

Research on the Cultivation Path of the Integration of Craftsman Spirit and Professional Skills

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Abstract. The industrial upgrading and the promotion of the Made in China 2025 strategy urgently need a large number of high-quality talents with craftsmanship spirit. Therefore, the cultivation of craftsmanship was included in the work report of the Chinese government as early as 2016. However, vocational colleges generally focus on skills training and neglect craftsmanship and other professional quality training. Even though a few schools began to attach importance to the cultivation of craftsmanship, they separated the cultivation of craftsmanship from the cultivation of professional skills. But, in fact, craftsmanship spirit and professional skills have a high degree of internal correlation, so it can not achieve the corresponding effect if they are cultivated separately. Therefore, the paper explores an effective way to integrate craftsmanship and vocational skills.

1 Introduction

With the promotion of China's manufacturing 2025 strategy, the upgrading of China's manufacturing industry is accelerating, and a large number of high-tech talents with craftsmanship spirit are needed. However, today people are pursuing the immediate benefits, they lack craftsmanship spirit to carefully polish products. As a result, talents with craftsmanship spirit are increasingly scarce. The cultivation of craftsmanship in vocational colleges can not only meet the needs of the upgrading of manufacturing industry for high-quality skilled personnel, but also meet the requirements of social values, and also help improve the competitiveness of students in employment. Although there are many research documents on the cultivation of craftsmanship spirit of vocational college students, the cultivation of craftsmanship spirit is still in the exploration stage, and there are still many problems. First, the current research focuses on macro theory, and there is no unified and feasible training path for the craftsmanship spirit [1][2]. Second, in many studies, the cultivation of craftsmanship spirit is separated from the cultivation of professional skills, which makes the cultivation of craftsmanship spirit lack effective grasp, so the cultivation effect of craftsmanship spirit is not ideal. These articles mostly study the cultivation of craftsmanship spirit from the perspectives of politics and culture, so there is no good carrier [3][4][5][6]. A few scholars mentioned the need to cultivate students' craftsmanship spirit at the same time when studying the cultivation of professional ability. However, these studies do not have a specific path for the cultivation of craftsmanship and professional ability,

nor do they consider how to systematically integrate craftsmanship into the cultivation of professional ability [7][8][9][10]. In order to improve the cultivation effect of craftsman spirit, the paper proposes to integrate the cultivation of craftsman spirit and professional ability, and the paper proposes specific cultivation paths.

2 The consistency of craftsmanship spirit and professional skills requires the integration and cultivation of both

Craftsman spirit is a kind of professional spirit. It is the embodiment of professional ethics, professional ability and professional quality, also it is a professional value orientation and behavior expression of practitioners [1]. At present, there is no unified view on the connotation of craftsmanship. On the basis of summarizing the existing research literature, the basic connotation of craftsman spirit includes the spirit of dedication, excellence, dedication, innovation and other aspects with meticulous as the core. Through the research and comparison of craftsmanship spirit and professional skills, it is found that craftsmanship spirit and the cultivation of students' professional abilities have an internal correlation.

2.1. The craftsmanship spirit is consistent with the core connotation of professional ability

Craftsman spirit is the soul of vocational education [10]. On the one hand, The essence of craftsmanship spirit is the ultimate pursuit of high-quality production and service, and its core connotation is the professionalism

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and professional attitude of dedicated investment and ultimate pursuit. On the other hand, due to industrial upgrading and the transformation of old and new driving forces, the demand for high quality and high quality in today's society is getting higher and higher, and the demand for craftsmen and spiritual and technical talents is getting stronger and stronger. However, the graduates of vocational colleges are often unable to obtain employment due to their inadequate professional skills, weak vocational skills, and poor employment quality. Therefore, schools must integrate craftsmanship into the cultivation of professional skills. The cultivation of craftsman spirit is becoming an important way to solve the social needs and the gap between school talent training.

2.2 The craftsmanship spirit is consistent with the practice path of professional ability

Craftsman spirit is not an empty theoretical text, but comes from practice. Therefore, the cultivation of craftsman spirit must be strengthened in practice. In practice, students will be trained to bear hardships and stand hard work. In practice, students will master post technical skills and cultivate their innovation and entrepreneurship spirit. The training purpose of skilled talents in higher vocational colleges can only be realized in the process of effective practical education, and the craftsman spirit itself is also cultivated in practice. The cultivation of craftsman spirit is the result of social practice, and the cultivation of skilled talents also cannot be separated from practice. The two are consistent on the path of practice.

3 Problems in the Integration of Craftsman Spirit and Students' Professional Ability

In order to understand the problems in the cultivation of craftsman spirit in vocational colleges, 520 students from a vocational college were randomly selected by student number to conduct a questionnaire survey. 512 questionnaires were returned, of which 6 were not completely answered, and 506 were valid. Cronbach's Alpha coefficient of the questionnaire is 0.905, indicating that the questionnaire has good reliability. The KMO value of the questionnaire is 0.831, and the associated probability sig P value of Bartlett's spherical test is 0.000, which indicates that the questionnaire has good validity. The graph data below are all from this questionnaire.

3.1 Inadequate emphasis on craftsmanship

Vocational colleges, teachers and students do not pay enough attention to the cultivation of craftsmanship. As the cultivation of students' craftsmanship is a long-term process, it can not achieve immediate results in the short term, while focusing on students' professional skills can quickly see the results. If we focus on skill competition,

we can easily achieve results. Teachers will be rewarded, and the school will be honored. Both teachers and the school will benefit. Therefore, vocational colleges and teachers attach importance to skills training, ignoring craftsmanship and other literacy training. According to the results of the questionnaire, only 4.38% of the respondents believed that teachers would often publicize craftsmanship in professional courses, and 31.62% of the respondents believed that professional teachers would often publicize craftsmanship; 47.43% of the respondents thought that the professional teachers' propaganda of craftsmanship was average, and 15.42% of the respondents thought that professional teachers only occasionally publicized craftsmanship. In teaching, less than 40% of teachers often publicize the craftsmanship spirit, and teachers pay less attention to the cultivation of craftsmanship spirit.

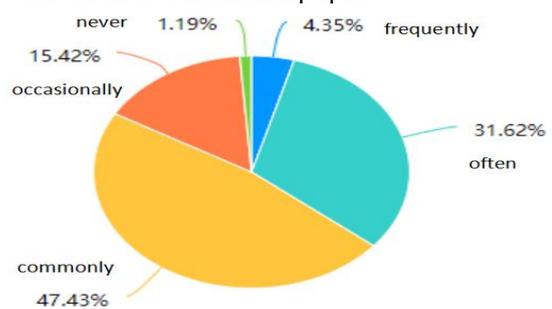


Figure 1. Teachers' integration of craftsmanship into professional skills training

At the same time, vocational college students generally believe that they need to have a skill, so they attach great importance to skills, but not pay enough importance to the cultivation of craftsmanship. It can be seen from Figure 2, only 32.41% of the students think craftsmanship is very important, and 51.38% of the students think craftsmanship is more important.

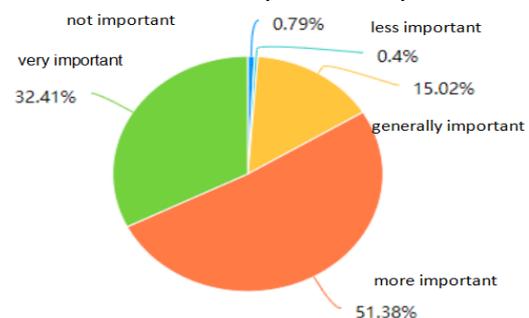


Figure 2. Recognition of the importance of craftsmanship to work from student

3.2 Students' understanding of craftsmanship is not clear

Most students have no deep understanding of craftsmanship. The survey data shows that less than 30% of students know more about handicrafts. Only 3.16% students answered completely, and 22.92% students answered relatively well. The vast majority of students have a little understanding of craftsmanship, accounting for 58.1%. 13.04% of students do not know much about

it, and 2.77% of students do not know anything about it. In a word, about 80% of the students do not know enough about it.

The students did not have a clear understanding of the connotation of craftsmanship. Many students do not understand that craftsmanship should include dedication and innovation, and even some students think that it should include "patriotism". This shows that the dedication and concentration of students are very low.

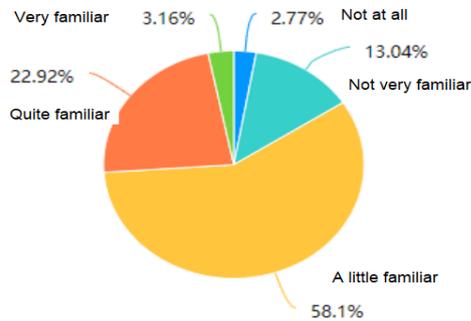


Figure 3. Students' understanding of the spirit of craftsman

3.3 The cultivation path of craftsman spirit is relatively simple

The survey data shows that the cultivation of students' craftsmanship spirit is still at a relatively shallow level of propaganda and preaching. Craftsman spirit is not well integrated into professional courses, skill competitions, internships and other major talent training methods, which makes it difficult for students to internalize craftsman spirit. The most common way for students to contact craftsmanship spirit is through ideological and political courses, accounting for 71.54%, followed by media publicity, accounting for 67.59%, the third way is campus culture, accounting for 56.13%, and the fourth way is social practice, accounting for 50.2%. The proportion of professional formal courses, practical training courses, skill competitions, etc., which are the main positions of talent training in vocational colleges, is less than 50%. This shows that more attention is still paid to skills and quality in professional talent training. The cultivation of professional ethics such as craftsmanship spirit is less concerned.

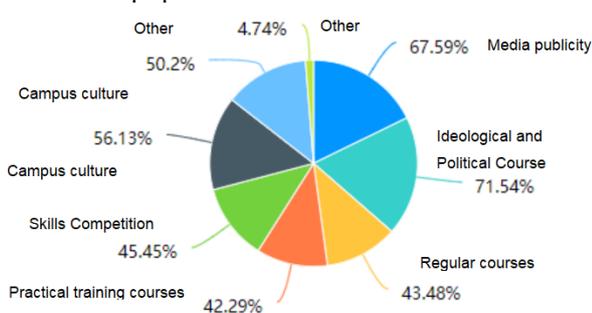


Figure 4. Ways to Cultivate Craftsman Spirit in Vocational Colleges

3.4 The cultivation effect of craftsman spirit is not ideal

Under the active guidance and publicity of national policies and mainstream media, teachers and students in many vocational colleges have initially realized the importance of craftsmanship. Higher vocational colleges have begun to put the cultivation of the craftsman spirit of students on the agenda, and the cultivation effect of craftsman spirit is not ideal. This phenomenon is widespread in higher vocational colleges.

(1) Poor dedication.

As the saying goes, "Do what you do and love what you do." Since students have studied the corresponding major, they should like it and learn it well. Only 5.93% of the students like their majors very much, 30.43% of them like their majors, and most of the students like their majors generally (53.36%), while 7.91% of them do not like their majors very much, and 2.37% of them do not like their majors very much.

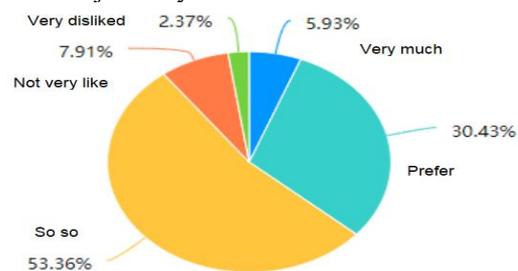


Figure 5. Students' liking for their major

(2) Lack of due perseverance and concentration

When asked, "Can you be strict and meticulous in your study and practice?" Only 9.16% of respondents said they could do it, 32.67% of respondents said they could do it in most cases, nearly 50% of respondents said they could do it in general, and about 8% of respondents said they could not do it in most cases.

When asked, "What will you do when you encounter setbacks in your study and feel unable to continue?" Nearly 90% of the respondents said they would give up, and only about 10% said they would continue to insist. The further indicates that most students have poor perseverance and concentration.



Figure 6. Attitude of students when encountering setbacks

(3) Lack of due perseverance and concentration

The spirit of craftsmanship requires that every professional should make 100% efforts to devote all his efforts to the research, development and production of

products. There is no best, only better. The spirit should be possessed by every skilled talent. When asked, "Do you ever forget to eat and sleep in order to repeatedly improve a work?", only 2.77% of the respondents can frequently do so, while 14.62% of the respondents often do so. The sum of the two is less than 20%, which means that nearly 80% of the respondents will not repeatedly improve their work. This shows that the craftsman spirit of the students is poor. In their eyes, it is OK to be in a state of muddling along.

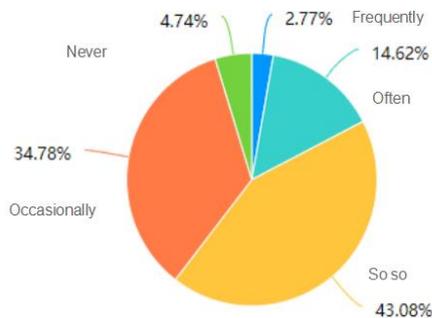


Figure 7. Professional spirit of students striving for perfection

(4) Lack of pioneering and enterprising spirit of innovation

The craftsmanship spirit contains the requirements of being enterprising, pioneering and innovative, and it is impossible to create new achievements by standing still. Only by being good at thinking from different angles and solving problems in different ways, we can make new discoveries and promote things to a better direction. When asked: "Do you have any ideas and behaviors that will break the rules and innovate in your study and life?" Only 1.99% of the respondents were surveyed regularly, and 15.14% of the respondents were surveyed regularly. The total number of two people is less than 20%.

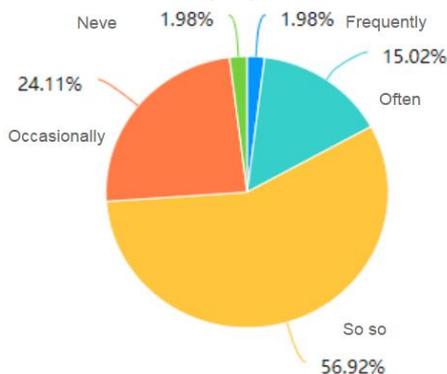


Figure 8. Students' innovative ideas and behaviors

4 The Effective Way to Integrate Craftsman Spirit into the Cultivation of Students' Professional Skills

In the training of skilled talents in higher vocational colleges, the cultivation of vocational ability is the key to the cultivation of skilled talents. However, professional ability refers to the ability of individuals to complete professional tasks through a series of knowledge, skills

and attitudes. The professional attitude represented by the craftsman spirit plays an important role in guiding the formation of professional ability. The effective integration of craftsman spirit into the cultivation of professional ability will play a role in the cultivation of students' professional ability with half the effort.

4.1 Build a talent training program with craftsmanship as the guide and professional ability as the core

In order to enable graduates to better face various challenges in the future, we must build a talent training program with craftsmanship as the guide and professional ability as the core. The school regularly holds a professional construction steering committee, regularly holds professional construction seminars, and conducts discussions, discussions and demonstrations on talent training programs and curriculum systems to promote the cultivation of students' professional skills and the shaping of students' professional qualities such as dedication, honesty and trustworthiness, seeking truth from facts, and being willing to contribute, so as to promote the overall improvement of students' professional ability, methodological ability, social ability, and moral ability, It realizes the organic combination of practicality, openness and professionalism of talent training.

4.2 Optimize the curriculum system and cultivate craftsmanship spirit in professional courses

Relying on the "craftsmanship spirit" and taking the professional post ability requirements as the core, reconstruct the professional curriculum system. The school should analyze the typical job tasks and vocational skill requirements of the post, and then determine the training objectives of professional talents. The school should rebuild the professional curriculum system based on the "craftsmanship spirit" and centered on the professional post ability requirements. Only in this way can we ensure the quality of talent training.

At the same time, the spirit of craftsmanship should be integrated into the teaching of professional core courses. Students in higher vocational colleges are trained in the spirit of loving their jobs, so that students can improve their technical ability in practical training and understand the essence of craftsmanship.

4.3 Cultivating Craftsman Spirit through Practice and Social Practice

Social practice can well integrate craftsmanship spirit and professional ability. It not only helps students complete the cognitive cycle of "theory practice theory". It can also helps students consolidate and deepen theoretical knowledge, solve practical problems with what they have learned, and improve their professional ability, etc. It not only helps students complete the cognitive cycle of "theory practice theory", but also

helps students consolidate and deepen theoretical knowledge, solve practical problems with what they have learned, improve their professional abilities, etc., and cultivate the spirit of craftsmanship in the new era. Therefore, social practice activities should be combined with professional practice, enterprise post groups and mainstream enterprise culture spirit.

4.4 Taking skill competition as an important means to cultivate craftsmanship spirit, so as to better promote learning through competition

The vocational skill competition is a centralized embodiment of the comprehensive ability of students to comprehensively master the post knowledge and skills as well as to actually deal with problems. It is highly situational, practical and urgent, with special emphasis on students' professional comprehensive ability to solve practical problems. During the competition, the craftsmanship spirit of vocational students was vividly displayed with the promotion of various competition items. If students lack the professionalism of excellence and the quality of innovative problem solving, you will not be able to achieve excellent results on the stage of skill competition. Of course, if students do not have excellent professional skills, they will not be able to achieve good results in the competition. Therefore, the cultivation of craftsmanship spirit and professional skills can be perfectly integrated through professional skills competitions.

5 Conclusions

Higher vocational colleges train and transport high-quality technical talents for the society, which coincides with the training needs of craftsmanship. It is very important for vocational students to have craftsmanship spirit for their professional ability development and future career development. How to cultivate the craftsmanship spirit of students in higher vocational colleges is a problem worth studying. Based on the full study of the connotation of craftsmanship spirit and professional ability training, this paper proposes a way to combine craftsmanship spirit with professional ability. The research in this paper is of great significance to the cultivation of craftsman spirit and high-quality skilled personnel in higher vocational colleges.

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References

1. Feifei Gu. Strategy of cultivating vocational students in preschool education based on the craftsman spirit. *New course teaching (electronic version)*, 2021 (03), pp. 188-189.
2. Yang Li. Research on the Craftsman Spirit Cultivation of Students in Higher Vocational Colleges. *Jiangxi Normal University of Science and Technology*, 2021.
3. Tong Zhao. The path of integrating craftsman spirit into curriculum ideological and political construction. *International Journal of New Developments in Education*, 2022, 4.0(7.0).
4. Wang Bo, Li Yu, Talha Muhammad. Research on the Path of Artisan Spirit to Party Ideological Education in Colleges and Universities Based on Image Processing Technology. *Journal of Advanced Transportation*, 2022.
5. Jia-qian LI, Meng-tao ZHENG, Mian-hao ZHANG. Research on the Cultivation and Education of Craftsman Spirit of Secondary Vocational Students under the Background of Curriculum Ideology and Politics. *2021 International Conference on Education, Humanities, Management and Information Technology*, 2022, 83.
6. Junying Yu. On The Inheritance of Traditional Culture and the Cultivation of Artisan Spirit in Vocational Education. *Advances in Educational Technology and Psychology*, 2021, 5(4).
7. Jie Li. Research on Vocational Ability Training Path of Preschool Vocational Education Guided by Craftsman Spirit. *China Education Technology and Equipment*, 2021 (19), pp.126-127.
8. Xi Wang. Analysis of Vocational Business Students under the Vision of "Craftsman Spirit". *Journal of Wuhan Vocational and Technical College*, 2021, 20 (03), pp.31-34.
9. Yingchun Zhong. Research on phased Vocational Ability Training of Higher Vocational Surveying and Mapping Students Based on "Craftsman Spirit". *Engineering and Construction*, 2021, 35 (03), pp. 534-535.
10. Mei Dang. Research on the Integrated Cultivation Strategy of Craftsman Spirit and Professional Ability Based on the Integration of Competition and Education. *Modern Vocational Education*, 2022 (05), pp. 4-6.