

Research on the Value Connotation and Implementation Strategies for Cultivating the Spirit of Craftsmanship in Higher Vocational Students

高职学生工匠精神价值内涵及培养实施策略研究

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Abstract: To achieve China's goals of rapid and high-quality development, it is essential to rely on skilled talents with a spirit of craftsmanship to provide strong support. In the context of this new era, the core characteristics of the craftsman's spirit mainly include the following: motivation by ideals and an unwavering belief in moving forward; professional ethics of respecting teachers and eagerly pursuing knowledge; noble qualities of being honest, reliable, and courageous in taking responsibility; as well as the spirit of diligent learning and the pursuit of excellence. As the main training ground for skilled talents in the new era, higher vocational colleges have the responsibility and obligation to promote and cultivate the spirit of craftsmanship. For higher vocational students, cultivating the spirit of craftsmanship not only meets the developmental needs of the new era but is also conducive to realizing greater life values. Therefore, higher vocational colleges should clearly understand and identify the intrinsic characteristics and values of cultivating the spirit of craftsmanship in students in the new era, examine and address potential real-world issues that may arise in the process of cultivation. To

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this end, higher vocational colleges can promote the development of students' spirit of craftsmanship in the following ways: firstly, create an educational environment that honors the spirit of craftsmanship; secondly, change educational concepts through school-enterprise cooperation; in addition, build a "dual-qualified" teaching faculty; and finally, strengthen practical education to give students more opportunities to learn and hone their skills in practice. These measures will help shape and develop the spirit of craftsmanship in higher vocational students.

Keywords: Higher Vocational Students, Spirit of Craftsmanship, Value Implication, Realistic Constraints, Implementation Approaches

摘 要：实现中国的高速且高质量发展目标，必须依靠拥有工匠精神的技能型人才提供强大的支持。在这个新时代的背景下，工匠精神的核心特征主要包括以理想为动力，坚定不移的向前的信念；对师长的尊敬和对知识的热切追求的专业道德；诚实可靠、勇于负责的高尚品质；以及勤奋学习，追求卓越的精神追求。作为新时代技能型人才的主要培养地，高职院校有责任和义务推广和培养工匠精神。对于高职学生来说，培育工匠精神不仅符合新时代的发展需求，而且也有利于他们实现更大的人生价值。因此，高职院校应该清晰地理解并识别新时代下高职学生工匠精神培养的内在特征和价值，审视以及解决在培育工匠精神过程中可能面临的现实问题。为此，高职院校可以通过以下几种方式来促进高职学生工匠精神的发展：首先，高职院校需要创造一个尊崇工匠精神的教育环境；其次，院校可以通过校企合作来改变教育理念；另外，亦可以打造“双师型”的教师队伍；最后，高职院校需要加强实践教学，让学生有更多的机会在实践中学习和磨砺自己的技能。这些措施，将有助于高职学生工匠精神的塑造和发展。

关键词：高职学生，工匠精神，价值意蕴，现实困囿，实施路径

In April 2021, General Secretary Xi Jinping gave important instructions on vocational education, emphasizing the importance of accelerating the construction of a modern vocational education system, cultivating more high-quality technical and skilled talents and skilled craftsmen, vigorously promoting the spirit of craftsmanship, and elevating the social status of technical and skilled talents, so

as to provide strong support for talents and skills for the all-around construction of a modernized socialist country and the realization of the national rejuvenation and the Chinese dream (Liu, 2021). At the present stage, the importance of promoting and cultivating craftsmanship is especially emphasized, which reflects the strong demand for high-quality technical talents in China, which is fully in line with the requirements of the era of China's pursuit of high quality and rapid development.

Higher vocational colleges and universities are important bases for cultivating high-quality technical talents, however, there is still no mature model to guide how to effectively cultivate the craftsmanship of higher vocational students. Therefore, in-depth understanding and clarification of the intrinsic characteristics and value significance of the cultivation of contemporary craftsmanship, analysis of the practical dilemmas encountered in the current cultivation of craftsmanship from multiple perspectives, and further optimization of new paths and strategic suggestions for the cultivation of craftsmanship have become key issues to be solved in the field of higher vocational education (Zhang, 2017).

Higher vocational colleges face severe challenges in cultivating high-quality technical talent, especially in fostering a spirit of craftsmanship. Here are my views on how to cultivate the spirit of craftsmanship in higher vocational education, which I will elaborate upon with specific arguments, evidence, and reasoning.

The integration of theoretical and practical courses is key to cultivating the spirit of craftsmanship. Theoretical knowledge forms the foundation of skill learning, but the essence of craftsmanship lies in practice, which can only be reflected in actual operations. In the current higher vocational education system, theoretical and practical courses are often separate, which to some extent hinders the cultivation of students' spirit of craftsmanship (Xin, 2023). For students in early childhood education majors, theoretical courses may teach them about child psychology, educational methods, and curriculum design, but without actual teaching experience, they would find it difficult to truly understand how to apply this theoretical knowledge and solve various problems that arise during the teaching process. Therefore, the integration of theoretical and practical courses is

crucial for their professional training. In practical courses, students would have the opportunity to intern at kindergartens or relevant educational institutions, personally design and execute teaching plans, interact with children, observe their reactions, and solve their problems, thereby honing their practical abilities and problem-solving skills. In this process, they could apply the knowledge learned from theoretical courses, such as child psychology and teaching methods, to practical operations, thus better understanding and mastering this knowledge. More importantly, through practical operations, students can personally experience the responsibilities and challenges of being a teacher, understanding the professional spirit and craftsmanship spirit of the profession. They will realize that being a teacher is not just about imparting knowledge but also about guiding and helping each child grow through dedicated teaching, patience, and love, which is the essence of a teacher's craftsmanship spirit. Thus, the integration of theoretical and practical courses is an important path for students in early childhood education to develop their professional skills, understand the professional spirit of teaching, and cultivate their spirit of craftsmanship (Huang, 2023).

The education system needs to emphasize close cooperation with enterprises in order to cultivate technical talents that meet market demands. At present, the higher vocational education system is largely disconnected from the market, resulting in students often being unable to find suitable jobs after graduation or failing to meet the needs of enterprises in their job positions. Taking the construction specialty as an example, if higher vocational colleges could closely cooperate with construction enterprises, regularly invite enterprise experts to give lectures or seminars, or even set up internship opportunities to allow students to learn and practise in a real work environment, this would greatly enhance their skill levels and spirit of craftsmanship (Huang, 2021). At the same time, such close cooperation would also allow the education system to understand the market demands in a timely manner, thereby adjusting the teaching content and methods to cultivate technical talents that are more in line with market needs.

The role and quality of teachers have a significant impact on the cultivation of the spirit of craftsmanship. Teachers are not only disseminators of knowledge but also guides and role models for students' craftsmanship spirit. The teaching methods of teachers and their understanding and emphasis on the spirit of craftsmanship will affect students. Taking the woodworking specialty as an example, if teachers merely teach students how to use tools, but neglect the cultivation of the spirit of craftsmanship, then students may only learn how to use the tools, but not understand and embody the spirit of craftsmanship. However, if teachers emphasize fine manual skills during the teaching process, ensure thorough completion of each process, respect, and protect every piece of wood, then students will slowly cultivate a love for work, respect for skills, and a pursuit of results in such an environment. This is indeed the essence of craftsmanship. Consequently, higher vocational colleges face serious challenges in cultivating high-quality technical talents, especially in the cultivation of the spirit of craftsmanship (Lynch, 2000).

The construction of campus culture is also an important part of cultivating the spirit of craftsmanship. Campus culture can deeply affect students' values and behavioral habits, thereby influencing their attitudes towards learning and academic outcomes. For example, schools can organize various activities, such as "Craftsmanship Week",

"Technology Competitions", etc., to encourage and inspire students' spirit of craftsmanship (Abusamra, 2022). At the same time, schools can also integrate the spirit of craftsmanship into daily campus life, such as setting up a "Best Craftsman" award to compliment students who exhibit excellent craftsmanship, thus creating a campus atmosphere that respects technical skills and values the spirit of craftsmanship.

Policy support is an important driving force for the cultivation of the spirit of craftsmanship. The government's education policies and investments determine the direction and strength of vocational education development. The government can promote the cultivation of the spirit of craftsmanship by formulating relevant

policies, such as increasing investment in vocational education, optimizing the teacher workforce, improving teaching equipment, etc. At the same time, the government can also encourage more students to choose technical majors by establishing corresponding employment policies, such as improving the treatment of technical talents and adding technical positions, thus providing a favorable social environment for the cultivation of the spirit of craftsmanship (Hénard, 2012).

The above arguments constitute my view on how to cultivate the spirit of craftsmanship in higher vocational education. I contend that only when we have a deep understanding of the spirit of craftsmanship can we find the correct path to cultivate it, thereby training more high-quality technical talents for society. For this purpose, we need to re-examine and understand the concept of the spirit of craftsmanship on multiple levels, while also exploring in-depth how to effectively cultivate the spirit of craftsmanship in vocational education. This includes not only understanding and interpreting the intrinsic characteristics of the spirit of craftsmanship but also deeply digging into and elucidating its value significance. In addition, we need to analyze and understand the realistic difficulties faced in cultivating the spirit of craftsmanship from multiple perspectives, and based on this, propose practical solutions and approaches. This series of work is of great theoretical and practical significance for determining the status of the spirit of craftsmanship in vocational education and promoting its practical application in vocational education.

1. The Intrinsic Characteristics of Cultivating the Spirit of Craftsmanship in Higher Vocational Students

1.1 Firm ideological beliefs

Higher vocational students should be firm in their beliefs, not afraid of the ‘long road’, to be practical, put into action, dare to “suffer”. It is necessary to point out that contemporary college students bear the mission of the great rejuvenation of the Chinese nation.

nation of the Chinese nation. They should not confine themselves to personal aspirations, but instead integrate their individual dreams into the broader realization of the Chinese dream. In particular, higher vocational skilled talents should not be bound by the traditional concept of “learning is superior”, rich artisanal spirit and high skill and technology talents can also realize self-worth, also well able to take on the historical mission and responsibility given by the country and the nation (Zheng, 2023) Dreams drive personal growth and skill enhancement. Human potential is infinite, only with a dream, can stimulate the potential of the individual, drive the individual to move forward, so as to realize the skill improvement.

1.2 Attitude of respecting teachers and eagerly seeking knowledge

As higher vocational students, when learning professional knowledge and skills, they should always maintain a sense of respect and reverence for their teachers. Only by respecting teachers can one truly value and utilize the knowledge imparted by them, and can one apply this knowledge effectively when solving practical problems, truly achieving the goal of learning for application (Jian, 2023). At the same time, they also need to use the knowledge taught by their teachers to deepen their own understanding and thinking, gradually improving their professional skills and literacy, and achieving the improvement from good to excellent, and then from excellent to outstanding. Respecting and trusting teachers can better facilitate learning and skill enhancement. Respect and trust in teachers can help students better learn and make use of the knowledge taught by teachers, thereby better improving their skills.

Higher vocational students, through continuous learning, gradually develop their own professional qualities and character, thus becoming individuals with genuine value and influence. This is the connotation and significance of the attitude and integrity of respecting teachers and earnestly seeking education, and it is also the attitude and integrity that higher vocational students must always adhere to and uphold on the path of pursuing their dreams.

1.3 Honesty, integrity, and the courage to take responsibility as noble character traits

In the pursuit and adherence to the spirit of craftsmanship, higher vocational students should always be honest and trustworthy. Sincere pursuit and relentless perseverance can integrate and elevate honesty and the spirit of craftsmanship to a new level. In addition to the basic quality of being honest and trustworthy, students in the new era should possess the noble character to bravely undertake missions and responsibilities (Sun, 2023). The character traits of honesty, integrity, and courage to take responsibility are crucial for skill enhancement. Being honest and trustworthy helps individuals build good interpersonal relationships and social reputation, while the courage to take responsibility helps individuals persevere when facing difficulties and challenges.

1.4 Diligence and dedication, striving for excellence as aspirational goals

For modern technical talents, the core concept of the spirit of craftsmanship is the relentless pursuit of technical excellence and continuous improvement. Acquiring professional knowledge and skills is not an overnight achievement; it requires diligent study and the cumulative accumulation of knowledge and skills to gain a deep understanding and proficient mastery, thereby truly realizing the pursuit of excellence and perfection, reaching the state of continuous improvement (Xiao, 2023). Diligence and the pursuit of perfection can help individuals continuously improve their skills. It is only through diligent study, continuous learning, and practice that one can enhance their personal skills.

Therefore, the primary task of higher vocational students is to be eager to learn and wholeheartedly participate in various teaching activities that can enhance their professional knowledge and skills. They should engage deeply in study and practice to develop a professional depth, meticulous attention to detail, and a pragmatic work style. They should treat every work task with high standards and strict requirements, truly realizing the pursuit of the state of striving for excellence. This pursuit should not only be manifested in study but also in work (Hai, 2016). Whether in learning or working, we need to demonstrate a love for

professional knowledge and a pursuit of technical excellence. Only in this way can we truly embody the core concept of the spirit of craftsmanship and become an outstanding technical worker.

Whether it is motivation by dreams or respect for teachers, both are important factors that help individuals improve their skills. Honesty, integrity, and the courage to take responsibility are the basic qualities that every technical worker must possess, while diligence and the pursuit of excellence are the fundamental ways for individuals to continuously enhance their skills. Higher vocational students should grasp these elements and continuously improve their skills through learning and practice, contributing to the realization of self-worth and social development.

2. The Value Implications of Cultivating the Spirit of Craftsmanship in Higher Vocational Students

2.1 Cultivating the spirit of craftsmanship aligns with the needs of contemporary era development

In the current era, the rapid changes in internet technology have provided a huge impetus for the swift development of the economy, and the economic competition among countries around the globe is becoming increasingly intense. However, the concept of rejuvenating the country through industrial development remains the cornerstone of our nation's sustained economic growth. Higher vocational education institutions, as important bases for the country to cultivate skilled talents, play a critical role, and their students are the key force in achieving the goal of “rejuvenating the country through industry”, bearing the future mission of the nation (Zhang, 2023). Against this backdrop, it is particularly important to cultivate more high vocational skilled talents with a spirit of craftsmanship, as this precisely meets the needs of modern national development. Therefore, higher vocational students should actively and persistently embrace the spirit of craftsmanship as their basic professional quality, striving to become inheritors and practitioners of the spirit of craftsmanship. Moreover, higher vocational students need to internalize the spirit of craftsmanship as their professional

attitude, continually improving their professional skills and quality to meet the needs of society and national development. They should be guided by the spirit of craftsmanship, engage deeply in practice, continuously learn and explore, and always maintain a love and pursuit of professional skills and knowledge, thus truly achieving the excellence of skills and becoming an important supporter of national development. In summary, higher vocational students should regard the spirit of craftsmanship as their professional and behavioral guideline, continuously pursuing the refinement of skills to respond to the expectations of the nation and society and contribute to the prosperity and strength of the country (Klamer, 2012). The spirit of craftsmanship in higher vocational students is reflected in the following aspects:

1. Passion for the profession, striving for excellence

This is the core of the spirit of craftsmanship and the basic requirement for skill enhancement. The rapid development of modern society requires people to have a skill and, more importantly, the ability to continue learning and improving. For example, a professional electrician needs not only to master the basic skills of circuit construction but also to learn and master new equipment installation and debugging techniques as technology advances. Only in this way can one stand firm in the fierce competition of society.

2. Focus on quality, pursuit of perfection

The spirit of craftsmanship is not only reflected in the refinement of skills but also in the pursuit of the quality of work results. Steve Jobs, the founder of Apple, is a typical representative of the spirit of craftsmanship. He demanded near-perfection in every detail of his products, striving for a perfect user experience, which is an important reason why Apple products stand out among many competitors.

3. Dedicated focus, tolerance of solitude

The spirit of craftsmanship is also reflected in a professional attitude, which is to love what you do and dedicate yourself to excelling in it. World-class pianist Lang Lang requires hours of practice every day, which has continued for decades.

This dedication to work and love for the results is a typical example of the spirit of craftsmanship.

From the above three points, it can be seen that higher vocational students should take the spirit of craftsmanship as their professional guideline, pursuing skill refinement through passion for their profession, focus on quality, dedicated investment, and tolerance for solitude. In this way, they can not only enhance their professional skills to meet the development needs of society and the nation but also contribute to the prosperity and strength of the country (Li, 2019).

2.2 Cultivating the spirit of craftsmanship promotes the realization of the “whole-person education” goal

The spirit of craftsmanship in contemporary society reflects not only a quality of honesty and integrity, unique innovative thinking, and an unremitting pursuit of excellence but is essentially also a cultivation and shaping of character. At the same time, higher vocational education is committed to fostering students' well-rounded personalities and noble moral qualities as part of the “whole-person education” (Yu, 2023). “Whole-person education” is an important component of the education program under Chinese socialism with distinctive characteristics. It refers to an education that promotes the comprehensive development of moral, intellectual, physical, aesthetic, and labor education. Specifically, “whole-person education” includes the following three aspects:

1. Comprehensive development: It emphasizes a comprehensive quality education for students, including aspects of moral, intellectual, physical, aesthetic, and labor education. It focuses not only on students' knowledge and skills learning but also on the cultivation of their moral qualities, aesthetic tastes, and physical capabilities.

2. Whole process: It emphasizes that education should span the entire life of students, not just take place in schools but also extend to families, communities, and even the whole society, forming a broad pattern of education for all people by the society.

3. Participation by all: It emphasizes that education should be a process of participation by the whole society, including teachers, parents, communities, and other forces, all of whom are involved in the education of students, creating a situation where the whole society is involved in education.

The proposal of “whole-person education” reflects the characteristics and goals of Chinese education, that is, to cultivate well-rounded socialist builders and successors with development in moral, intellectual, physical, aesthetic, and labor education. This is also an innovation and development of Chinese educational philosophy, which has significant meaning for enhancing the quality and effectiveness of education in China (Su, 2018).

However, currently, some university students lack foresight in their future career planning, are somewhat indifferent in self-management, and find it particularly challenging to pursue the state of excellence. Therefore, in addition to focusing on the imparting of theoretical knowledge and professional skills, higher vocational education should also emphasize on ideological and political education that is closely related to the reality of modern society in its teaching and management processes, in order to better achieve the goal of “whole-person education”. This can be done through various forms such as lectures by famous experts, speeches by leading craftsmen, and specialized ideological and political model classes, integrating the “spirit of craftsmanship” into the ideological and political education of higher education, and more effectively promoting the formation of a good professional spirit and complete personality among students (Zhang, 2018).

At the same time, higher vocational colleges should also actively guide students to understand and delve deeply into the spirit of craftsmanship, using it to cultivate their professional qualities and vocational ethics, so that they balance theoretical learning and practical operation, possessing both profound theoretical knowledge and solid practical skills (Zhong, 2023). In this way, students can foster a positive, meticulous, and pragmatic work attitude, as well as a professional spirit of dedication, love for their job, and courage to innovate while

on campus, contributing to the future development of society. In summary, the cultivation of the spirit of craftsmanship is an important approach to achieving the “whole-person education” goal. Higher vocational colleges should make full use of various resources and methods to integrate the spirit of craftsmanship into the educational process, thus better accomplishing the task of “whole-person education” and training more high-quality skilled talents for society.

2.3 Cultivating the spirit of craftsmanship is the proper meaning of achieving student training objectives

“A person without virtue cannot stand” is a profound philosophical principle. For higher vocational education, the goal is to cultivate high-quality skilled talents who not only possess technical skills but also moral qualities (Yang, 2023). Through surveys of talent needs conducted among multiple enterprises, it is found that most enterprises, in addition to professional knowledge and skills, focus on the vocational spirit and ethical character of skilled job candidates. This is because work experience and technical skills can be gradually accumulated and improved in subsequent work practices, but a person’s character cultivation and noble qualities need to be gradually developed and formed at various stages of school education. Superior technical skills and noble character are precisely the core of the spirit of craftsmanship. Therefore, cultivating the spirit of craftsmanship in skilled talents is an important way to achieve the objectives of higher vocational education and talent cultivation.

Higher vocational education should incorporate the cultivation of the spirit of craftsmanship into its curriculum system and, through multifaceted efforts, cultivate skilled talents who possess both professional skills and good character. In recent years, China’s economy has been shifting from expansion in scale to a focus on quality and efficiency, which requires our higher vocational education to keep pace with the times, adjusting teaching models and content, and placing more emphasis on cultivating students’ spirit of craftsmanship. According to the China Labor Market Report (2023), enterprises are in greater need of high-quality skilled talents who have innovative capabilities and professional skills, as well as

good moral character and the spirit of craftsmanship. Such talents are not only capable of performing their duties well but can also provide new ideas and momentum for the development of enterprises. And this is precisely the effect that the cultivation of the spirit of craftsmanship can bring (Ma, 2023).

Take Huazhong University of Science and Technology as an example, the university introduced a “spirit of craftsmanship” course in 2019, which not only teaches professional knowledge but also focuses on cultivating students’ innovative spirit and craftsmanship. In practice, students are required not only to master professional knowledge but also to solve practical problems and pursue technical perfection with the spirit of a craftsman. After several years of practice, the university’s graduates have received positive feedback in the job market; they not only possess good professional skills but also have noble character and a strong spirit of craftsmanship. Therefore, by integrating the cultivation of the spirit of craftsmanship into the curriculum system through higher vocational education, we can better cultivate skilled talents who have both professional skills and good character, contributing to the development of society.

For this purpose, higher vocational education should incorporate the cultivation of the spirit of craftsmanship into the curriculum system, and through efforts in professional knowledge teaching, practical skill training, and moral character education, cultivate skilled talents who possess both professional skills and good character (Zhu, 2023). At the same time, it is necessary to strengthen cooperation with enterprises, gain a deep understanding of enterprise talent demands, and better adjust educational content to enhance students' employability. In summary, higher vocational education should adhere to the principle that “a person without virtue cannot stand”, focus on the integration of moral education and skill training, and strive to cultivate high-quality skilled talents with a spirit of craftsmanship to contribute to the development of society.

2.4 Cultivating the spirit of craftsmanship helps students achieve greater value in life

In today's society, characterized by rapid technological advancement and swift economic growth, the employment situation of higher vocational students has undergone profound changes. Compared to the past, modern university students generally come from more financially comfortable backgrounds, and they have a wider range of choices when it comes to employment and entrepreneurship, tending to pursue personal interests and careers that can realize greater value. Currently, there is a significant and urgent demand for skilled talents in our society. Therefore, promoting a social atmosphere that values "skills are precious, creation is great" has become particularly important (Huang, 2023). This also means that the cultivation of the spirit of craftsmanship is closely related to the future employment and professional development orientation of higher vocational students. Effectively integrating the spirit of craftsmanship into daily learning and living not only helps students form a correct view of career development but also enables them to firmly embrace the ideal belief in pursuing excellence and the personal quality of honesty and trustworthiness, thereby enhancing the overall competitiveness of university students and helping them to realize their grand ideals and life values.

Cultivating a craftsman's spirit can help vocational college students realize greater life values, as it not only enhances their skillset but also shapes their character. This allows them to be more competitive in future employment and career development. Mastery of any skill requires continuous learning and practice, which are rooted in the craftsman's spirit that emphasizes meticulousness and perseverance. Additionally, the honesty, trustworthiness, and respect for labor inherent in the craftsman's spirit can help students develop proper professional and value orientations. These qualities are crucial for skilled talents as demanded by enterprises and society in modern times. Therefore, students who embody the craftsman's spirit not only excel in their professional skills but also earn respect for their moral integrity, thus better realizing their life values. Taking Zhejiang

University of Technology as an example, the university has created a “Modern Craftsman” course to better foster the craftsman’s spirit among students. In this course, the school invites craftsmen with rich experience and profound skills in their respective fields to talk about their careers and share how they adhere to the craftsman’s spirit, continuously improve their skills in practice, and ultimately succeed professionally (Breuss, 2019). This direct and vivid teaching method profoundly impacts students, inspiring them to strive for excellence and perseverance. As a result, when they enter society, they not only have higher aspirations for their professional skills but also gain a deeper understanding of professional ethics and life values, thereby achieving greater life values. Therefore, by cultivating the craftsman’s spirit, vocational college students can better enhance their professional quality and life values, leading to greater personal development.

In order to better achieve this goal, vocational colleges should make corresponding adjustments to their curriculum and teaching methods. For instance, they could integrate content related to the craftsman’s spirit into the courses, allowing students to comprehend and appreciate the essence of the craftsman’s spirit while learning their professional knowledge. Moreover, through hands-on teaching, students can experience the charm of the craftsman’s spirit in practice, fostering a deeper understanding and acceptance of this ethos. In addition, schools should strengthen their connections with society to better understand the demand for skilled talents and, accordingly, adjust their educational content and methods to enhance students’ employability. In summary, the craftsman’s spirit is an important guide for vocational students in their studies and employment. Vocational colleges should focus on cultivating this spirit to assist students in better realizing their aspirations and values.

3. The Realistic Challenges of Cultivating the Craftsman's Spirit in Vocational College Students

3.1 Outdated educational and teaching philosophies, deviation from guiding principles

Moral education and fostering virtue is the foremost task of vocational education. However, in the actual educational process, many vocational colleges focus too much on the cultivation of “technical skills” and neglect that the ultimate goal of education is to improve students’ overall quality, including professional skills, knowledge reserves, and worldview (Li, 2023). Currently, vocational education reform in China is unfolding comprehensively, but the focus of most vocational colleges’ reforms still centers on some “symbolic achievements”, and the cultivation of non-symbolic outcomes, such as “craftsman’s spirit”, often remains on paper only. For example, due to societal biases and employers’ perspectives, the employment rate of vocational students is relatively low. A school’s employment rate is seen as a “hard currency” indicator of its educational strength; as a result, some vocational colleges, in their pursuit of higher employment rates, even promote the utilitarian notion of “employment first, career choice later”. This leads students to often fall into situations where their jobs do not match their majors or they are unable to utilize their strengths, which significantly impacts the innovation and entrepreneurial abilities of skilled talents and their ability to sustainably develop their careers, not to mention cultivating and passing on the craftsman’s spirit (Cai, 2023).

Outdated educational concepts and deviated guiding principles can impact the holistic cultivation of vocational students’ qualities, including professional skills, knowledge reserves and worldviews, and may even lead to the neglect of cultivating the craftsman’s spirit. Currently, the problems in vocational education primarily center on an excessive focus on students’ skills training while neglecting the enhancement of humanistic qualities and the cultivation of the craftsman’s spirit. This lag in educational philosophy not only limits students’ comprehensive

development but may also result in graduates being unable to meet societal demands after employment (Liang, 2023). Additionally, some vocational schools excessively pursue employment rates, ignoring the quality of students' employment, which can lead to graduates being unable to find jobs matching their specialties, or even to career issues.

Take a certain vocational college as an example; this college prioritizes increasing employment rates and has established a multitude of skills training courses, neglecting education in other areas. As a result, despite the high employment rates, there are a considerable number of students who cannot find satisfactory jobs after graduation, and some are even unable to demonstrate their professional skills at work. This shows that merely pursuing skills training and employment rates, while ignoring the cultivation of humanistic qualities and the craftsman's spirit, cannot truly improve student quality.

Furthermore, some vocational colleges, in order to meet employers' demands for skills, have over-interpreted the "vocational" nature of vocational education, overemphasizing the pursuit of "high, precise, and advanced" technical skills among students, while neglecting the education of humanistic literacy and spiritual world. This has led to a situation where vocational talents have superb "crafts" skills but are severely lacking in humanistic qualities and the "craftsman's spirit". Therefore, vocational education should re-examine its educational philosophy and teaching methods, adhere to the fundamental task of fostering virtue through education, focus on cultivating students' comprehensive qualities, including professional skills, knowledge reserves, and worldviews, and emphasize the cultivation of the craftsman's spirit in the educational process. This ensures that skilled talents reach high levels in both skills and humanistic qualities, thereby making a greater contribution to the development of society.

3.2 The disconnection between the cultivation of the craftsman's spirit and the curriculum system

At present, vocational education in China is actively promoting deep reforms. However, during this process, the focus of teaching reforms in most vocational

colleges still concentrates on innovation and entrepreneurship education, ideological and moral education, career planning, and professional ethics, with the cultivation of the craftsman's spirit only touched upon within these parts of the curriculum (Wang, 2023). Especially in the process of formulating standards for professional courses, under the guidance of a “technology-first” educational view, the focus is still on how to integrate theoretical course teaching with skills training courses, while the design and implementation of courses to cultivate the craftsman's spirit remain at the theoretical level.

It is widely understood that teaching both theoretical and practical training courses relies on the support of appropriate “action-based” course plans. Similarly, the cultivation of the craftsman's spirit in vocational college students also needs targeted “action-based” course plans as a foundation. These course plans are independently developed by schools based on actual needs, combining the characteristics of professions and industries, and fully utilizing professional course resources. However, many vocational colleges do not give enough importance to the preparation of these course plans, leading to a lack of interest in these “action-based” course plans that require a significant investment of time and effort to innovate. Naturally, this results in the cultivation of the craftsman's spirit in students lacking corresponding course standards and plans (Tao, 2017).

The disconnect between the cultivation of the craftsman's spirit and the curriculum system prevents students from gaining a deep understanding and nurturing of the craftsman's spirit while learning professional skills, which negatively affects the comprehensive development of vocational education. In the actual teaching process, if the cultivation of the craftsman's spirit is disconnected from the curriculum setup, then no matter how much the school emphasizes the importance of the craftsman's spirit, students will not be able to truly comprehend and understand it in their actual learning process. Since most learning is conducted through the curriculum system, if it does not include the cultivation of the craftsman's spirit, students are likely to remain ignorant of it even after completing their courses.

For instance, consider Hunan Science and Technology Vocational College. During its educational reforms, this college has always valued the cultivation of the craftsman's spirit. The cultivation of the craftsman's spirit has been incorporated into the college's curriculum system, enabling students to understand and grasp the essence of the craftsman's spirit while learning their professional knowledge. As an illustration, in the Mechanical Manufacturing Technology program, the college has a course called "Craftsman's Spirit and Professional Quality" which, through theoretical explanations and practical activities, allows students to truly understand the meaning of the craftsman's spirit and feel its charm. After several years of practice, graduates from this college have not only achieved a high level of professional skills but have also made significant progress in the cultivation of the craftsman's spirit.

Hence, as vocational colleges push forward with teaching reforms, they should place greater emphasis on cultivating the craftsman's spirit, as well as on the development of related course standards and plans. Only in this way can it be ensured that students fully comprehend the essence of the craftsman's spirit while learning professional skills, allowing them to demonstrate not only excellent technical skills in their future work but also the spirit and demeanor of the craftsman's spirit.

3.3 The overall quality of "dual-qualified" teaching staff is uneven

As the main base for training skilled talents in our country, the quality and level of the teaching staff in vocational education directly affect the quality of student training. Therefore, only when teachers themselves first learn and implement the craftsman's spirit can they subtly guide students to learn and practice the craftsman's spirit through their own example, thus achieving the ultimate goal of education and teaching. In this process, the importance of building a "dual-qualified" teaching team is self-evident. The so-called "dual-qualified" teachers refer to those who not only have a higher education teaching qualification certificate but also possess professional skill level certificates relevant to their field. They have not only worked in the relevant enterprises but can also

provide practical teaching guidance to students. At present, in various vocational colleges, the number of such dual-certified teachers is relatively large. However, it is notable that some teachers are motivated to obtain these certificates mainly to increase their scores for professional title evaluations and awards. Yet, after obtaining the relevant certificates, their emphasis on practice and in-depth research in their daily study and teaching work is relatively low.

The construction of a “dual-qualified” teaching team is crucial to vocational education, and the current uneven quality directly impacts the quality of education and teaching, as well as the cultivation of the students’ craftsman spirit. In vocational education, “dual-qualified” teachers need to possess both theoretical knowledge and practical experience to guide students effectively. They should integrate the craftsman’s spirit into the teaching process while instructing on professional skills. However, the reality is that some teachers place insufficient emphasis on practice and in-depth study after obtaining their professional skills certificates, which prevents them from guiding students in understanding and practicing the craftsman’s spirit deeply during the teaching process. Taking vocational colleges in Jiangsu as an example, although the schools vigorously promote the training of “dual-qualified” teachers, the teaching abilities and practical experience of some teachers still need improvement. Some teachers rely too much on theoretical teaching and lack recognition of the importance of practical teaching, resulting in students who may have a good grasp of theory but often encounter problems in practical application. This not only affects the students’ skills learning but also prevents them from truly experiencing and understanding the craftsman’s spirit during practical activities like craft making (Wei, 2023).

While promoting educational and teaching reforms, vocational colleges should strengthen the construction of their “dual-qualified” teaching teams and enhance teachers’ practical teaching abilities to improve the quality of education and teaching and better cultivate the craftsman’s spirit among students. Therefore, although these full-time teachers have an in-depth understanding of the theoretical knowledge and key skills in their professional fields, there is still a certain

distance between their knowledge and skills and the innovative technologies and professional spirit that actual enterprise demand requires. In practical teaching, their integration with enterprise requirements is limited, indicating that the overall quality of the teaching staff in vocational education still needs improvement. Vocational colleges should not only focus on the professional skills training of teachers but also pay attention to improving their professional qualities while promoting educational and teaching reforms, to achieve the long-term development of vocational education.

3.4 Students lack a sense of craftsmanship and confidence in becoming “craftsmen”

In contemporary society, most vocational college students come from well-off families and are only children who enjoy comfortable material lives without engaging in any physical labor. This condition has led them to question the belief that “labor creates wealth and value” (Zhang, 2023). As the economy develops rapidly, the ideas of opportunism and hedonism are spreading in society.

We need to enhance the respect and recognition of craftsmen from three levels: society, school, and family, to change the lack of confidence among vocational students in becoming craftsmen. Social level changes are necessary, such as increasing the recognition and respect for skilled labor. For example, governments can promote the craftsman’s spirit through public media, allowing the public to understand how craftsmen from different industries contribute to society through their exquisite skills. At the same time, award measures can be set up to commend craftsmen who have outstanding performances in their fields, encouraging more people to respect and choose skilled labor. School level changes are crucial, as schools are vital for guiding students to form correct values. Schools can offer career-oriented courses to help students understand the value of various jobs, including those involving manual skills (Ye, 2021). Through hands-on activities, students can experience the labor process and understand labor’s value, fostering their respect and interest in skilled work. Family level changes are also significant. Parents’ views and attitudes have a crucial impact on their children’s

career choices. Parents should respect and support their children's choices in skilled professions and help them build respect for labor and confidence in becoming craftsmen. For instance, parents can visit various handicraft exhibitions with their children, allowing them to see the charm of handicrafts and understand the value of being a craftsman.

Through changes on these three levels, we can increase society's respect and recognition for craftsmen, thereby inspiring vocational students to have confidence in becoming craftsmen. This inspiration can guide them to deeply study and proactively explore their professional skills and cultivate their craftsman spirit.

Moreover, there is a widespread misunderstanding and prejudice against vocational education in society. People generally consider the status of vocational education to be lower than that of general higher education and lack the due recognition and respect for craftsmen who engage in manual work. This social environment has a negative impact on the mindset of vocational students. They lack confidence in becoming highly skilled craftsmen and lack the spirit to deeply study and actively explore their professional skills. Therefore, to change this situation, we need to start from various aspects, including society, schools, and families. Firstly, we must correct the misunderstandings and prejudices against vocational education in society and increase the recognition and respect for craftsmen; secondly, schools should strengthen vocational education for students and guide them to establish correct professional concepts and values; finally, families should also support their children's choice of skilled professions and help them build respect for labor and confidence in becoming craftsmen. Only in this way can we cultivate a group of skilled talents who are highly skilled and full of craftsman spirit.

4. Implementation Path for Cultivating Craftsman Spirit in Vocational College Students

4.1 Integrate strengths to comprehensively create an educational environment that venerates the craftsman spirit

On the societal level, we can utilize various media to interpret and promote the essence of the modern “craftsman spirit”, thereby eliminating the misconceptions caused by “traditional views” about the craftsman spirit. We need to make students understand that skilled talents with the craftsman spirit have become a primary force in creating value in contemporary society and have an immensely broad space for sustainable career development and self-value realization. Employers should not differentiate between vocational college students and university graduates based on educational background when selecting talent, promoting employees, and evaluating positions. They should also strengthen the recognition and publicity of outstanding craftsman-like talents to create a conducive environment for skilled talents with the craftsman spirit to work and grow (Jiang, 2023).

Society, employers, and vocational colleges need to join forces to comprehensively create an educational environment that venerates the craftsman spirit, allowing students to have a deeper understanding and recognition of it. Societal changes: Public understanding and acknowledgment of the craftsman spirit are foundational to forming an environment that venerates it. The essence and value of the craftsman spirit and the significance of highly skilled talents in modern society can be publicized through various media platforms, which can stimulate public respect and recognition for technical work. Employer changes: Employers should treat all employees fairly, without discrimination based on educational background. Those craftsmen with superb skills and excellent performance should be given adequate recognition and rewards by employers, such as more opportunities for promotion and higher remuneration. Such practices not only motivate employees to improve their technical skills but also attract more people to become craftsmen. Changes in vocational colleges: Vocational colleges, as the

main front for cultivating skilled talents, should actively promote the craftsman spirit and improve students' understanding and recognition of it. Schools can organize various activities themed around the craftsman spirit, such as lectures on the craftsman spirit, exhibitions of outstanding craftsmen's deeds, and craftsmanship technology competitions, to allow students to understand and experience the craftsman spirit. Through changes on these three levels, we can create a favorable environment that enables more people to understand and respect the craftsman spirit, increase societal recognition for technical work, and encourage more students to choose to become craftsmen, thus cultivating more highly skilled talents for society.

Vocational colleges, as the main battleground for cultivating skilled talents, must always insist on promoting and inheriting the craftsman spirit of the new era in the process of constructing campus culture, combining cultural education with the training of skilled talents. They can use campus radio, Weibo, and the campus network and other platforms to promote the craftsman spirit. They can also regularly hold reports on outstanding craftsmen's deeds, organize various competitions centered on the "craftsman spirit," and host themed lectures on the craftsman spirit. These activities can not only enable students to clearly understand the connotation and essence of the craftsman spirit but also strengthen their sense of identity and pride in their chosen professions through continuous exposure. Especially, these activities can inspire skilled talents to feel a sense of mission in passing on the "craftsman spirit," thereby creating a favorable environment for talent cultivation.

4.2 Transform the educational philosophy and implement the fundamental task of cultivating "morally and technically proficient" talents through school-enterprise cooperation

In modern society, the demand for skilled talent emphasizes not only their superior technical skills but also their noble moral qualities. Therefore, the craftsman spirit can be seen as the soul of vocational education, playing a vital role in the cultivation of vocational college students. This educational process should not

only allow students to master a technical skill but also help them establish correct moral concepts, requiring us to pay attention to both “moral” and “skill” cultivation in training vocational students.

In the process of “moral” cultivation, we need to combine the nurturing of the craftsman spirit with the cultivation of socialist core values, which helps students establish correct worldviews, life perspectives, and value systems. At the same time, we should integrate the cultivation of innovative skilled talents with the nurturing of the craftsman spirit, actively carry out “curriculum ideology” education, and incorporate the cultivation of the craftsman spirit into the teaching content system of ideological and political courses (Zhang, 2023). Moreover, when designing professional courses and public foundation courses, we should also look for typical cases and other ideological and political elements that can highlight the craftsman spirit, aiming to improve students’ ideological and moral qualities, making the craftsman spirit a value that they pursue consciously. During the “skill” cultivation process, the teaching by example of experts and teachers, as well as students’ practical operations, are indispensable links. Therefore, based on the practice teaching within the school, we should also cooperate deeply with enterprises related to the industry as much as possible, allowing the professional theories and practical course contents learned by students to better align with the demands of their future job positions and career development directions. By designing and innovating projects that combine theory with practice, we can attract more students to actively participate in teaching activities, allowing them to experience firsthand the social value and unique charm brought by skills and the craftsman spirit. While practicing “skills”, we steadily transform the “craftsman spirit” into the students’ cultural DNA, thereby enhancing the effectiveness of “skill” cultivation (Ye, 2018).

To cultivate talents with noble moral qualities and superb technical skills, known as “morally and technically proficient,” we need to transform our educational philosophy and carry out comprehensive cultivation of both “morality” and “skills” through school-enterprise cooperation.

Cultivation of Morality: In moral education, we can help students establish correct worldviews, life perspectives, and value systems by integrating the cultivation of the craftsman spirit with the nurturing of socialist core values. We can offer courses like “Craftsman Spirit and Socialist Core Values” to enable students to understand and embrace the craftsman spirit and socialist core values while learning technical skills.

Cultivation of skills: In the cultivation of technical skills, we need to provide students with opportunities for practical operations, so they can better understand and master the professional knowledge they have learned. Through school-enterprise cooperation, we can set up practical projects, allowing students to intern at enterprises, personally experience the application of technical skills, and appreciate the value of the craftsman spirit.

School-Enterprise cooperation: School-enterprise cooperation is an effective way to cultivate “morally and technically proficient” talents. Schools can sign cooperation agreements with enterprises, where enterprises provide internship bases and schools provide theoretical education, jointly cultivating students. In this way, students can learn theoretical knowledge at school and gain practical experience in enterprises, effectively improving their technical skills and moral qualities.

By transforming the educational philosophy and achieving comprehensive cultivation of both “morality” and “skills” through school-enterprise cooperation, we can effectively cultivate “morally and technically proficient” talents with noble moral qualities and superb technical skills, who will become a significant force driving societal progress.

4.3 Build a “dual-qualified” teaching team to lead students on the path of becoming “craftsmen”

In today’s society, the demand for skilled talents is not only for advanced technical skills but also for noble moral qualities. Therefore, the craftsman spirit can be regarded as the soul of vocational education, which requires us to focus not only on skills training but also on moral education in the process of cultivating vocational college students (Zhang, 2023).

To cultivate students with high moral quality and advanced technical skills, we need to build a “dual-qualified” teaching team to guide students towards the craftsman spirit. Education of morality: In terms of moral education, we need to closely integrate the cultivation of the craftsman spirit with the education of socialist core values. We can offer courses such as “Craftsman Spirit and Socialist Core Values”, allowing students to understand and embrace both the craftsman spirit and socialist core values while learning technical skills. Cultivation of skills: In skills training, we need to provide students with sufficient practical opportunities. We can collaborate with enterprises in relevant industries to set up practical projects, giving students the chance to intern at these enterprises, personally experience the application of technical skills, and appreciate the value of the craftsman spirit. The role of “dual-qualified” teachers: In terms of teacher team building, we need to create a “dual-qualified” teaching team (Zhang, 2023). We can improve the selection and training system for teachers, enhancing their professional skills and moral qualities. We can encourage teachers to participate in enterprise practice activities and skills competitions to improve their professional skills and teaching abilities; we can also introduce technical experts from enterprises to form teaching teams with full-time teachers within the school, increasing the practicality and effectiveness of teaching. By building a “dual-qualified” teaching team, we can effectively guide students towards the craftsman spirit, thereby cultivating students with high moral quality and advanced technical skills, who will become a significant force in driving social development.

In the realm of moral education, it's essential to closely integrate the cultivation of the craftsman spirit with the education of socialist core values to help students establish a correct worldview, outlook on life, and value system. At the same time, we should organically blend the cultivation of innovative, skilled talent with the craftsman spirit, actively carrying out “ideological and political education within the curriculum,” and incorporating the education of the craftsman spirit into the content of ideological and political courses. When designing professional and public foundational courses, we must focus on identifying

exemplary cases and other ideological and political elements that reflect the craftsman spirit, so that students can elevate their moral thinking while also adopting the craftsman spirit as a value they pursue consciously (Sun, 2018).

In terms of skills training, the guidance of professional mentors and teachers and students' practical operations are indispensable. Therefore, upon completing practical teaching within the school, we should actively collaborate with enterprises in relevant industries to align the professional theories and practical course content that students learn with the demands of their future job positions and career development directions. We can attract students to actively participate in teaching activities by expanding and innovating integrated theory and practice projects, allowing them to personally experience the social value and unique charm that the craftsman spirit brings. While enhancing skills, we should also steadily transform the "craftsman spirit" into the students' own cultural DNA, further improving the effectiveness of skills training.

Regarding the construction of the teaching staff, we believe that teachers are the "vanguard" in cultivating the craftsman spirit among students (Guo, 2023). Thus, we must perfect the selection and training system for teachers to ensure that the teaching staff possesses professionalism and vocational ethics, fully leveraging the role and charm of "dual-qualified" teachers. On one hand, we should focus on enhancing teachers' practical skills and operational abilities. We should encourage teachers to "go out" and participate in enterprise practice activities related to their profession, master new technologies, standards, and concepts needed by modern enterprises, and keep up with cutting-edge technical developments in their fields. At the same time, we should also encourage teachers to participate in skill competitions at various levels related to their specialties, reform educational teaching based on the competition's evaluation system, and update and improve teaching content and plans to make the cultivation of the craftsman spirit more aligned with practice. On the other hand, we should actively introduce technical experts from enterprises to form teaching teams with full-time teachers within the school, enhancing the "dual-qualified" aspect.

4.4 Strengthen practical education and reinforce the leading role of role models

In vocational education, the most effective way to let students fully feel and understand the craftsman spirit is through practical activities, especially those that require hands-on operation and active participation, allowing students to profoundly comprehend the modern meaning and social value of the craftsman spirit through personal experience (Gan, 2023).

Strengthening practical education and the leading role of role models plays a significant part in helping students understand and embrace the craftsman spirit. The importance of practical education: Practical education is a crucial avenue for students to understand and accept the craftsman spirit. We can collaborate with enterprises to provide various practice platforms for students, such as laboratories, training workshops, and internship bases. On these platforms, students can experience the application of technical skills firsthand and understand the value of the craftsman spirit. Design of practical activities: We should organize a variety of hands-on teaching activities, integrating elements of the craftsman spirit into them. For example, we can design activities such as professional technical skills practice, career planning and innovation and entrepreneurship practice, as well as graduation internships and thesis writing, allowing students to naturally absorb the craftsman spirit through practice. The leading role of role models: The power of role models is boundless. We can guide students to understand and embrace the craftsman spirit by sharing the experiences and insights of successful individuals. We can invite students who have won skills competitions or alumni who have achieved certain successes to share their success stories, thereby stimulating students' enthusiasm for learning, guiding them to emulate successful individuals, and embracing the craftsman spirit. By reinforcing practical education and the leading role of role models, we can effectively help students understand and accept the craftsman spirit, making it their behavioral norm, thus enhancing their professional quality and comprehensive capabilities, and preparing them for future development.

For this reason, the cooperation between schools and enterprises is crucial. Together, we must build various practice platforms for students, such as laboratories, training workshops, and internship bases, to establish a practice teaching system with the craftsman spirit at its core and integrated with professional course content. We need to organize a variety of hands-on teaching activities, such as professional technical skills practice, career planning, and innovation and entrepreneurship practice, as well as graduation internships and thesis writing, incorporating elements of the craftsman spirit to subtly internalize this spirit into students' consciousness through practice (Breuss, 2019).

At the same time, we must fully explore and utilize typical and real-life cases around the students. We can invite classmates who have won awards in various skills competitions or alumni who have graduated and achieved certain successes to share their experiences and insights with the students. Their personal stories and successful experiences can provoke thought and resonance among students of the same profession, providing them with references for establishing their career directions and positioning. Through these methods, we can make the craftsman spirit truly become a value that students consciously pursue, a code of conduct in their studies, life, and work, thereby enhancing their professional quality and comprehensive capabilities, and making thorough preparations for their future.

5. Conclusion

In summary, promoting and cultivating the craftsman spirit is particularly important against the backdrop of the country's rapid development. This is not only a requirement for national development but also an inevitable demand for vocational college students to realize their own value, and to enhance personal quality and skills. In this process, vocational colleges play a critical role, possessing unique positions and advantages (Wang, 2023).

Firstly, vocational colleges should deeply understand the connotation, characteristics, and value implications of the craftsman spirit in the new era, providing students with comprehensive education and guidance (Zhu, 2022). Secondly,

vocational colleges need to comprehend and address the real challenges that vocational students face in pursuing the craftsman spirit, offering them the necessary support and assistance. Furthermore, vocational colleges must continuously explore and research effective pathways and strategies for cultivating the craftsman spirit among vocational students, aiming to find the most suitable cultivation model that meets the needs and characteristics of the students. To better achieve this goal, we should start from the following aspects: First, create an educational environment that honors the craftsman spirit, making it a part of the campus culture and a guide in students' daily life and study; second, strengthen school-enterprise cooperation, transform educational philosophies, and allow students to learn in practice, improving their skills and qualities; third, build a "dual-qualified" teaching team with both professional knowledge and front-line practical experience to provide students with more targeted guidance; fourth, enhance practical education to give students more opportunities to engage in actual work and experience the charm of the craftsman spirit (Ljungblom, 2021). Only by doing so can we effectively break through the real difficulties in cultivating the craftsman spirit and make a greater contribution to China's vocational education and student development.

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