The Core Technical Personnel Education View of the Communist Party of China Under the New Situation

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Abstract: Since the reform and opening up, my country's science and technology has made great progress, and it has set new requirements on the structure and specifications of technical personnel. In terms of educational practice guidance for cultivating core technical talents, the Communist Party of China has formed a technical education ideological system, which is derived from the inheritance of the technical education ideas of Marx, Engels, and Lenin and the technical education ideas of Chinese traditional culture. After the 18th National Congress of the Communist Party of China, the core technical talent education concept of the Communist Party of China has a new development connotation. Under the new normal of economic development, the development of China's economy has entered a period of slowing growth, adjustment and optimization of industrial structure, and innovation-driven strategic transformation. The all-round successful transformation of these contents will inevitably be inseparable from the support of the creation of a new type of high-quality technical and skilled labor. On the basis of Xi Jinping's socialist technical personnel education thoughts with Chinese characteristics, the new era elements of "innovative spirit" and "craftsman spirit" have been injected to form the core technical personnel education concept of the Communist Party of China under the new situation.

Keywords: Communist Party of China, Core Technical Personnel, Technical Education

1. Introduction

Social practice activities are often guided by certain theories, and at the same time, social practice promotes the development and renewal of theories. With the continuous improvement of my country's core technology since the reform and opening up in 1978, the demand standard for technical talents has changed, and the requirements for technical talent training specifications also need to be changed. On this basis, the Chinese Communist Party's core technical personnel education thought has new connotations, and under the new ideological connotation, there has also been new development in guiding China's technical education.

2. Theoretical Basis of the Chinese Communist Party's Core Technical Personnel Education Views

Technical education, which aims to impart technological knowledge and give people a scientific method of training practical activities. The educational thoughts of the core technical talents of the Communist Party of China are inseparable from the inheritance and development of Marx and Engels' technical education ideology, Lenin's technical education ideology and Chinese traditional cultural technical education.

2.1. Marx and Engels' Theory of Technocal Education

Marx and Engels' technical education theory is mainly reflected in two main aspects: "technical education thought of comprehensive development of labor capacity" and "combination of education and productive labor". In order to overcome the problem of the one-sided development of people under the social division of labor, Marx proposed to use "knowledge of science and technology related to machine operation, understanding of basic principles of production, and application of production tool skills" as the main content of technical education practice. [1] Marx and Engels’ thoughts on technological education are a kind of
"comprehensive labor ability education" for cultivating all-round development of newcomers, and affirmed and insisted on the application of the theory of "combination of education and productive labor" in technological education thought. Engels criticized Duhring's educational point of view, and also proposed that the comprehensive development of education content should include technical education, and be related to intellectual education, moral education, sports, etc., so as to ensure that the educated can receive more "technical training" and "science education practice". [1]

2.2. Lenin's Technical Education Ideas

Lenin is creatively developing Marxist technical education ideas, including the technical education ideas against premature specialization, raising comprehensive technical education to the level of the party platform, and to the conditions for the overall development of people. When Lenin opposed premature specialization, he emphasized that the content of comprehensive technical education should be integrated into the basic knowledge principles and skills related to modern large-scale production. In addition, Lenin focused on cultivating "handcraftsmen" with comprehensive technical literacy, focusing on cultivating laborers with communist ideals, and included comprehensive technical education in the party platform many times. Combined with the actual situation of the Soviet Union at that time, he saw the development of large industries for new labor. [2] The needs of the person and the necessity of the all-round development of man, scientifically combine direction and reality. [3]

2.3. Technical Education Ideas of Chinese Traditional Culture

The educational ideas formed in the traditional culture of our country are extremely rich, and there are many technical education ideas that are very representative such as Mo Zi, Fu Xuan, and Yan Zhitui. The Communist Party of China has inherited the ideas of "unification of sages and skilled people" and "semi-cultivation and half-reading", and formed a new concept of technical talent education.

Mo Zi first proposed the idea of combining mental and physical labor, that is, the unification of the sages and the skilled. In the practice of technical education, it is even more important to combine theory with practice, not only to make disciples understand the working principles and scientific principles of manufacturing technical artifacts, but also to enable disciples to acquire skills in manufacturing technical artifacts. [4] Scholars such as Fu Xuan and Yan Zhitui realized the importance of technical talents. The "half-farming and half-reading" thought also has a certain influence on the Chinese Communist Party's technical education thoughts. For example, Liu Shaoqi proposed half-work (agricultural) and half-reading technical education thoughts after the founding of New China. [5] Part of the theoretical basis is derived from this. The culture of farming and reading embodies the spiritual essence of linking theory with practice. There is a new interpretation of this in the Chinese Communist Party's technical education thinking. "Cultivation" is more related to social practice. [6] The understanding of "reading" is in addition to learning general education knowledge, technological knowledge, technical ethics, etc.

3. The Core Technical Personnel Education Thought Since the 18th National Congress

Since the 18th National Congress of the Communist Party of China, the Chinese Communist Party with Xi Jinping as the core have systematically answered from theory and practice what kind of socialism with Chinese characteristics they insist on and develop in the new era, and how to uphold and develop socialism with Chinese characteristics. Under the new normal of economic development, China's economic development has entered a period of slowdown in growth, industrial structure adjustment and optimization, and innovation-driven strategic transformation. All-round and successful transformation of these contents will inevitably be inseparable from the support of innovative and high-quality technical and skilled workers, and from the continuous development of the party's core technical talent education ideology.

3.1. Xi Jinping's Thinking on the Education of Socialist Technical Personnel with Chinese Characteristics

Since the 18th National Congress of the Communist Party of China, party and government leaders have attached great importance to technological innovation and the cultivation of talents for scientific and technological innovation, and have put forward a series of profound and rich ideas about technological education.

Under the new normal of China's social and economic development, after the 18th National Congress of the Communist Party proposed "accelerating the development of vocational education", in 2012, Xi Jinping emphasized the need to "highly value and accelerate development." "deepening system reform and innovating vocational education models of all levels and types" and "holding firmly on the direction of school development for service development and employment promotion" not only have strategic continuity, but also incorporate new era connotations, and industrial upgrading. The times of technological progress, innovation and entrepreneurship, and poverty alleviation are more suitable. In the same year, Xi Jinping pointed out that when he heard the report from the Ministry of Science and Technology, the strategy of "rejuvenating the country through science and education" needs to be closely linked with education. "Science and technology education should have a good division of labor and cooperation, and at the same time, we must constantly improve a series of policies for the cultivation, use and management of innovative talents." Therefore, technical
education should constantly improve a series of policies on innovative technical personnel. Xi Jinping emphasized the need to accelerate the development of vocational education and training at many important meetings and inspections. In 2014, Xi Jinping made clearly at the National Vocational Education Work Conference the importance of developing vocational education, working principles, fundamental tasks, school direction, support priorities, party and government responsibilities and other important issues, reflecting the new situation of the Chinese Communist Party's technical education thinking. The Party and the country ideologically proposed that we should attach great importance to and accelerate development of vocational education, which has become the working principle of the development of vocational education in my country in the new period. The cultivation of large-scale high-quality laborers and technical skills requires the support of "innovating vocational education models at all levels" to improve the development of vocational and technical education. Persistence in the guarantee of talents should be provide to the goal of achieving the two centenary goals and national rejuvenation. In general, Xi Jinping's guiding ideology on the development of vocational education is the most comprehensive and rich instruction since the reform and opening up, and it has been mentioned to the height of the development strategy of "rejuvenating the country through science and education" to promote its development. In March 2015, Zhang Dejiang pointed out at the National Enforcement Inspection Conference on Vocational Education that "vigorously developing vocational education is an objective need to accelerate the transformation of economic development mode and actively adapt to the new normal of economic development. "Vocational education is better adapted to economic and social development." In May 2015, Premier Li Keqiang in the "Vocational Education Activity Week" issued instructions "accelerating the development of modern vocational education" and "realizing the leap-forward development of vocational education" to provide a high level for improving the level of manufacturing in China. In June of the same year, Xi Jinping pointed out during his inspection in Guizhou that "vocational education is an important part of China's education system and a basic project for cultivating high-quality and skilled talents. It is necessary to work together to make it better." March 15th, 2017 Tang Tao, deputy minister of the Ministry of Human Resources and Social Security, proposed "vigorously develop technical education" to reserve skilled workers and highly skilled personnel with innovative capabilities for the implementation of the 13th Five-Year Plan.

In recent years, with the adjustment of my country's industrial structure and the urgent need to move from a "manufacturing country" to a "manufacturing power", the demand for the technical knowledge and skills of skilled workers has continuously increased. Especially with the proposal of "Made in China 2025", the integration of information technology and traditional manufacturing will lead to the acceleration of product replacement, and the demand and requirements for skilled workers will continue to increase. The decision of the Central Committee of the Communist Party of China in 2013 on several major issues of comprehensively deepening reform put forward "deepening system reform and innovating vocational education models at all levels and types", "firmly grasping the direction of school development for service development and promoting employment", and the development of the new era meets the needs. In 2013, Xi Jinping's speech during the inspection work of the Chinese Academy of Sciences pointed out that the technical and scientific personnel in our country are lacking in level and structure, and proposed engineering and technical personnel as the backbone of the scientific and technological team. However, there are production and innovation practices in the process of training engineering and technical personnel. The problem of disconnection is the lack of engineering ethics responsibility education. In January 2015, the Ministry of Education issued the "Outline of Moral Education in Secondary Vocational Schools (Revised in 2014)", which fully reflects the new requirements and guidance of the party and the country on the morality of technical talents since the Eighteenth National Congress, and attaches importance to secondary vocational colleges. Innovative measures adopted in the moral education practice of cultivating technical talents. At this point, the Chinese Communist Party's technical education thinking is more comprehensive.

3.2. "Artisan Spirit" and "Innovation Spirit" Are Integrated into the Current Technological Education Ideas of the Communist Party of China

In the context of the new normal of China's economy, we need to re-examine the relationship between technical education and technical talents if we are to achieve innovation-driven development. " Artisan spirit " and "Innovation Spirit" are the factors to enrich the development of technological education ideas.

The artisan spirit, namely craftsmanship spirit is the inheritance of the craftsman tradition and its spiritual ideas within a certain range in the past in a specific way. It is the spirit of the practice subject to constantly improve the quality of artificial objects, continuously improve methods and tools, and improve the quality of products and services for the society. In March 2016, the "artisan spirit" was written in the government work report. In December of the same year, Premier Li Keqiang proposed: "We must promote the artisan spirit and improve the level of manufacturing in China." The "artisan spirit" is concentrated in the technical practice process with technical talents as the main body, so as to improve the level of China's industrial manufacturing. In the new stage, the Communist Party of China proposes to introduce the "artisan spirit" into the technical education ideology, which has a certain theoretical basis. The "artisan spirit" is integrated into labor, and the main body of labor is "human". American sociologist Richard Sennett pointed out that "people" in the "craftsmanship activity" has a basic and lasting human impulse just to get things done, people who
focus on practice may not be motivated by instrumental rationality. [7] However, the self-discipline and input of the "artisan" in the "artisan spirit" are often constrained by various social and economic conditions, such as failure to provide the most advantageous tools or the factory does not attach importance to the pursuit of quality. [8] Engels pointed out in his writings that workers in the era of machine industry are not only different from slaves and serfs, but also from handicraftsmen and manual workshop workers. [8] Although the "artisan spirit" has been described in ancient times in the Book of Songs as "successful as learning, as sculpting as grinding", Zhuangzi can use the artisans "transporting as a wind" and "Pao Ding Jie Niu", etc. An analysis of the "artisan spirit" also requires an analysis of the epistemological characteristics of how artisans strive for excellence in artificial objects. [9] In the book "Technology Sociology," Japanese sociologist Shigeaki Kurashi used Wright Miltz's ideal character of six aspects of craftsman to analyze the spirit of craftsman. The ideal personality of these six aspects mainly refers to: the craftsman's body and mind are devoted to products and technology to form an internal relationship, the product and the producer have a certain psychological combination, and the improvement of the technical level will promote human's own combination of development, labor and recreational education is consistent, and labor becomes the only motive of the craftsman's life. [10] From these six aspects, it can be seen that embodying the "artisan spirit" necessarily involves the relationship between the artisan's subject, artifacts, labor, and objects of use, and is analyzed and expressed from a spiritual level.

In the modern high-precision machine industry, workers with the "artisan spirit" are becoming more and more important. In other words, in today's manufacturing industry, high-precision machinery production can often determine whether products can be produced independently or not. The body of excellence carried by the spirit is often able to manually polish the products with the highest precision. Marx emphasized that "all-round development of the individual" can also exist in the process of manufacturing goods, and the relationship between human self and society has been developed in the process of manufacturing goods. In the case of insufficient technical ethics and social responsibility of contemporary technical talents, the proposal of the craftsmanship spirit is conducive to providing corresponding technical personnel support for enhancing China's manufacturing level and accelerating the construction of a strong manufacturing country. If it is said that Germany, Japan, Switzerland and other countries have promoted the improvement of product quality and the establishment of product brands through the cultivation of the craftsmanship spirit, then China's current return to the craftsmanship spirit is helping economic structural adjustment and industrial transformation and upgrading meaning. "Craftsman spirit" manifests in the pursuit of the spiritual concept of the worker's physical and mental unity, excellence, and spare no effort in the design, quality, skill, and production of products or services. The connotation lies in perseverance and dedication, and is the industrial spirit of striving for excellence and pursuing high quality. Under the new economic normal, manufacturing and service industries are being integrated. The "artisan spirit" is no longer limited to the "artisan activities" of "artisans". Scientists and engineers also need artisan spirits, while manufacturing powers need the support of independent innovation spirits. Therefore, the "artisan spirit" should also incorporate the spirit of innovation into the connotation as the times evolve.

The contemporary "artisan spirit" has a direct connection with the new production organization form of society. It must combine the current trend of the integration of the Internet and traditional manufacturing, the importance of innovation and practice, and the freedom of production collaboration. Only by meeting the real needs of the times and in line with the direction of the future can we return to the traditional connotation and incorporate the new era representation and sustainable development. In addition to the basic meanings of "striving for perfection" and "high quality" in the traditional connotation, it is enriched by the current theme of the new era. The revitalization of China's physical manufacturing industry and the integration of information technology and the improvement of economic living standards have led to the continuous increase in the demand for quality products and services in consumer society, the calling and return of professionalism, etc. The characteristics of these times can be passed through the "artisan spirit" to be reflected. The "craftsman's spirit" refracted has been given a new symbol of the times, giving birth to new meanings including the spirit of innovative practice. To realize the independent creation of core technology, it is necessary to incorporate the practical guidance of the technical education ideology of "artisan spirit" and "innovative spirit". The core technology is time-based. It is based on the accumulation of past technologies, and is also represented by the current specific technical products. At the same time, it also has a certain degree of predictability for future technologies. These characteristics stipulate the creativity of core technologies. There needs to be a state of constant innovation. Therefore, the technical education ideology also needs to incorporate the "spirit of innovation" to provide instruction for the subject of technical practice.

The integration of innovative spirit is also conditional on the rapid development of technological progress, high-quality and diversified social needs as a driving force, and the uncertainty of the rapidly changing future requires innovation as a solution. The spirit of innovative practice is as a spirit of the times, integrated into the characterization of the traditional factors of the “artisan spirit”.

Under the guidance of the craftsman spirit that incorporates innovative elements, it has an important role to train technical talents with strong innovation ability for my country's economic transformation. [11] Achieving independent innovation in core technology also requires craftsmanship. No matter what craftsmanship you are engaged in, if you want to get things done, you must have a reliable judgment on the mechanics of this craftsmanship. [12] The experience of making high-quality products is contained in the master's
own tacit knowledge. With the improvement of skills, the content of a person's repeated practice will change, and workers can continuously improve and innovate their skills, which is inseparable from the discovery of new problems when solving old problems. Training skills through practice also suffers from some resistance from modern tools. For example, people use machines incorrectly, or sometimes machines will deprive people of opportunities to improve in repeated exercises, and large-scale use of intelligent machines. To some extent, people's understanding and repetitive and operational learning processes are cut off, which in turn damages people's thinking ability. [13] Most of the teaching of production technical artifacts and skills is reflected in the practical process of "knowledge knowledge" flow. [14] The mastery of skills is more a process of internalization, a process of transforming into tacit knowledge, and it also means developing a complex set of behavioral programs. With the improvement of skill level, the interaction between self-consciousness and dominated by tacit knowledge is more and more continuous, and explicit consciousness also highlights the role of criticism and correction. Therefore, being comfortable with the existing skills will forget the higher standards. Only by maintaining the original impulse to keep improving can the workers make progress. [15]

4. Conclusion

The cultivation of core technical talents focuses on technical education. Technical education aims to impart technical knowledge and give people training and practical activities in a scientific way. [16] Since the 18th National Congress of the Communist Party of China, party and state leaders have attached great importance to technological innovation and the cultivation of talents for scientific and technological innovation, and have put forward a series of profound and rich ideas about technological education. Under the new situation, the Chinese Communist Party's core view of technical talents is conducive to the reorientation of training targets for technical talents under the new normal of economic development in China.

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