

Research on the Cultivation Path of Artisan Teachers in Higher Vocational Colleges under the Background of Integration of Production and Education

Ting Jing*

Guangdong Preschool Normal College in Maoming, Maoming, Guangdong, China

*Corresponding author

Abstract: Under the background of integration of production and education, the cultivation of artisan teachers in higher vocational colleges refers to the efforts to cultivate a teacher team that can adapt to the needs of practical work, possess practical skills and professional ethics through deep cooperation with industries and enterprises. This cultivation approach emphasizes the integration of practical and theoretical teaching, strengthens the capacity building of teachers in enterprise practice, improves their professional ethics and practical experience, and provides high-quality "artisan" teachers for industrial development. This paper takes the necessity of incorporating the spirit of craftsmanship into the integration of production and education as the starting point, expounds the new requirements and current situation of artisan teachers in higher vocational colleges under the integration of production and education, points out the problems in the professional skill training mechanism of artisan teachers, and proposes specific paths for the cultivation of artisan teachers in higher vocational colleges under the background of integration of production and education.

Keywords: integration of production and education; higher vocational colleges; artisan teachers

1. Introduction

Under the background of integration of production and education, the cultivation of "artisan" teachers in higher vocational colleges has become an important development direction. With the increasing support from the government for the manufacturing industry and the continuous deepening of vocational education, the demand for the cultivation of artisan teachers is growing. In order to meet the needs of industrial development, higher vocational colleges are continuously strengthening the cultivation of "artisan" teachers, gradually establishing a complete education system and training mechanism. These mechanisms include close cooperation with enterprises, the integration of practical and theoretical teaching, and professional training and academic exchanges for teachers. At the same time, higher vocational colleges also strengthen the moral education of teachers, pay attention to cultivating their sense of social responsibility and mission, and make them recognized professional talents by enterprises and society. Under the background of integration of production and education, the cultivation of "artisan" teachers in higher vocational colleges has achieved significant results. By constantly innovating educational models and training mechanisms, higher vocational colleges are providing more and more professional talents with practical and innovative abilities for the national industrial development.

2. The Necessity of Incorporating the Spirit of Craftsmanship into Industry-Education Integration

Industry-education integration refers to the close combination of industry and education to provide society with high-quality and highly skilled labor resources. The "spirit of craftsmanship" refers to the attitude and values of pursuing excellence, innovation, and quality, and is the love and persistent pursuit of work by craftsmen (Yuan, Z., & Guo, D. 2023). In industry-education integration, incorporating the spirit of craftsmanship is particularly necessary.

Firstly, the spirit of craftsmanship can promote the development of skill education. Traditional education focuses on knowledge imparting, while skill education emphasizes practice and skill training. The values and attitudes of the spirit of craftsmanship are in line with skill education, which can help students better accept and apply skill training. Only through practice and the pursuit of excellence and innovation can skills truly be mastered. Secondly, incorporating the spirit of craftsmanship can promote

the innovation and development of enterprises. Enterprises are the core of industry-education integration and the ultimate destination of skill education. The spirit of craftsmanship emphasizes the pursuit of excellence and quality, which has an important promoting effect on the production and research and development of enterprises. Only by constantly pursuing excellence can enterprises achieve transformation and upgrading and sustainable development. Thirdly, incorporating the spirit of craftsmanship can also improve students' competitiveness in employment. With the development of society, more and more enterprises focus on employees' skills and practical experience, rather than just diplomas and degrees. The pursuit of excellence and innovation in the spirit of craftsmanship is an important quality for students to stand out in the job market. Additionally, incorporating the spirit of craftsmanship can promote the country's economic development and industrial upgrading. In modern economy, skills and innovation have become important factors of competition. Industry-education integration with the spirit of craftsmanship can provide the country with more high-quality and highly skilled labor resources, promoting industrial upgrading and economic development.

3. New Requirements for Craftsman-Type Teachers in Vocational Colleges in the Context of Industry-Education Integration

In the "dual-oriented" education model of industry-education integration, both enterprises and colleges act as the main bodies of teaching and production, jointly plan talent training models, and achieve win-win cooperation. Therefore, both parties must develop together and adopt the teaching methods of "craftsman-type" teachers. These teachers not only need to have superb theoretical knowledge and professional skills, but also need to have the ability to improve their skills to serve society, solve technical difficulties, and integrate innovation to adapt to the development of the times. As a result, the ability scope covered by vocational qualification certificates is no longer sufficient. Based on the characteristics of the "dual-oriented" education model of industry-education integration, Figure 1 summarizes the required elements of the professional skills of "craftsman-type" teachers.

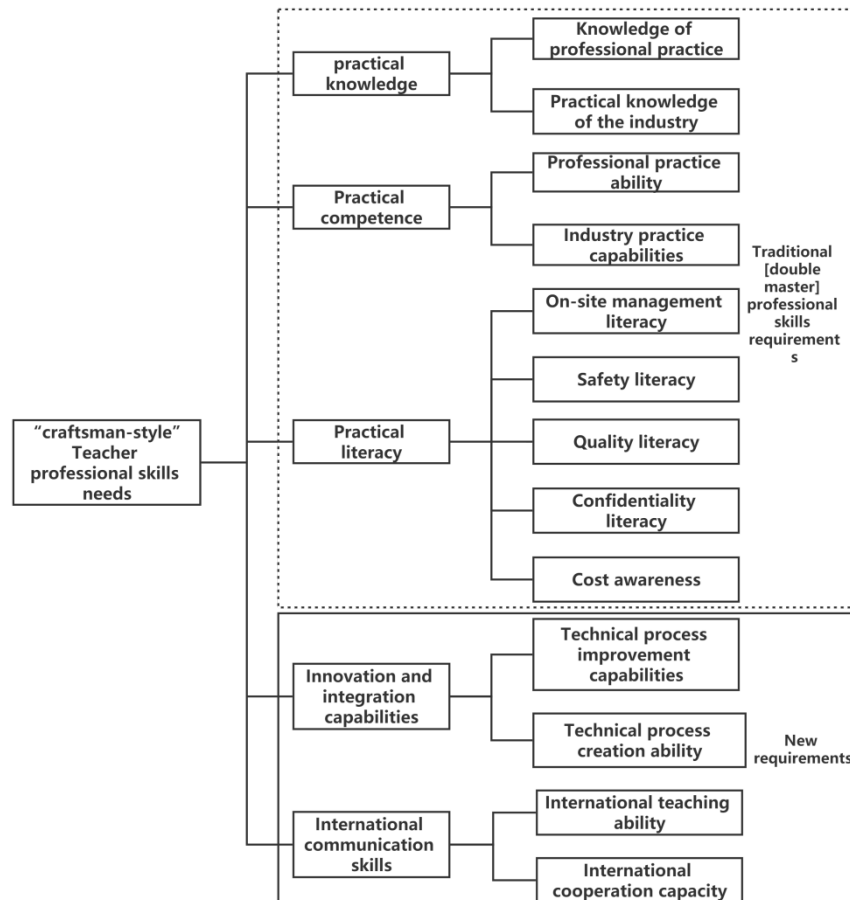


Figure 1: Professional Skills Required for "Craftsman-Type" Teachers in the Context of Industry-Education Integration

In modern society, teachers are no longer simply imparting knowledge, but need to have more abilities and qualities, including innovative integration capabilities. This ability not only requires teachers to have a solid theoretical foundation and relevant vocational qualification certificates, but also requires them to continuously adjust their knowledge structure in long-term teaching and social professional activities, promptly absorb the latest technology and skills in their field, internalize and apply them to practice.

4. The Current Situation and Problems of the Mechanic-Style Teacher Professional Skills Training Mechanism

The professional skills level of mechanic-style teachers is a key factor in the transformation of vocational education towards "improving quality" and achieving "distinctive characteristics"(Fan, B. 2023). However, due to historical reasons and the drawbacks of personnel systems, professional skills training has been a systemic challenge (Zhang, S., Su, H., & Zhang, T. 2023). Solving this problem requires multiple approaches, involving four roles: teachers, schools, enterprises, and government. In addition, it also involves both conceptual awareness and practical operation, as shown in Table 1.

Table 1: Problems existing in the professional skills training of "craftsman" teachers

	Audience attitude	Hands-on
Teacher	<ul style="list-style-type: none"> ➤ The teaching concept of "emphasizing theory over practice" ➤ The concept of self-advantage ➤ Despise the development of professional skills 	<ul style="list-style-type: none"> ➤ Top post exercise "go through the motions" ➤ Outdated professional skills ➤ There is a big conflict between professional skills training and daily teaching work
College	<ul style="list-style-type: none"> ➤ Weak awareness of training ➤ Neglect of service to society 	<ul style="list-style-type: none"> ➤ Extensive management ➤ Unscientific assessment ➤ Incentive policies are not perfect
Enterprise	<ul style="list-style-type: none"> ➤ Lack of a sense of responsibility and obligation ➤ Not highly motivated 	<ul style="list-style-type: none"> ➤ Poor management of top post exercises ➤ Technical skills are not open to teachers
Government	<ul style="list-style-type: none"> ➤ Ignore the difference between "dual teachers" and ordinary college teachers 	<ul style="list-style-type: none"> ➤ The participation of school-enterprise cooperation is insufficient ➤ Insufficient policy and legal support ➤ The allocation of investment resources is unreasonable

4.1 Insufficiently refined training management

Vocational colleges are a key link in the cultivation of applied talents, and teachers are the guides for students' growth. The improvement of professional skills is crucial for enhancing the quality of teaching and the learning effectiveness of students. However, currently, many vocational colleges have many problems in the cultivation of teachers' professional skills, such as a lack of effective organization, monitoring, and guidance in the training process, and the absence of targeted plans and arrangements. Even more seriously, the improvement of teachers' professional skills lacks long-term planning, only focusing on result evaluation while ignoring process supervision, resulting in minimal training effects. This phenomenon not only affects the development of teachers themselves but may also lead to the gradual degradation of their professional skills, making it difficult to keep up with the pace of the times.

4.2 Inadequate appointment and evaluation system

Currently, vocational colleges widely use the "craftsman" teacher qualification system, which reflects the teacher's professional skill level to some extent. However, the evaluation of "high-level professional skills" still lacks consideration. Usually, this evaluation is based only on a "certificate," and the "dual-teacher qualification" is a lifelong system without a dynamic appointment mechanism, which has significant shortcomings. In addition, the evaluation of teachers' theoretical research aspects follows the same evaluation system as ordinary teachers, which places emphasis on research results in professional theory, such as the number of articles published in core journals and the number of research projects carried out. However, applied research results are often overlooked. Due to the difficulty in recognizing

the value of horizontal projects, their results cannot even be included in the scope of professional title evaluation and assessment systems, which leads to a lack of enthusiasm for applied research and motivation for improving their own professional skills among "craftsman" teachers.

4.3 Incomplete incentive policies

Currently, many vocational colleges have implemented some incentive measures, but they have not distinguished between incentive policies for "craftsman" and non-"craftsman" teachers. This leads to most incentives being reflected only in terms of salaries, overemphasizing result incentives while neglecting process incentives and flexible incentive mechanisms. This can cause teachers to lack the initiative to improve their professional skills and hinder the growth of "craftsman" teachers. Therefore, appropriate and flexible incentive policies should be formulated to provide a better development environment for "craftsman" teachers. Such policies can greatly stimulate the development of "craftsman" teachers and improve their development speed.

5. The cultivation path of craftsman teachers in higher vocational colleges under the background of the integration of industry and education

5.1 Improve the school guarantee mechanism

In order to train "craftsman" teachers, schools need to establish a long-term guarantee mechanism to stimulate the power of teachers' professional independent development. First of all, it is very necessary to arrange teachers' working hours reasonably, because the excessive teaching burden will weaken teachers' attention and investment to their professional fields, so failing to cultivate "craftsman" teachers (Sun, X. 2023). Vocational colleges should reduce the teaching burden of teachers and give them more time to study, research and practice to improve their professional skills and development potential, so as to better serve students and the society. At present, the incentive policies of most vocational colleges are only based on salary incentives, which does not play a great role in promoting the growth of "craftsman" teachers. Therefore, vocational colleges need to establish flexible and diverse incentive mechanisms to provide more rewards and support for teachers and stimulate their professional independent development motivation. Such incentives need to be based on long-term stability, allowing teachers to see their efforts recognized and rewarded and to be more motivated to develop their professional skills (Wang, J., Tian, X., Gao, J., & Liu, Y. 2023).

In addition, the establishment of a long-term working mechanism is crucial for cultivating "craftsman" teachers. Vocational colleges should establish a sound working mechanism internally, including regular evaluation and training, as well as the establishment of professional academic teams and cooperation mechanisms. These measures can promote the communication and mutual learning among teachers, and jointly promote the improvement of professional skills and education quality. At the same time, schools should also build a platform for discipline exchange and cooperation, to provide more opportunities for "craftsmen" to learn and practice teachers, and help them constantly improve their teaching level and professional skills. The establishment of these working mechanisms can not only promote the growth of teachers, but also promote the overall development of vocational education, improve the quality of education and the competitiveness of students' employment, and make positive contributions to the social and economic development.

5.2 Increase enterprise participation

As the main goal of vocational education, training "craftsman" teachers needs to carry out deep cooperation between vocational colleges and industrial enterprises to realize the integration of industry and education. This collaboration can provide practical and training opportunities for teachers, while also allowing teachers to better understand the needs of the industry and enterprises, integrate these needs into the curriculum, and improve the quality of education. Industry-education cooperation can also promote the professional development of teachers, make teachers more familiar with and master the latest technology and knowledge, and better cultivate students' professional quality and practical ability.

The two sides will refine the cooperation areas and optimize the cooperation system in the agreement between the university-enterprise community. Enterprises should clarify their assessment requirements in the training of "craftsman" teachers, and also clarify the responsibilities, power and interests of schools and enterprises in the training of "craftsman" teachers. On the basis of mutual benefit and win-win results,

both sides should give full play to the advantages and resources of industrial enterprises in equipment, projects and work tasks, and form a "craftsman-type" school-enterprise collaborative training mode for teachers (Zhao, W., & Wei, L. 2023). Through this model, teachers can better understand the needs and development trends of enterprises, and integrate this information into the curriculum, so as to cultivate students' professional quality and practical ability. At the same time, enterprises can also provide professional training and academic exchange opportunities for teachers to help them continuously improve their professional ability and level. These efforts can promote the overall development of vocational education and improve the quality and level of vocational education.

5.3 Improve teachers' core skills

Teachers are an important part of vocational education, and their quality and ability are directly related to students' learning effect and the improvement of professional quality. In the process of cultivating "craftsman" teachers, it is crucial to improve their core skills. First, teachers need to master practical skills and knowledge. Vocational education is characterized by strong practicality, so teachers need to master practical skills and knowledge closely related to the industry. These skills and knowledge include process, modern equipment operation and maintenance, production management, marketing, etc. Only with these practical skills and knowledge can teachers better teach students, so that students can truly master professional skills and knowledge. Secondly, teachers need to have independent thinking, innovative spirit and teamwork ability. These abilities are an important guarantee for teachers to exert their subjective initiative in teaching. In the teaching of vocational education, students need to judge and analyze according to the actual situation, and teachers need to guide students to think independently and cultivate students' innovative spirit. At the same time, the teaching of vocational education needs to emphasize teamwork, and teachers need to have the ability of teamwork, and lead students to carry out practical operations and team projects, so that students can give full play to their ability in the team. Finally, teachers need to constantly improve their own professional level and teaching ability. Vocational education is a rapidly developing field, and teachers need to constantly learn new knowledge and skills, understand the latest industrial trends, and trends, and integrate this information into teaching. At the same time, teachers need to constantly improve their teaching ability, explore and practice new teaching methods and strategies, and constantly improve the teaching quality and effect (Liu, X. 2023). Only with practical skills and knowledge, independent thinking, innovative spirit, teamwork and constantly improving their professional level and teaching ability, can teachers better cultivate students with "craftsman" literacy.

5.4 Strengthen the publicity of artisan teachers

In today's rapidly changing economic environment, in order to meet the needs of industrial structure upgrading and intelligent manufacturing, it has become an urgent need for vocational education to train a group of teachers with "craftsman-oriented" literacy. However, how to attract and train such teachers is not easy. In this case, strengthening the publicity of craftsman teachers is crucial to the development of vocational education. First of all, by publicizing the value and role of craftsman teachers, more people can understand the importance and development prospects of this career. Craftsman teachers are not only required to master practical skills and knowledge, but also need to have innovation ability, teamwork and leadership skills, which makes them the key to cultivating high-quality professional talents. Through publicity, it can improve people's awareness and attention to the profession of craftsman teachers, and attract more talents who are interested in vocational education. Secondly, strengthening the publicity of the training plan for craftsman teachers can let more people understand the opportunities and challenges in vocational education. Training programs for vocational education usually involve the deep participation of industries and enterprises to ensure that the educational content matches the actual needs. Through the publicity, more people can understand the importance of this participation, and the positive effect of this education model on improving the quality and level of vocational education. Finally, strengthening the publicity of the successful cases of craftsman teachers can stimulate the enthusiasm and motivation of more people to learn. Through publicizing successful cases, the outstanding performance and achievements of craftsman teachers in the field of vocational education can be displayed, and more people can be encouraged to devote themselves to the cause of vocational education. This also helps to create a good atmosphere in the field of vocational education and improve the social status and recognition of vocational education.

6. Conclusion

To sum up, under the background of the integration of industry and education, it is of great significance for higher vocational colleges to cultivate "craftsman" teachers. On the one hand, it will help to meet the demand of the industrial development for high-quality skilled personnel, and accelerate the industrial upgrading and transformation. On the other hand, it also helps to improve the quality and level of higher vocational education, and improve the employment competitiveness and adaptability of graduates. By integrating industrial needs into education and teaching, higher vocational colleges can better cultivate students' professional quality and practical ability, and lay a solid foundation for students' career development. In addition, the cultivation of craftsman teachers is also helpful to promote the professional development of teachers and improve the teaching quality, and to provide sustainable teachers for the long-term development of higher vocational colleges.

Acknowledgements

1) Guangdong Preschool Normal College In Maoming 2022 "Fourteenth Five-Year Plan" Education Science Project "Research on the Cultivation of Excellent 'Artisan Teachers' in Higher Vocational High School" (Project number: 2022GMYSKT15).

2) Te Teaching Reform Project of Guangdong Higher Vocational Colleges and Universities Teaching Guidance Committee of Education and Physical Education for 2022: "Exploration and Practice of Cultivation Model of Higher Vocational Pre-school Education Talents in Western Guangdong Based on 'Three-Whole Education'" (Project number: 2022G042).

References

- [1] Yuan Z., & Guo D. (2023). *Deep integration of industry and education to empower "triple education reform"*. *Journal of Hubei Open Vocational College*, (08), 67-69.
- [2] Fan B. (2023). *Reflections on ideological and political education in the mode of industry-education integration in higher education*. *Sichuan Labor Security*, (04), 42.
- [3] Zhang S., Su H., & Zhang T. (2023). *Exploration of the application of "industry-education integration" in the cultivation of talents in applied law majors in universities*. *Journal of Heihe University*, (04), 88-90.
- [4] Sun X. (2023). *Strategies for improving the high-quality employment of architecture majors from the perspective of industry-education integration*. *Architecture & Structure*, (08), 181.
- [5] Wang J., Tian X., Gao J., & Liu Y. (2023). *Exploration and practice of industry-education integration and talent cultivation mode in engineering majors of agricultural vocational colleges under the background of new agriculture*. *China Educational Technology Equipment*, (10), 48-51.
- [6] Zhao W., & Wei L. (2023). *Practical teaching reform of software engineering course based on industry-education integration*. *Computer Education*, (04), 177-180.
- [7] Liu X. (2023). *Cultivating applied new business talents through industry-education integration in the digital economy era*. *Old Brand Marketing*, (07), 173-176.