

Full length article

The Practice and Exploration of Construction Industry Worker Training and Evaluation

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ABSTRACT

The Central Committee of the Communist Party of China and the State Council have recently announced the "Reform Plan for the Development of Industrial Workers in the New Era," which outlines the general ideas and systematic strategies for the construction and reform of industrial workers in the new era. My nation's vocational skills training has accomplished tremendous things and accumulated a great deal of experience. However, there are still numerous issues. Since 2016, the Guangzhou Housing and Urban-Rural Development Bureau has collaborated with the Guangzhou Urban Construction Vocational College and other institutions to conduct long-term practice and in-depth research in the training and evaluation of construction industry workers, as well as the construction and management of construction industry workers.

1. Introduction

1.1 Research Background

Since the Communist Party of China's 18th National Congress, which focused on implementing the strategy of manufacturing a strong country and improving the overall quality of industrial workers, the Central Committee of the Communist Party of China and the State Council have issued the "Reform Plan for the Construction of Industrial Workers in the New Era," which put forward the overall ideas and systematic plans for the construction and reform of industrial workers. To speed up the government's efforts, the Central Committee of the Communist Party of China and the State Council recently issued three opinions, namely "Opinions on Improving the Treatment of Skilled Workers," "Opinions on Deepening the Reform of the Talent Development System and Mechanism," and "Opinions on Implementing a Lifelong Vocational Skills Training System." Function transformation, deepen the reform of the vocational qualification system, construct a vocational skill level system, improve the assessment system for skilled talents, and build knowledge-based and skilled-based talent for the implementation of vocational skills improvement measures. The army of innovative workers provides excellent support services and fosters a social fashion of magnificent labor as well as a professional environment of excellence.

1.2 Research Objectives and Significance

Improving and perfecting the construction industry workers' skills training evaluation system is a must in order to build the construction industry workers' team in the new era. Not always necessary. This article will begin with research on the evaluation system of skills training for construction industry workers and will present suggestions for the evaluation system of skills training for my country's construction industry workers based on the current situation of China's construction industry workers.

2. Problem Statement

China vocational skills training work has always been focused on the needs of economic and social development, adhered to the service and employment orientation, pioneered and innovated, and forge ahead, achieving great results and gaining a lot of experience. However, the policy system for vocational skills training is not perfect, the social environment is not good, the level and quality of vocational skills training are uneven, there is still a gap between achieving high-quality employment, and there are still many questions when compared to the needs of future economic and social development.

2.1 The vocational training policy system is not yet complete, and policy implementation is lacking.

In my country, vocational training is primarily governed by the Vocational Education Law, the Labor Law, and the Employment Promotion Law. However, there are still gaps in legal protection and policy implementation in current vocational training work, and the supply of vocational training services cannot meet the needs of industrial transformation. The lack of special vocational training laws, as well as the lack of legal protection for construction workers throughout their careers, all contribute to the need for upgrading and rapid technological change. For example, the rights of construction workers to receive training are not strictly guaranteed by law, and the administrative departments responsible for construction worker training are unclear about their responsibilities, with significant regional differences. Because most training is done on the basis of engineering projects rather than individual workers, some workers can get training while others cannot, some workers have been trained multiple times while others have not. Construction workers' continuing education, advancement, and retirement are not legally guaranteed. Workers' skill levels, for example, can be upgraded after training, but their wages cannot. At the same time, the recently issued vocational training policy has yet to be implemented, and system construction is lacking. For example, vocational education promotes "industry-education integration and school-enterprise cooperation," but in reality, "schools are hot, and enterprises are unmotivated." Another example is that while vocational school education for school students is legal, it is difficult to implement vocational training after entering the workforce.

2.2 Inadequate coordination of competent departments, training subjects are autonomous

Currently, the government leads the evaluation of skills training for construction workers, which is carried out by the main body of training and separates training and examination. However, three departments are currently carrying out related skills training evaluation work at the same time. To begin with, the Ministry of Human Resources and Social Security's vocational skill level identification work is primarily carried out by technical schools, businesses, and social training institutions. Second, the Ministry of Education's "1+X" skill certificate evaluation work is primarily carried out by higher vocational colleges. Furthermore, the Ministry of Housing and Urban-Rural Development's vocational skills appraisal work is primarily carried out by schools, businesses, associations, and social training institutions. In fact, the three departments' goals are the same, but their starting points are not. Coordination between the three departments is insufficient, resulting in overlap and even work conflicts.

According to the "Vocational Education Law," training subjects include schools, enterprises, social training institutions, and other diverse subjects, and diverse training methods such as school-enterprise cooperation, integration of production and education, work-for-work, or apprenticeship training are encouraged. Simultaneously, the competent department is implementing the policy of "delegating power, delegating power, and serving," as well as the policy of "whoever trains is responsible." As a result, each training subject is self-taught and self-evaluated, and the training level and quality are uneven.

2.3 Inconsistent evaluation standards and disconnection between training content and actual work

Because vocational education involves at least three administrative departments, for example, vocational schools are managed by the Ministry of Education, technical schools are managed by the Ministry of Human Resources and Social Security, and vocational training is managed by the Ministry of Housing and Urban-Rural Development. The three departments each have their own policies and systems, and the evaluation standards, evaluation content, and evaluation methods are not all the same.

According to the "Vocational Education Law," vocational education should be guided by industry, and competent industry departments (such as the Ministry of Housing and Urban-Rural Development) should have a better understanding of industry development and enterprise needs and should guide and supervise vocational education. However, the industry authorities have no supervisory, let alone binding, power over vocational school education. At the same time, due to insufficient practice of integrating production and education in schools, deviations in the orientation of student training (partial management), and social discrimination against skill work, the training content is out of touch with the actual work, and the training process emphasizes theory over the practical operation.

2.4 The social environment is unfavorable, and the training initiative and enthusiasm are not high

For starters, construction workers do not have a high social status. The current concept of "emphasizing academic qualifications while ignoring ability; emphasizing theory while ignoring operation" has not been fundamentally reversed from the perspective of the entire society. Skilled work is not appealing to young people and students. Not particularly motivated. Second, workers in the construction industry do not have adequate social security. At the moment, most construction companies do not sign long-term labor contracts with their employees and do not provide social security. Construction workers' skill level improves after training, which is not linked to their salary package. The administrative department lacks supporting measures for effective construction worker utilization following training. Furthermore, there is a lack of understanding about vocational training. Some businesses lack awareness of vocational training, lack responsibility, fail to play the primary role, and lack initiative and enthusiasm. Workers' right to choose and participate was not fully reflected and guaranteed in the training. Most of them are government organizations, and workers are passively accepted, which affects workers' enthusiasm for government-subsidized training.

3. Practice and exploration of training and evaluation of construction workers (taking Guangzhou as an example)

Guangdong Province, as a large construction province, is more pressing for the transformation and upgrading of the construction industry, as well as the needs of construction workers. Since 2016, the Guangzhou Housing and Urban-Rural Development Bureau has collaborated with Guangzhou Urban Construction Vocational College, Guangzhou Construction Group Co., Ltd., and Guangzhou Construction Industry Federation, among others, to make long-term efforts in the training and evaluation of construction industry workers, as well as the construction and management of construction industry workers.

3.1 Build a standardized training system to improve the overall quality of industrial workers

3.1.1 Establish a training mechanism and build a construction industry worker training network

Carefully compare the policy requirements for the construction of the industrial workforce, closely monitor the actual development of the industry, and based on the current situation of the construction workforce, strengthen macro guidance and top-level design, and establish the Guangzhou Municipal Bureau of Housing and Urban-Rural Development, and the Guangzhou Municipal Construction Industry Management Service Center., the grass-roots housing service center will also be established.

Innovatively implement measures such as skill improvement, teacher guarantee, question bank collection, mechanism construction, rights protection, and caring actions; explore the use of credit evaluation methods to guide and encourage the selection of construction craftsmen and skilled workers on project sites; and publish the "Guangzhou City Builds High-quality Projects to Promote Urban and Rural Construction High" "Quality Development Work Plan", which proposes to implement the aforementioned measures.

3.1.2 Establish training standards and standardize the skill improvement system for workers in the construction industry

It is committed to addressing the issue that the current construction industry skills assessment standards are uncoordinated with construction site requirements, and it coordinates the development of teaching programs for occupations such as "masonry workers, steel bar workers." The National New Occupational Work Catalogue will release the new occupation of "Assembly Construction Worker" in 2020, and the "Prefabricated Building Construction Training Course" will be compiled, covering the main types of assembly construction, such as component assemblers and grouting workers. The content includes course standards, teaching plans, assessment standards, assessment question banks, etc., improves the construction worker skills training assessment organization and implementation system, and establish occupational skills standards and evaluation norms for construction industry workers that emphasize practical skills, construction knowledge, teamwork, and other factors.

3.1.3 Build demonstration bases and gradually expand the scale of demonstration and cultivation bases

Construct a government-school-enterprise cooperation platform and a demonstration base for the cultivation of eleven types of construction workers, including prefabricated building component assemblers and grouting workers. Guangzhou has established mature construction industry worker training demonstration bases that have carried out a substantial amount of skill development work. They are the Guangzhou Urban Construction Vocational College demonstration base and the Guangzhou Construction Group Co., Ltd. demonstration base. The two bases train over 10,000 individuals annually, with many qualified trainees entering the Pearl River Delta region. The demonstration base, Guangzhou Panyu Technical Vocational College training base, Guangdong Construction Machinery Co., Ltd. training base, Guangzhou Construction Engineering Vocational School training base, etc. The Standard mandates pre-construction expenditures, and the scale of foundational construction is on the agenda.

3.1.4 Improve the quality of demonstration training projects and invest more in the cultivation of construction industry workers.

Since 2017, Guangzhou has implemented the construction industry worker demonstration training project, established a government-sponsored school-enterprise undertaking mechanism, and assisted construction enterprises in establishing construction worker cultivation partnerships. More than six hundred trainees have been trained in more than twenty training shifts covering six types of work, including component assembly workers, grouting workers, masonry workers, inlay workers, steel bar workers, and survey workers. Implementing characteristic incentive measures to support the employment or promotion of relevant students to take on leadership roles in construction site operations, as well as providing certain remuneration and grading incentives, has had a positive effect on the market, transforming these skilled and well-educated construction industry workers into Guangzhou's best and brightest. The "igniting force" of the city's construction industry workers. In addition, Guangzhou City has invested more than four million yuan annually since 2018 to conduct safety experience training activities for construction site employees. Equipped with VR software equipment and organized development of safety awareness education videos, more than 50,000 workers on Guangzhou construction sites have been trained, thereby enhancing their construction safety awareness.

3.1.5 Select tree construction artisans, and organize construction artisan skill competitions on a regular basis
The Guangzhou Construction Craftsman Skills Competition has been regularly held with high standards since 2016. Currently, 398 Yangcheng construction craftsmen have been chosen in six competitions, which has elicited positive responses from the industry and society. The first Yangcheng construction craftsman, Li Zhifang, was selected as a model worker of the national housing construction system, the deputy chief referee of the third Yangcheng Construction Craftsman Skills Competition, and a speaker at the 2017 "World Cities Day" forum. Tian Zhonggui, the third Yangcheng construction craftsman from the China Construction Fourth Bureau, progressed from a front-line worker to the assistant chief referee of the fourth and fifth ring competitions. The company made him an employee and aided in the development of Tian Zhonggui's innovative work. The company's annual capital savings and profits exceed six million Chinese Yuan. In the Guangdong Vocational Skills Competition for steel workers, the three steel bar apprentices he trained and guided for the company won first, second, and fifth place. These exemplary cases have significantly increased the sense of accomplishment among construction industry workers, as exemplified by construction craftsmen, and fostered an environment conducive to the development and growth of Guangzhou construction industry workers.

3.2 Implement a long-term service mechanism to enhance industrial workers' sense of gain

Develop an information platform for the construction industry in Guangzhou and implement systems including special account management for migrant workers' wages in the engineering construction industry, real-name management, and wage security. To date, Guangzhou's construction projects have amassed a total of 1.9155 million real-name registered workers, and 47.28 billion yuan have been paid in wages via the platform. Provide construction workers with online training, job search information, construction craftsman development tracking, and other convenient services; combine construction worker data with daily supervision services; innovate and establish an early warning mechanism; and protect the legitimate interests of industrial workers with regard to compensation, skill improvement, employment information,

3.3 Investigate the establishment of a comprehensive construction industry training mechanism

Further, clarify the positioning of the government and the market, adhere to the principle of "government promotion, market leadership, and social co-construction and sharing," and broadly mobilize the forces of market players such as construction enterprises and construction vocational colleges, give full play to the role of industry associations and industry management bridges, and promote the development of the construction industry. Industry resources and construction site requirements are tightly intertwined to improve the skills and provide quality training for construction industry employees. From the perspectives of "cultivation, assessment, use, incentives, and guarantees," a comprehensive mechanism and system for training industrial workers have been established. Guangzhou Municipal Bureau of Housing and Urban-Rural Development issued "Implementation Opinions on Accelerating the Cultivation of Guangzhou Housing Construction Industry Workers (Draft for Comment)" in July 2021. The supporting implementation measures include ten distinct policies, such as the establishment of a database of skilled workers and the application of incentives.

The first is to encourage bidders to choose bidders with skilled workers (particularly self-skilled workers) and to include skilled workers in bid considerations.

The second step is to compare the real-name management and other data of the Guangzhou Construction Management Platform, conduct supervision and inspections regarding the use of skilled workers to perform on-site operations for enterprises that have invested in skilled workers in the winning projects, and record the pertinent information in the comprehensive integrity evaluation or credit records of enterprises and individuals.

The third objective is to establish and continuously enhance standards for the on-site staffing of skilled workers in accordance with the nature, scope, and implementation phase of the project. According to the construction characteristics of the project, support the enterprise in the construction design organization, synchronously configure the proportion of skilled workers, and optimize the team collocation, take the lead in piloting the prefabricated housing construction project, summarize the implementation experience of the pilot project, and extend it gradually to the prefabricated housing construction project in the city. In the concluding coverage of the city's housing development projects.

The fourth objective is to gradually establish a market-oriented salary information release mechanism for skilled workers and to direct construction companies to link the skill level of skilled workers with incentive policies, such as salary, so that those with more skills and those who work more will receive higher compensation.

Conclusion

To speed up the government's efforts, the Central Committee of the Communist Party of China and the State Council recently issued three opinions, namely "Opinions on Improving the Treatment of Skilled Workers," "Opinions on Deepening the Reform of the Talent Development System and Mechanism," and "Opinions on Implementing a Lifelong Vocational Skills Training System." Thus, this paper has suggested a comprehensive construction industry training mechanism, implementing a long-term service mechanism to enhance industrial workers' sense of gain, select tree construction artisans, and organizing construction artisan skill competitions on a regular basis, improve the quality of demonstration training projects and establish training standards and standardize the skill improvement system for workers.

References

Dong He. Status Quo, Reasons and Improvement Suggestions of "New Generation" Migrant Workers Training [J]. China Adult Education, 2021(16):77-80.

Huang Yuanli. Innovating the system and mechanism to cultivate the construction industry workers [J]. Architecture, 2017(19):36-39

“It is time to set sail. China Vocational Training Industry Research Report [C]//”. iResearch Consulting Series Research Report (2021 Issue 3), 2021:535-605.

Jiang Dayuan. Exploration and current affairs of the construction of China's modern vocational education system [J]. Shenzhou Scholars, 2021(11):10-15

Jiang Xiaoyun. Exploration and practice of construction of new construction industry workers [J]. Architecture, 2021(11):50-52

Liao Huan. Research on the impact of training on the industrialization of migrant workers in the construction industry [D]. Chongqing University, 2018

Mao Qi, Gong Zhenhua, Chen Tingting, Zhang Chong. Research on the Evaluation System of Vocational Skills Training [J]. Shanxi Youth, 2021(18):28-29.

Wortley, D. J., Lai, P. C., (2017) The Impact of Disruptive Enabling Technologies on Creative Education, 3rd International Conference on Creative Education, Mar 3-4.

Yu Yang. 2021. Establishing an evaluation system for vocational skills training to cultivate workers in the construction industry in the new era [J]. Architecture, (09):40-41.

Zhou Linni. 2019. Exploration on the training methods of construction workers in traditional construction enterprises [J]. Today's Fortune (China Intellectual Property), (09):74-75.

Zhu Xuemei. 2011. China's Vocational Education System: Problems and Development Trends [J]. Vocational and Technical Education, 32(22): 23-25.