Research on the Cultivation of Craftsmanship in Huang Yanpei’s Education Thought

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Abstract: Skilled talents are the main support for the strategic development of science and technology in China. The quality of talents is an important guarantee for the transformation and upgrading of national industries. By analyzing and studying Huang Yanpei’s thought on vocational education, this paper focuses on the cultivation of students’ craftsmanship in vocational schools. First, we analyze the results of previous research and then elaborate on the connotations of Huang Yanpei’s education thought and craftsmanship spirit. Lastly, we propose five suggestions for the cultivation of craftsmanship. Our research work carries certain reference value to the study of craftsmanship cultivation in Huang Yanpei’s education thought.

Keywords: Cultivation of craftsmanship; Craftsmanship; Teaching; Huang Yanpei’s education thought

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1. Introduction
The vigorous development of vocational education is an inevitable requirement for promoting economic and social development and building a strong country in science and technology. In recent decades, vocational education has provided strong talent support for the rapid development of the national economy. With the acceleration of industrial upgrading and economic transformation, the demand for high-level skilled personnel in various industries and the value of vocational education are increasing [1]. With the announcement of the Made in China 2025 Initiative, China has accelerated the transformation from “Made in China” to “Made with Quality” and “Created in China.” Meeting the requirements of the changing times and strengthening the cultivation of students’ craftsmanship are the missions given to vocational education. However, at present, there are problems, such as lacking follow-ups of concepts, designs of teaching contents, and innovation in collaboration with enterprises, in cultivating students’ craftsmanship in vocational schools [2].

A century ago, Huang Yanpei put forward his educational thought, which includes “using hands and brains” and “doing and learning together,” pointing out the direction for the development of vocational education in China [3]. The cultivation of craftsmanship is an important element of Huang Yanpei’s education thought. In order to ensure the development of vocational education, it is important to explore the value of Huang Yanpei’s education thought from the perspective of cultivating craftsmanship [4].

2. Research status
Huang Yanpei’s thought on vocational education has been a hotspot in research, especially among vocational education academia, and a large number of studies have been conducted. Chen [5] carried out an in-depth study of Huang Yanpei’s education thought in the new era, proposing that the idea of “sanctity of
labor” should be established in vocational education and emphasis should be placed on vocational education and professional ethics education. Yan [6] explored Huang Yanpei’s thought on vocational education and its contemporary inspiration. According to Yan, vocational schools should carry forward Huang Yanpei’s education thought, cultivate the spirit of craftsmanship, and better serve the society. On the other hand, Liu [7] studied the formation, connotation, and value of Huang Yanpei’s education thought in the modern world. He believes that the inheritance of Huang Yanpei’s education thought plays a significant role in the development of vocational schools. Wang [8] studied the application of Huang Yanpei’s education thought in the new era and argued that vocational schools in the new era should draw on Huang Yanpei’s education thought and experience and combine with the modern apprenticeship system to form a training model in which production, learning, and doing are mutually integrated. Cai [9] reflected on Huang Yanpei’s education thought in the context of modern apprenticeship. He considers the modern apprenticeship system as a means of implementing the hand-brain system and integrating industry with education. Gao [10] studied the “four directions” of Huang Yanpei’s education thought. According to Gao, Huang Yanpei’s education thought has far-reaching significance for the healthy development of vocational education in China. Wu [11] studied the inspiration of Huang Yanpei’s education thought to the cultivation of craftsmanship. He believes that excellence is the core of craftsmanship spirit and vocational school students must respect their profession. Zhao [12] analyzed the influence of Huang Yanpei’s education thought on the professional development model of teachers and proposed several strategies for teacher training based on Huang Yanpei’s thought on vocational education. Song [13] and Guo [14] studied the positive correlation between vocational education and socio-economic development, taking Huang Yanpei’s thought on “big vocational” education as an example. According to these scholars, this education thought acts as a guideline that enables people to break away from backward thinking and address the disconnections between industry and education in vocational education.

Craftsmanship is an objective need for building a strong country in science and technology. Scholars have carried out a lot of research on cultivating craftsmanship. Gao [15] studied the cultivation path of craftsmanship spirit in modern vocational education, suggesting that teachers should integrate the cultivation in the teaching process and strengthen the shaping of students’ professionalism. In addition, Zhang [16] studied the craftsmanship cultivation model in metallurgical higher vocational colleges and proposed the idea of nurturing craftsmanship from four aspects: the state, school, teachers, and students. In another study, Song [17] studied the cultivation path of craftsmanship. According to Song, the cultivation of craftsmanship is an important task, which can be accomplished by relying on the joint efforts of individuals, the society, and the state. Sun [18] studied the path of cultivating craftsmanship spirit in higher vocational schools from the perspective of excellent traditional Chinese culture, arguing that the essence of traditional Chinese culture should be fully drawn in the cultivation of craftsmanship spirit and that teachers should focus on cultivating humanistic feelings and professionalism among students. Bu [19] studied the strategies for cultivating craftsmanship among higher vocational teachers. He believes that higher education teachers should uphold the craftsmanship spirit so as to enable students to experience the craftsmanship spirit through their teaching. Li [20] studied the process of cultivating the craftsmanship spirit of labor culture in higher vocational students and argued that school-enterprise synergy must be adhered to in the cultivation of humanistic sentiment among students. Huang [21] conducted a study on the cultivation of craftsmanship in the new era, emphasizing that craftsmanship is an important part of the cultivation of high-quality skilled talents. Meanwhile, Yang [22] analyzed the status quo of cultivating craftsmanship spirit in vocational colleges. According to Yang, craftsmanship should be integrated into the whole teaching process to meet the goals of talent cultivation. Tal [23] studied the role of higher vocational physical education in cultivating craftsmanship and asserted that higher vocational schools should take physical education classroom as an important platform for cultivating craftsmanship.
3. Huang Yanpei’s thought and craftsmanship

3.1. Huang Yanpei’s thought
Huang Yanpei established the policy of “socialization, scientificization, and civilianization” in running education. According to Huang, the development of vocational education focuses on the needs of society, while the solution to the problems in vocational education depends on scientific methods. His suggestion to solve the problem of civilian livelihood centers on vocational education. Huang Yanpei put forward the principle of “using hands and brains” and “doing and learning together.” According to Huang, theory and practice are parallel and equally important. He stressed the importance of both knowledge and skills and put forward the education purpose of making the unemployed employed and those who are employed enjoy their work. His belief was that vocational education should first satisfy individuals in terms of earning a living, and it should then, on this basis, strive to achieve the function of serving the society. Furthermore, he argued that vocational education should adhere to the following fundamental values: “dedication to work and happiness” and “love for country and people.” It is important for students to develop the correct concept of personal career and a healthy mind to serve the society.

3.2. Craftsmanship
Craftsmanship represents not only a high-level skill, but also a rigorous, meticulous, dedicated, and responsible work attitude as well as a sense of identity, responsibility, honor, and mission for any profession. Craftsmanship is a form of value orientation and behavior toward a profession, that is, the practitioner’s reverence for the profession and the persistent pursuit of excellence and continuous innovation in products and services. Richard Sonnett, a famous American sociologist, once pointed out that craftsmanship is the desire to do things well. It can be said that craftsmanship is the ultimate professionalism that is deeply rooted in the practitioner’s inner being. Cultivating craftsmanship is not just a slogan; it should be implemented in vocational education and reflected in the thoughts and actions of every student. In the process of cultivating craftsmanship, higher vocational schools must first clarify the fundamental aspects of craftsmanship so as to cultivate students’ craftsmanship personality and shape. It is only by doing so that we can cultivate students’ personality and shape great craftsmen. Professional ethics is the heart of craftsmanship. At the level of professional ethics, craftsmanship is expressed as the spirit of dedication to work and selfless devotion as well as the sense of responsibility to do one’s duty. At the level of professional and technical behavior, craftsmanship is expressed as the spirit of inquiry focusing on details and the consciousness of innovation and bold breakthroughs. The recognition and love for a profession are the foundations of craftsmanship. People will only develop professional trust for excellence and pursue the best if they have deep identifications with their professions.

4. Targeted suggestions

4.1. Strengthen ideological and political education
Higher vocational schools tend to overemphasize the cultivation of professional spirit, while neglecting ideological and political education. These institutions should fully integrate the cultivation of craftsmanship spirit into ideological and political education and combine the craftsmanship spirit with certain core values. Schools should educate students on vocational values when they first enter the school so that they can develop correct values and outlook on life. Teachers should encourage students to pay attention to technical development and recognize the inherent beauty of technology. Only when students have a better understanding of craftsmanship and the social value of technology can they realize the importance of craftsmanship.
4.2. Focus on cultivating craftsmanship
It is a common problem that vocational schools focus on professional course grades and employment rates, while neglecting the cultivation of craftsmanship. This has led to the neglect of moral education in many vocational schools. Higher vocational schools should put forward relevant policies to enhance the cultivation of craftsmanship spirit among students. Teachers should fully explore the nurturing elements in professional fields, such as the inspiring stories of how certain well-known experts have grown, in order to help students establish correct values and outlook on life. In addition to teaching sessions, teachers should also fully integrate craftsmanship into evaluation sessions. Besides, government agencies at all levels should assume craftsmanship as an important indicator to assess the school operation and talent training quality.

4.3. Strengthen school-enterprise cooperation
The cultivation of vocational talents should not be limited to school education; rather, students should also be taught on the production line of enterprises. Since the goal of vocational education is to supply skilled talents to enterprises, vocational education enterprises must focus on the integration of schools with enterprises and strengthen their cooperation with enterprises. Vocational schools should actively bring in experts and technicians from the industry to coach students like their own apprentice. Enterprise experts should pay attention to guiding students’ outlook on life and emphasize the importance of skills in their teaching. Only in this way can students dedicate themselves to their work and take the initiative to ponder and learn about technology when they step into their workplace in the future.

4.4. Integration of professional learning with the cultivation of craftsmanship
Cultivating skilled talents is the core idea of vocational education. It is necessary to integrate craftsmanship into professional courses as it can effectively promote students’ skill learning. Along with professional courses, teachers should also share some of the diligent measures taken by experts to promote students’ motivation for learning. The infiltration of craftsmanship into the professional field can help students better understand why and how they can learn. Any technology is a matter of excellence and research. It is extremely important to develop good habits such as rising to challenges and actively striving in the pursuit of learning.

4.5. Cultivate craftsmanship in various practical activities
Strengthening social practice is an important step to improving the overall quality of students in vocational schools and cultivating their craftsmanship spirit. Practical activities are important not only to improve students’ professional skills, but also to cultivate craftsmanship among students. Higher vocational schools should encourage students to actively participate in social practice activities. Through practical activities, students will develop a certain sense of identity with their profession and realize the important role of craftsmanship.

5. Conclusions
Nearly a century ago, Huang Yanpei proposed the principles of “using both hands and brains” and “doing and learning together.” According to Huang, theory and practice are parallel and equally important. He emphasized the importance of both knowledge and skills and proposed the idea of making those unemployed employed and those who are employed enjoy their work, which is in line with the spirit of craftsmanship. Due to the upgrading and intelligence of industrial development, the number of people working purely by hand is decreasing; therefore, the advocacy of craftsmanship has weakened in today’s society. At present, China is in a critical period of transformation from “Made in China” to “Created in
China,” and the society has put forward higher requirements for skilled talents. Industrial upgrading is inseparable from high-level skilled talents. The mastery and proficiency of skills are inseparable from craftsmanship. In the process of promoting quality education and accelerating education reform and development, higher vocational schools should integrate craftsmanship with vocational education.

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