges should continue to explore ways to improve the construction of "double qualified" teachers, constantly improve the quality of talent training, and promote the sustainable development of higher vocational education.

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