

The Causes and Countermeasures for the Shortage of Composite Technical Skilled Talents

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Abstract: Due to the rapid growth of industrialization and economy, compound skilled talents are playing an increasingly important role in economic construction. No matter in the transformation of traditional industries with high-tech and advanced applicable technologies, or in high-tech professional posts in emerging industries, a large number of talents who can master advanced technology and high skills are needed. Accelerating the construction of a powerful country with talents is an important guarantee to promote sound and rapid economic and social development and realize the goal of building a well-off society in an all-round way. In recent years, there has been a shortage of skilled workers, especially senior skilled workers, in China. The contradiction of insufficient total number of compound skilled talents, unbalanced distribution and unreasonable structure is very prominent, which has become one of the restrictive factors of sustainable economic development. To strengthen the construction of compound skilled talents, we must establish a correct concept of talents and optimize the growth environment of compound skilled talents. This paper analyzes the causes of the shortage of compound technical and technical talents, and puts forward relevant countermeasures.

1. Introduction

With the large-scale transfer of global manufacturing industry to China, many enterprises find that professional and technical personnel are easy to find, but compound skilled personnel are hard to find. China's agricultural industrialization, new industrialization and service modernization are increasingly demanding highly skilled talents, but it is a pity that there are serious problems in the number and structure of highly skilled talents in China at this stage[1]. With the adjustment of national economic strategy and industrial structure, the contradiction between supply and demand of skilled talents will continue to expand in some fields. The reasons for this shortage are history and culture, social and economic development, government, enterprises, schools and many other reasons[2]. Skilled talents play an irreplaceable role in accelerating industrial optimization and upgrading, improving enterprise competitiveness, promoting technological innovation and transformation of scientific and technological achievements, and occupy a decisive position in social and economic development[3]. No matter in the transformation of traditional industries with high-tech and advanced applicable technologies, or in high-tech professional posts in emerging industries, a large number of talents who can master advanced technology and high skills are needed. The contradiction between the quality of labor force and the requirements of occupation and post is increasingly prominent[4]. Structural unemployment has increasingly become an important type of unemployment in China. Especially the shortage of compound skilled talents has seriously affected the adjustment of industrial structure and the improvement of enterprise competitiveness, and has become a bottleneck restricting the growth of enterprises. At present, with the rapid economic development and rapid technological progress in China, the demand for compound skilled talents is becoming stronger and stronger. Judging from the current situation and future growth of compound skilled personnel training in China, the basic work of compound skilled personnel training in China is specifically undertaken by technical colleges[5]. Obtaining the qualification of skilled personnel requires a long-term and continuous training and a strict

verification process. In this process, countries, enterprises and individuals should play their own roles and strive to improve the quantity and quality of skilled personnel in China[6]. Compound skilled talents include skilled workers who have obtained professional qualifications of senior workers, technicians and senior technicians and corresponding ranks, and are mainly distributed in posts with high skill content in the primary, secondary and tertiary industries. They are an important part of China's talent team, outstanding representatives of industrial armies from all walks of life, and the core backbone of skilled workers[7]. As a technical college in charge of training compound skilled personnel, although it has developed rapidly in recent years, there are also many difficulties and problems in training compound skilled personnel. This paper analyzes the causes of the shortage of compound technical and technical talents, and puts forward relevant countermeasures.

2. Causes of Shortage of Compound Skilled Talents

2.1 One-Sided View of Talents

There are many reasons for the shortage of compound skilled talents in China. It is not only necessary to make a systematic and objective scientific analysis, but also a prerequisite for taking measures to solve the problem. At present, it is common in China that “academic education is emphasized and vocational education is ignored;” The traditional concept of attaching importance to academic diplomas and neglecting vocational skills is an important ideological root that leads to the shortage of compound skilled talents[8]. This prejudice against skilled talents first leads to a continuous decline in the number of students in vocational education and a shortage of reserve talents with advanced skills. Due to China's long-term implementation of the planned economy management system and the corresponding personnel management system, enterprise employees are clearly divided into two levels: managers and managed, which forms two completely different identities of cadres and workers[9]. A few years ago, cadres at different levels were managed by the organization department and the personnel department respectively, while workers were managed by the labor department. The specialty and curriculum setting of higher vocational and technical education can't be planned with the market demand as the guide, which is blind, and the specialty setting and teaching content are seriously divorced from reality and can't keep up with the needs of the rapid growth of manufacturing industry. Among the employed population in developed countries, the proportion of skilled workers accounts for the majority, forming an olive structure. However, there is a dumbbell-shaped structure in China, and the proportion of people receiving higher education has increased greatly, while the number of technicians in the middle has become a scarce population.

2.2 The Education System is Not Perfect

The information communication between schools and enterprises is not sufficient and the combination is not close, which makes the trained students not get enough opportunities for practical exercise, resulting in their practical ability far from meeting the requirements and difficult to adapt to the needs of enterprises; At the same time, due to the lack of funds and equipment, the training ability of vocational and technical colleges is weak and the training level is low, which makes it difficult to meet the training needs of new jobs, new technologies and new processes. The information communication between schools and enterprises is not sufficient and the combination is not close, which makes it difficult for the trained students to adapt to the needs of enterprises; At the same time, due to the lack of funds and equipment, the training ability of vocational and technical colleges is weak and the training level is low, which makes it difficult to meet the training needs of new jobs, new technologies and new processes[10]. The skilled workers in China are divided into five grades: junior workers, intermediate workers, intermediate workers, technicians and senior technicians. In addition to the technical workers working in government agencies and institutions can enjoy the corresponding economic benefits, the vast number of technical workers employed in enterprises can enjoy the treatment of a certain level of engineering and technical personnel, even if there are relevant government documents, but it is difficult to implement.

There are boundaries of proportion, age, seniority and identity in the evaluation method of skilled talents, and a new evaluation system of skilled talents is not established, which is oriented by professional ability, focuses on work performance and pays attention to professional ethics and professional knowledge level. In the incentive of skilled personnel, most enterprises, especially state-owned enterprises that use compound skilled personnel, have not established an income distribution mechanism to encourage skilled workers in the front line of production and operation to study technical business and strive to improve their own quality[11]. Under the condition of market economy, except for vocational schools in charge of education departments, private vocational schools, vocational schools run by enterprises and vocational colleges sponsored by labor and social security departments are totally dependent on the market, lacking necessary policy support and government financial support.

3. Training Countermeasures of Skilled Talents in Short Supply

3.1 Create a Good Social Atmosphere

Without senior skilled personnel, all new scientific and technological achievements will not be transformed into realistic productive forces. The cultivation of talents with compound skills is not achieved overnight, but a systematic project. Because it is impossible to change the concept of valuing academic qualifications over skills in the current society in a short period of time, the government should first give more positive guidance on policies, give compound skilled talents corresponding academic qualifications, and let senior technical schools develop into higher vocational colleges through merger or reorganization, so that they can be qualified to issue junior college or even higher diplomas. To solve the dilemma of the shortage of compound technical and skilled talents, the whole society needs to care about the cultivation of skilled talents, solve the practical difficulties in vocational colleges, provide a fair upward channel for skilled talents, establish a correct view of talents in the whole society, create a good atmosphere of advocating skills, and make the majority of young people happy to realize their self-worth in their jobs.

3.2 Establish a Long-Term Mechanism of School-Enterprise Cooperation

Vocational education system is the main force to cultivate skilled talents in short supply, and school-enterprise cooperation and work-study combination are the only way to improve the teaching quality of vocational education. While actively commending and publicizing compound skilled talents, the government should also encourage and support social and industrial enterprises to carry out some activities to cultivate compound skilled talents and reward star talents, such as organizing various vocational skills competitions at all levels and regularly organizing skills exchange activities in the same industry, so that they can gain great benefits regardless of their income, fame and occupation, and at the same time, they can stimulate skilled talents to learn scientific and technological knowledge and improve their skills. The government defines the responsibilities, obligations and rights of enterprises to participate in education through legislation, and guides enterprises to participate in vocational education; The industry guides the professional layout of colleges and universities by publishing talent demand reports. The professional competence structure of vocational education teachers is shown in Figure 1.

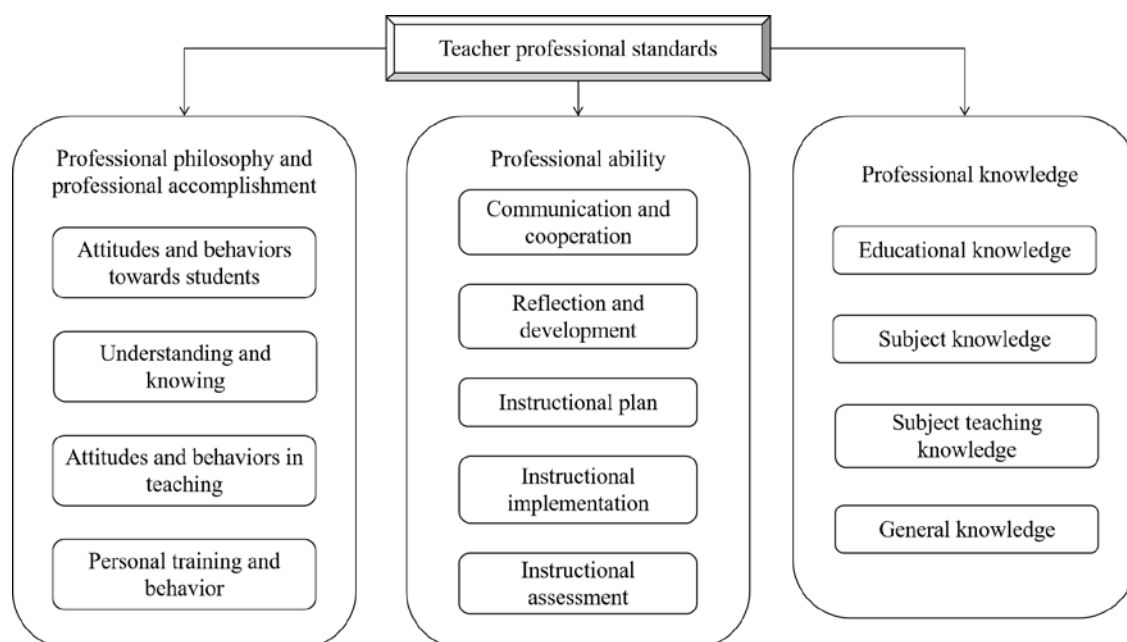


Fig.1 Professional Ability Structure of Vocational Education Teachers

Higher vocational education and some related technical majors in colleges and universities should first identify and define their positions, analyze their strengths and weaknesses by defining market demand and future development, and avoid and overcome their weaknesses and deficiencies, so as to formulate a reasonable talent training plan. Both schools and enterprises share the heavy responsibility of talent training and develop new ways for school-enterprise cooperation. Vocational colleges should dig deep into their potential and take the initiative to create value for enterprises in product research and development, technical consultation and staff training. Enterprises should overcome the old thinking, participate in the training of skilled personnel with the spirit of ownership, and avoid the phenomenon of school-enterprise cooperation in the past.

3.3 Innovative Training Mode for Skilled Talents

Vocational colleges should actively investigate and scientifically adjust the professional structure according to the current situation of regional and industrial economic development and the situation of industrial structure adjustment and upgrading. In view of the current unified and separate pattern of general education and vocational education, it is advisable that the current education department or labor and social security department should be in charge of vocational education within a certain period of time, or a new independent department should be created to co-ordinate the management of vocational education, vocational training and vocational skill appraisal in the whole society. After the formation of this pattern, the proportion of vocational education funds should be determined by the state, just like the current education fund collection policy, in order to support the growth of vocational education and encourage the cultivation of compound skilled talents. The training standard of compound skilled personnel is shown in Figure 2.

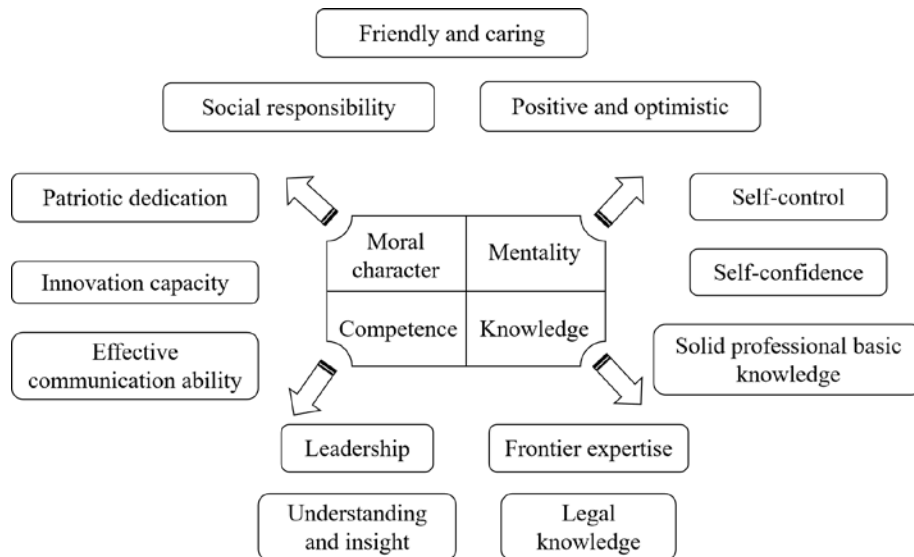


Fig.2 Training Standards of Compound Skill Talents

Enterprises can take the school as the enterprise's talent resource base by running a school jointly by industry and education or independently, provide certain financial support and teacher support for improving teaching conditions, mobilize the enthusiasm of students and teachers, and provide necessary practice sites and equipment for the college. In the talent training scheme, the curriculum system and content are set for jobs, and professional courses are developed based on working process, so as to improve students' comprehensive quality and strengthen their professional skills training.

4. Conclusions

At present, the causes of the shortage of skilled talents in China are complicated, and the contradiction between supply and demand is acute, which involves all aspects of society and affects many industries in the economy and society. The growth of education and the establishment of strategic position of compound skilled personnel need to establish a good social environment. First of all, the government should give more positive guidance on policies, give compound skilled talents corresponding academic qualifications, and let senior technical schools develop into higher vocational colleges through merger or reorganization, so that they can be qualified to issue junior college or even higher diplomas. Vocational colleges should dig deep into their potential and take the initiative to create value for enterprises in product research and development, technical consultation and staff training. Enterprises should overcome the old thinking, participate in the training of skilled personnel with the spirit of ownership, and avoid the phenomenon of school-enterprise cooperation in the past. Enterprises can take the school as the enterprise's talent resource base by running a school jointly by industry and education or independently, provide certain financial support and teacher support for improving teaching conditions, mobilize the enthusiasm of students and teachers, and provide necessary practice sites and equipment for the college.

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References

- [1] Pelczarski K. Talent shortage creating recruitment and retention headaches[J]. Tribology &

Lubrication Technology, 2022(3):78.

[2] Burnson P. APICS addresses talent shortage with supply chain STEM program[J]. Modern Materials Handling, 2017, 72(7):9-12.

[3] Qu Q, Wei Y. Study on Talent Training Mechanisms of Marine Cultural Industry in China[J]. Meteorological and Environmental Research, 2017(05):69-72.

[4] Fantom L. RAS players address talent shortage[J]. Aquaculture North America, 2020(3):11.

[5] Menachery M. Talent shortage in downstream industry[J]. Refining & Petrochemicals Middle East, 2018(10):11.

[6] Krawcke N. Labor Shortage Brings Industry Together to Attract New Talent[J]. Air Conditioning Heating & Refrigeration News, 2019, 266(5):1-1,11-13.

[7] Liang S, Xia H. Employment-oriented private colleges and universities to explore talent training model [J]. Industry and Technology Forum, 2017, 16(16):2.

[8] Huang J, Luo X, Tian P, et al. Analysis of the current problems in the cultivation of applied skills talents [J]. survey of education, 2017, 6(11):2.

[9] Chen X. Contradictions between supply and demand of skilled talents in enterprises and solutions [J]. Modern enterprises, 2021(10):2.

[10] Li F, Zhang F, Pan M, et al. On the echelon construction of skilled talents in automobile manufacturing [J]. auto time, 2020(20):3.

[11] Du X. The path analysis and countermeasures of skilled talents cultivation under the background of high-quality social development [J]. Industrial Innovation Research, 2022(21):3.