
Research on the Strategy of Cultivating High-Quality Multi-Competent Teaching Staff in Private Higher Vocational Colleges and Universities in the Context of Industry-Teaching Integration

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Abstract: *In the current context of deep integration of industry and education, cultivating a multi-competent teaching team with rich theoretical teaching experience and practical teaching ability is one of the key magic weapons to break the bottleneck of vocational education. Private higher vocational colleges and universities have a flexible mechanism that is incomparable to that of public colleges and universities, which makes it more convenient and efficient to employ people. This paper mainly focuses on the development of the multi-competent teacher identification method, the improvement of the multi-competent teacher incentive mechanism, and the establishment of a comprehensive multi-competent teacher team. This paper focuses on the development path of multi-competent teacher team construction in private higher vocational colleges and universities by formulating multi-competent teacher identification methods, improving multi-competent teacher incentive mechanism, and establishing and improving multi-competent teacher internal assessment system and other measures.*

Keywords: *Integration of industry and education, multi-competent teachers, Private Higher Vocational Institutions, incentive mechanism*

Introduction

The term multi-competent teachers to a group of teachers who possess both in-depth theoretical knowledge and excellent practical skills (Pan,&Hao.2024). They usually play an important role in vocational education and application-oriented disciplines. These teachers are able to combine abstract theoretical knowledge with concrete practical operations to provide students with a more comprehensive and in-depth learning experience. In the context of vocational education in the new era, multi-competent teachers not only teach students how to understand complex concepts, but also guide students to apply theories to practice, effectively improving students' practical skills and ability to solve real-world problems. According to empirical analyses and theoretical studies, multi-competent teachers effectively enhance students' professional knowledge application ability and employment competitiveness by integrating industry experience and the latest developments into the curriculum and by providing practical work cases (Han,Huang,Zhang,&Wang.2024). In vocational education, the ability of multi-competent

teachers is particularly important, as they not only impart solid theoretical knowledge, but also lead students to a smooth transition to the world of work through teaching methods that are closely linked to workplace realities and hands-on demonstrations, enabling them to become professionals who are able to adapt to and engage in the workplace quickly.

As an important base for cultivating high-quality professional and technical talents, higher vocational colleges and universities must constantly innovate in teaching content, teaching mode and student management to meet the diversified needs of society for talent cultivation in the new era. As far as private higher vocational colleges and universities are concerned, the teaching staff is a bit thin, and the organizers of private colleges and universities are likely to prioritize the faster-earning cultivation methods when considering the budget, so the cultivation of multi-competent teachers is likely to occur because it is difficult to see the results in a short period of time, and there is a possibility of controlling the cost of teacher cultivation.

However, in the face of the development trend of vocational education of the deep integration of industry and education, it is especially urgent and crucial to strengthen the construction of multi-competent teachers. The integration of vocational education and industry and education can not only improve the productivity of enterprises and society, but also promote the transformation of talent training mode and the improvement of education quality. According to the National Vocational Education Reform Implementation Program (“VET 20”) issued by the State Council in 2019, it is planned that tens of thousands of industry-education integration enterprises will be cultivated nationwide by 2022. For example, as of March 2022, Liaoning Province has included 107 enterprises in the scope of the cultivation of industry-education-integrated enterprises and has published four batches of lists. Xinjiang Uygur Autonomous Region has also published two batches of lists totaling 36 industry-education integration-type enterprises. Guangdong Province, on the other hand, has cultivated and built 1,223 industry-education integration-type enterprises, the largest number in the country. In addition, 131 domestic enterprises have been selected for the cultivation pool for the construction of industry-teaching-integrated enterprises nationwide. For example, according to the Implementation Plan for the Vocational Education Industry-Education Integration and Empowerment Enhancement Action (2023-2025), jointly issued by the National Development and Reform Commission and eight other departments, by 2025, more than 10,000 industry-education integration enterprises will be constructed and nurtured nationwide. At present, Shandong Province plans to recognize 100 “industry-teaching integration-type” enterprises by 2022, Liaoning Province has included 107 enterprises into the scope of industry-teaching integration-type enterprise construction and cultivation, Xinjiang Uygur Autonomous Region has published a list of 36 industry-teaching integration-type enterprises, and Guangdong Province has cultivated and constructed 1,223 industry-teaching integration-type enterprises, which all reflect the national policy at the local level. All these initiatives reflect the concrete implementation and effectiveness of national

policies at the local level (National Development and Reform Commission.2023).The national level attaches great importance to the integration of industry and education, regards it as an important direction for the development of vocational education, and draws a grand blueprint for the integration of industry and education through a series of policy support and practical exploration. In this context, private higher vocational colleges and universities should firmly implement the teaching mode of integration of industry and education, pay attention to the comprehensive advantages of multi-competent teaching team in terms of higher education, vocational, practical and teaching, etc., and analyze the complexity and comprehensive problems in the construction of multi-competent teaching team, so as to comprehensively improve its construction level and further improve the quality of teaching team. It also analyzes the complexity and comprehensive problems in the construction of multi-competent teacher team, comprehensively improves its construction level, and then strives to improve the teaching quality and talent cultivation level of private higher vocational colleges and universities.

2. Challenges faced by multi-competent teachers in private higher vocational colleges and universities

2.1 Insufficient number and single source of multi-competent teachers

At the third press conference of the “1+1” series on “Education in this Decade” held by the Ministry of Education, Ren Youqun, director of the Department of Teacher Work of the Ministry of Education, pointed out that the number of full-time teachers in vocational schools nationwide has grown significantly since 2012, from 1.11 million to 1.29 million by 2021, a growth rate of 17 percent. 1.29 million in 2021, a growth rate of 17%. In addition, the proportion of 'dual-teacher-type' teachers among teachers of specialized courses has exceeded 55%, with 56% at the secondary level, 59% at the senior specialist level, and 59% at the senior undergraduate level, fulfilling the requirement of more than half of the total number of teachers (Ministry of Education of the People's Republic of China.2022).However, with the gradual expansion of the enrollment scale of higher vocational schools, the number of students in the increasing number of multi-competent teachers are scarce in quantity, quality is also short board, and can really realize the integration of engineering, knowledge and practice, moral and technical and cultivation of the best very few.

In addition, most of the teachers of vocational schools in China are mainly fresh graduates of colleges and universities, and the personnel of industrial enterprises and other personnel in the society only account for a small portion, and most of the teachers of vocational schools have little practical experience in the enterprise, insufficient working experience, and the quality of dual-teachers needs to be improved, and the teaching and practical experience are weak. This results in part of the higher vocational teachers to emphasize the theoretical teaching, resulting in students' professional knowledge and practical ability to disconnect, it is difficult to convert what they have learned into practical ability. For example, in the enterprise to master the corresponding

experimental techniques, and young teachers due to the lack of experience in the enterprise, resulting in students can master the relevant theoretical knowledge, but can not be applied to product testing and research and development activities.

2.2 Inadequate system for training multi-competent teachers

In January 2019, the State Council issued the Notice of the State Council on the Issuance of the Implementation Plan for National Vocational Education Reform (Guo Fa [2019] No. 4), which states that vocational colleges and universities, according to their own actual situation, can introduce full-time teachers from enterprises and hire part-time teachers and masters of skills who are both experienced in management and capable of providing business guidance, etc., to teach at schools, so as to build up a combination of specialized and high-quality Teacher team (Yang.2023).However, constrained by many factors such as salary and policy, private higher vocational colleges and universities face the dilemma of the difficulty of introducing high-quality technicians from enterprises in the actual running of schools, which in turn leads to the problem of insufficient practical ability of the faculty and the lack of significant organizational structure characteristics.

From the point of view of training teachers within vocational schools, the current training paths for multi-competent teachers mainly include national training, provincial training, further education, and participation in practical courses in enterprises (Liu,Cao,&Gua.2023). The training of multi-competent teachers is regular, and it takes a lot of time to develop real practical ability and needs to be carried out in a real practice environment to be effective. However, during the period of teachers' posting, schools often have professional teaching work and scientific research tasks, and the evaluation of teachers during this period is more based on the same results as other teachers, which leads to a series of imbalance in positioning and makes it difficult for teachers who have the idea of improvement to devote themselves to enterprise practice. In addition, some of the higher vocational schools and enterprises are not close enough, and the enterprises are not willing to accept teachers to practice in their own enterprises. In addition, the two sides have not yet constructed an effective system covering assessment, management, incentives, etc., which directly leads to the lack of teachers' enthusiasm, so that some of the activities of job training are just a formality, and finally, the students trained are difficult to meet the actual needs of the enterprises, and there is a clear phenomenon of disjunction.

3. Main ways to build a multi-competent teaching force

3.1 Establishment of a professional recognition scheme for multi-competent teachers

As an important position for the cultivation of multi-competent teachers, private higher vocational colleges and universities need to build a sound system for the recognition of multi-competent teachers at the school level, which covers the scope of the recognition, the target group, the criteria and the assessment and management of the recognition and other dimensions. Specifically, on the one hand, the classification needs to be clear. Specifically, 'dual-teacher'

teachers are divided into primary, intermediate and senior three levels, and the specific conditions for promotion need to be clearly defined. Junior multi-competent teachers must have a university teaching certificate + professional qualifications, intermediate must, on this basis, have more than six months of experience in the enterprise within three years, and senior must, on the basis of intermediate, obtain the first prize at the provincial level in the industry or the third prize at the national level or above. On the other hand, the management program combining incentives and assessment is implemented. Applicants are required to submit all the application materials (including teacher qualification certificate, academic degree certificate, title certificate, record of on-the-job experience and summary of practical experience, etc.), which will be first examined by the second-level colleges, and then reviewed by the administrative department of the university. At the same time, the college leaders and key teachers together to form a multi-competent teacher construction leading group, the college in charge of teaching vice president as the leader, held a multi-competent teacher recognition meeting once a year, the leading group meeting of each teacher's materials for review and approval, and then submitted to the municipal government. After passing the audit, the materials will be submitted to the municipal education administration department, and after all the processes are passed, the public announcement will be made on the network, and after no objection, the education administration department will take the lead in releasing the red-title document, which will be recognized as a multi-competent teacher.

3.2 Enhance kinetic energy, improve assessment and evaluation incentives, guarantee mechanism

Private higher vocational schools should establish and improve the assessment and evaluation system of multi-competent teachers and improve incentives to create a more relaxed and humane environment for their growth and development, in order to improve the overall quality of the multi-competent teacher team. The assessment and evaluation should be diversified, comprehensive and feasible, taking into account the teachers' moral character, teaching ability, vocational ability, professional quality and other factors. Combined with the relevant documents of the Ministry of Education, the incentives can be analyzed in depth from the following aspects, such as: in the promotion channels of teachers' positions (titles), setting the "threshold" in favor of multi-competent teachers; in education training, giving priority to multi-competent teachers; at the salary performance level, appropriately increasing the standard of multi-competent teachers' hourly fee to ensure that they are higher than ordinary teachers of the same level. In terms of educational training, priority is given to the participation of multi-competent teachers; at the level of salary and performance, the hourly rate for multi-competent teachers is raised appropriately to ensure that it is higher than that of ordinary teachers of the same level, and the important criterion of multi-competent teachers is taken into account in the teachers' year-end salary. The important standard of multi-competent teachers is used as an indicator for teachers' year-end incentive performance pay. According to the development needs of different teachers at different stages,

policies are tilted in their favor to guide and encourage the majority of teachers to actively engage in the path of 'dual-teacher' development and to continuously upgrade their 'dual-teacher' skills.

It is also necessary to do a good job of guaranteeing the training of multi-competent teachers and ensuring that multi-competent teachers have sufficient time and energy. Formulation of a policy to reduce the workload of vocational education teachers, with the aim of appropriately reducing the transaction workload of full-time teachers, while at the same time reinforcing their capacity for education and teaching, continuing education, and technical skills learning and innovation (Wang, Lin, & Xu, 2024). To provide more opportunities for multi-competent teachers to re-learn, re-train and further their education, so as to ensure that they master the most up-to-date professional knowledge and continue to lead professional development. Special funding should be guaranteed for the training of “dual-teacher teachers” and the improvement of their practical abilities, and localities are encouraged to raise the funding standards for vocational and technical colleges and universities in a timely manner in the light of the actual situation, so as to enhance the level of protection for vocational education (Yang, 2024). Schools use the income from government coordination, school-enterprise cooperation, technical services for enterprises, and training for the community to support full-time teachers' participation in industry-academia practice, industry-education integration, and the construction of teaching and practice bases (e.g., for instruments and equipment, human resources, technical funding, and learning platforms, etc.).

3.3 Strengthening training and building a high-level multi-competent teaching force in multiple ways

Private higher vocational colleges and universities should make full use of their flexible mechanism for selecting and employing people, implement the teacher assistant system, tailor-made personalized training programs based on teachers' character traits and professional strengths, and arrange senior teachers with deep academic attainments and outstanding practical ability to pass on to the young teachers, guide them to proficiently complete the various teaching links and teaching reforms, teaching construction, and teaching and scientific research activities, and help the Young teachers grow rapidly in the process of professional construction and course teaching.

Transforming Talent Recruitment and Introduction Requirements in Higher Education Institutions. The “Implementation Plan for Deepening the Reform of the Construction of ‘Dual-Teacher’ Teacher Teams in Vocational Education in the New Era” jointly issued by the Ministry of Education and other four departments clearly states that, from 2020 onwards, in addition to graduates of multi-competent vocational and technical teacher-training majors, there will be no more recruitment of fresh graduates who do not have more than three years of work experience in industry and enterprises (Liang, 2020). It can be seen that the status quo of recent doctoral and master's degree graduates as the main recruitment target has changed, and the professional practical ability will be an important basis for job hunting.

Therefore, some higher vocational colleges and universities work hand in hand with relevant industrial enterprises, making full use of their respective advantageous resources to build a bridge

of cooperation. Teachers in colleges and universities hold cutting-edge theoretical knowledge, but are slightly weak in practice; while enterprises are in urgent need of the latest theoretical achievements to stimulate innovation. This kind of complementary cooperation accumulates valuable experience for professional construction, curriculum reform and talent cultivation through teachers' in-depth practical learning in enterprises. At the same time, enterprises also regularly send skilled technicians with strong practical ability to the school as long-term or short-term lecturers of practical courses, which brings the teaching contents closer to the reality for students.

3.4 All-round improvement of talent training mode

First of all, update the talent training program and optimize the overall design of the curriculum. On the one hand, adjusting the talent training objectives of private higher vocational schools, bench-marking with enterprises, undertaking enterprise R&D and production orders as appropriate, and at the same time combining the new curriculum standards and the latest application and development in enterprises, that is, optimizing the cultivation objectives of talents and reforming the curricula to keep up with the new development of enterprises, realizing the integration of post-courses, and embodying the vocational nature of the curricula. On the other hand, multi-competent teachers should adjust the teaching mode and evaluation system of private higher vocational colleges and universities, and adopt teaching methods suitable for higher vocational colleges and universities such as task-driven method and project teaching method, so as to help students master the latest technical means of the industry faster and better. The evaluation system strives to be detailed, objective and accurate, and monitors the whole process of the course, forming process evaluation, assumptive evaluation, comprehensive evaluation and value-added evaluation at different points.

Then, innovative teaching implementation programs are set up to provide students with the first on-campus classroom and the second off-campus classroom. At the teacher level, both on-campus and off-campus teachers are allowed to discuss and undertake the teaching tasks of the course, with on-campus teachers responsible for theoretical guidance and off-campus teachers responsible for practical guidance. At the level of teaching materials, school-enterprise cooperation is encouraged to develop nationally planned teaching materials, strengthen the connection with production and life, and emphasize their applicability and practicability. New forms of teaching materials are also advocated to synchronize with off-campus enterprises, i.e., the use of new types of loose-leaf, workbook, and work task list. At the level of teaching methods, we make full use of the emerging modern information technology and digital teaching resources to implement online and offline blended teaching. Meanwhile, in the creation of the second classroom, we strive to carry out teaching in real environments to realize the virtuous cycle of 'learning by doing and learning by doing'.

Finally, it promotes the co-development of competitions and innovation capacity. Higher vocational colleges and universities should actively advocate the participation of teachers and

students in various types of skills competitions, which can effectively test the practical ability of teachers and students, but also to accelerate the promotion of multi-competent high level of construction of the teaching force (Zhang.2024).In addition, skills competitions for different groups need to be vigorously organized within schools, with the aim of stimulating students' innovative thinking and realizing the virtuous circle of promoting learning, practice and creativity through competition. For students' skill competitions, teachers can be allowed to guide the students, who have practiced their practical and innovative skills, and the teachers have improved their guiding ability. For teachers' skill competitions, we should break the limitations of age and teaching experience, so that young and old teachers can compete on the same stage, exchange ideas with each other, and work together to improve the professional skills of multi-competent teachers.

3.5 Establishment of a sound internal appraisal system for multi-competent teachers

To build a multi-competent faculty, private higher vocational colleges and universities should pay attention to the internal assessment of the team. Specifically: on the one hand, comprehensive ability assessment. In the process of building multi-competent teacher teams in private higher vocational colleges and universities, we should pay attention to the development of individual teachers within the team, and in this process, private higher vocational colleges and universities should pay special attention to the comprehensive ability of teachers. For example, in addition to the teaching level of specialized disciplines, whether the teachers have team leadership ability, comprehensive practical ability, academic research ability and so on.To build a multi-competent teaching team, private higher vocational colleges and universities should pay attention to the internal assessment of the team. Specifically: on the one hand, comprehensive ability assessment. In the process of building multi-competent teacher teams in private higher vocational colleges and universities, we should pay attention to the development of individual teachers within the team, and in this process, private higher vocational colleges and universities should pay special attention to the comprehensive ability of teachers. For example, in addition to the teaching level of specialized disciplines, whether the teachers have team leadership ability, comprehensive practical ability, academic research ability and so on.On the other hand, teacher ethics and morale assessment. In the internal assessment, we can't ignore the “teacher ethics”. Private higher vocational colleges and universities in the daily work, private higher vocational colleges and universities can regularly or irregularly in the teachers and students issued a network questionnaire, the questionnaire content should focus on covering the teacher's work attitude, the performance of the education of the students and the development of the school, in order to comprehensively investigate the teacher's professional conduct, and to motivate the majority of teachers to pay attention to the improvement of their own professional qualities, and actively practicing the construction of teacher ethics and teacher moral style.

Conclusion

Under the social background of the deep integration of industry and education, the multi-competent teacher training model of private higher vocational colleges and universities is conducive to improving the employment rate of students and solving the problem of difficult employment. At the same time, the implementation of the multi-competent teacher training model helps to improve the teaching level and practical teaching ability of the school. However, in the process of cultivating multi-competent teachers, private higher vocational colleges and universities are still faced with the relative lack of teachers, a single source of teachers, the internal and external mechanism of teacher training is not smooth and other practical problems need to be solved. In order to ensure the implementation of the multi-competent teacher training model, teachers must take a series of effective methods, develop multi-competent teacher identification methods, clear evaluation process, improve the assessment and evaluation incentives, protection policies, development of multi-level, all-round talent training mode, the establishment of long-term mechanism to ensure that the multi-competent teacher training model smoothly. To ensure the smooth implementation of the multi-competent teacher training mode.

References

- Han,W.,Huang,X.,Zhang,P.,&Wang,Y.(2024).Research on the interactive feedback mechanism of the employment status and talent training of the graduates of higher vocational colleges under the background of the integration of industry and education.Modern Vocational Education,34,49-52.
- Pan,K.,&Hao,M.(2024).Research on the construction of"double-qualified"teachers in higher vocational colleges under the integration of production,teaching and research.Modern Vocational Education,35,77-80.
- Liu,L.,Cao,W.,&Gu.(2023).Research and practice on the training path of"double-qualified"teachers in higher vocational drug majors.Journal of Jilin Institute of Education,05,110-114.
- Liang,Q.(2020).The origin,goals and strategies of the construction of vocational education teachers in the new Era——Interpretation of the implementation plan of deepening the reform of the construction of"double-qualified"teachers in vocational education in the New Era.Jiangsu Education,60,36-40.
- Ministry of Education of the People's Republic of China.(2022).Notice of the General Office of the Ministry of Education on further strengthening the construction of teacher teaching innovation teams in vocational colleges nationwide.Bulletin of the Ministry of Education of the People's Republic of China,10,55-57.
- National Development and Reform Commission.(2023).Action Implementation Plan for Improving the Integration of Industry and Education in Vocational Education(2023-2025).Accounting Study,21,3.
- Wang,J.,Liu,Z.,&Xu,Y.(2024).Exploration of teaching reform of civil engineering major based on win-win collaborative education.China Construction,10,28-30.
- Yang,M.(2023).Innovation strategy of cultivating high-level applied talents under the background of skill construction in China.Journal of Balding University,04,105-108.
- Yang,Y.(2024).New problems and new ideas of talent training in national strategic emerging industries under the background of industry-education integration.Jiangsu Science and Technology Information,19,12-16.
- Zhang,W.(2024).Construction and practice of value-added evaluation system of higher vocational students under the background of production and education integration.Journal of Taiyuan City Vocational and Technical College,11,57-60.