

Research on Basic Factors of Present Vocational Education System Construction in China

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Abstract: To build the modern vocational education system is the inevitable result of the China's social and economic development as well as a certain historical stage of vocational education. This article, analyzes the basic factors effecting China's present vocational education, sorts out a certain references for a modern vocational education system.

Keywords: China; Modern Vocational Education System; Status Quo; Basic Factors

The starting point of current vocational education reform and development in China is to clarify the following situation.

Firstly, mutual converge between vocational education and higher education. As well as the mutual penetrate of adult education and vocational education. Additionally, modern vocational education system should adapt to the economic and social development. In order to achieve this, vocational education must in close connection with employ market, and comprehensively contained the labor categories. Also, the internal parts of vocational education system should be well-structured together. Furthermore, in order to facilitate the mutual communication between vocational and ordinary education in China, it should be according to the inherent law of the marketing economy conditions and requirements.

1. The background to construct China's modern vocational education system

1.1 The origins of China's vocational education

The modern vocational education in China started in the 1860s, within the westernization movement of Qing dynasty. In order to meet the needs of westernization industrial development, the government put forward the "traditional Chinese values aided with modern western management" policy. It tried to train the technical personnel through establishing technical schools. Some reforms were also carried in the field of education. Zuo Zongtang³

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established Technique Training School of Foochow Warship Manufacturing Bureau in Fujian province 1866. And Zeng Guofan⁴ set up the Jiangnan Manufacturing Bureau in Shanghai 1867. They were dedicated to cultivating talented person in shipbuilding; driving technology and machine manufacture, which known as the "enterprise education" at that time.

In January 1904, (it is according to the Gregorian calendar, the lunar calendar is in 1903) the government of late Qing dynasty enacted the Kui Mao Education System, which included enterprise education in the school education system officially. Then vocational schools can be divided into three levels, which can be shown as follow: senior, junior and elementary. It is not only paralleled with the general education system, which also involved above three levels; but also similar with the double-track system in some western countries today. Furthermore, the vocational education at that time penetrated into the field of agriculture, industry and merchant. From then on, practical skills training were included into the school education system.

The government in Beijing promulgated Ren Xu Education System in 1922 (also called six-three-three schooling system), the new school system after Kui Mao. And the enterprise education changed its name to vocational education. This time vocational schools can be divided into two categories. One was professional vocational education institutions, such as vocational schools, specialized schools and professional working skills training schools. The other was the non-independent vocational education institutions that merged together with the general secondary schools, for example, vocational courses were set for senior elementary school students, and in addition, all kinds of skill lessons were set in junior high school. All vocational schools adopted flexible education system; so the length of schooling is unfixed and students can decide how long they would stay at school by themselves. Since then, to strengthen and establish vocational education system has become the focus pursuit of vocational educators. Therefore, vocational education develops along with economic, scientific and technological progress and it is the very start of its future development.

1.2 The start period of vocational education system in China

In 1985, the government of new China implemented *The Decision on Reform of the Education System* in which figured out a well structured system of vocational education should be built up. And it should be a system which includes junior to senior level, meet the needs of industrial structure and communicate well with the general education system as well. This is the beginning for official documents to promote the system construction of vocational education. Starting from this time a batch of vocational and technical schools developed. And vocational education system has been attaching importance throughout the country.

In 1993, the *Chinese National Education Reform and Development of Long-term Planning Programs* required that vocational schools of various levels should actively adapt to the local development. And meet the needs of the socialist marketing economy as well. It also promoted the employment training policy and suggested vocational and adult education should be mainly

⁴ Zeng Guofan is a Chinese official spokesman in Qing Dynasty.

rely on the industry, enterprises, institutions and other social organizations and set up joint schools. This is a new level to understand vocational education, which offers more freedom on school running and management in China.

In 1996, *National People's Congress published the Vocational Education Law of the People's Republic of China*, in which illustrated the important status of vocational education in law. Also, Levels of Chinese vocational education system has been cleared in the law. It can be divided into primary vocational education, secondary vocational education and higher vocational education, those are respectively in charged by primary, secondary and higher vocational schools (some higher vocational colleges also guided by general education institutions) which marked the formal establishment of Chinese prototype of vocational education system.

In 1999, the central party committee and the state council published the *Decision of Deepening Education Reform and Comprehensively Promote Quality Education for All-around Development*. It pointed out that the structure of the existing education system should be adjusted. And much importance should be attached to higher vocational education. It should be achieved through expanding the scale of high school education. Moreover, in the third national education conference which held in June of the same year further stated the functions to develop vocational education, detail information show as follow:

Firstly, the scale of senior stage of vocational education should be enlarged. Actively promote the high school education which including higher general education as well as higher vocational education. Thus, to provide a variety of learning opportunities for junior high school graduates.

Secondly, in the aspect of developing higher vocational education, it puts forward that the existing employee university, adults' colleges should be reorganized and changed gradually into vocational and polytechnic universities.

Thirdly, the universities in general education system were encouraged to cooperate with enterprise to set up vocational and technical institutes.

Fourthly, all levels of governments were pushed to take part in the action of establishing comprehensive and community college through systematically management of the education system.

At the beginning of the 20th century, a large amount of colleges and universities were set up under the guidance of the policy. In this period vocational education experienced high speed development. The number of students in vocational colleges and schools increased dramatically, that makes the vocational education rivals with ordinary education somehow. The status of vocational education has been further clear and ascends.

1.3 The development of modern vocational education system in China

In 2002, the state council came out the *Decision on Promoting the Occupational Education Reform and Development*, in which cleared the five goals of vocational education development.

First, strive to build up a modern vocational education system that adapt to the socialist market economic system, and closely combined with market demands as well as labor employment within the tenth five-year developing plan. Besides, it is committed to establish a well-structured, flexible, independent and with characteristic modern vocational education system. Additionally, the documents requires the officials attach great importance to the reform and

development of vocational education, and put forward the vocational education is not only an important part of Chinese education system, but also the important foundation to promote the national economic and social development. That is the first time for the government to clarify the concept of modern vocational education system in file.

In June 2004, the first session in the new century titled as National Vocational Education Conference was held, and marked as a great event in the developing history of vocational education in China. The education ministry and other seven ministries jointly published the documents named *Several Opinions on Further Strengthening the Vocational Education*, through which established the system of vocational education joint conference between different ministries.

In November 2005, the second session of national vocational education was held in the new century. It emphasizes that the development of vocational education is as the important foundation of economic and social development, as well as strategic focus of education system. Furthermore, it puts forward the idea to further establish the modern vocational education system with Chinese characteristics, and specific methods to achieve the target as well.

In 2010, the Chinese central committee of the communist party state council promulgated the *National Medium and Long-term Education Reform and Development Plan Outline (2010-2020)*, which highlighted the higher vocational education, and designed the blueprint of the construction for higher vocational education system. It strengthened that vocational education must face the whole society and benefit anyone. Also, it stressed vocational education should strive to cultivate the comprehensive ability of students which included great personality, professional skills and employment ability. And it planned that, by 2020, to form a modern vocational education system that adapt to the transformation of economic development patterns, match the industrial structure adjustment and embody the life-long education concept. Furthermore, the plan means the secondary and higher vocational education should realize coordinated development.

In June 2014, the state council held the third session of national vocational education, during which the six departments of education ministry jointly issued the Document *Modern Vocational Education System Construction Plan (2014-2020)*. And it clearly stated the target of the next period, which is to accelerate the guiding ideology, basic principles, goals, tasks and policy measures of the development in modern vocational education. Besides, it puts forward to speed up the construction of modern vocational education system.

It calls for the overall development of vocational education at different levels, the government should lead a group of general colleges and universities gradually transfer into vocational colleges and universities. Moreover, positively develop the continuing education and strengthen the communication between ordinary education and vocational education. With the purpose of unblocked rising channel from secondary vocational education to vocational college education, and vocational college education to technical universities. As well as to provide diversify choice for students, and to build the overpass for talents cultivation. By 2020, we should form a modern vocational education system with following characteristics. Firstly, meet the needs of development; secondly, teaching closely combined with production; thirdly, secondary vocational converges with higher education; fourthly, choices for vocational

education and ordinary education is fully free; fifthly, reflects the lifelong concept of education; at last, embody with the Chinese characteristics and meet with the international standards. Furthermore, the document put forward that by the year 2020, Chinese modern vocational education system should be built. This is the first time that China has the top-level design for promoting the development of Chinese modern vocational education.

2. The motivations and reasons for China's modern vocational education system construction

Vocational education naturally connected with economy and production. The diversity form of the vocational education and the practicability of teaching content require all social forces to participate in it. Thus, an Omni-directional and multi-level education system could be established.

2.1 The urgently need for skilled personnel in social and economic development

Education is the foundation, and talent is the key to promote the social and economic development, moreover, to transform and upgrade of industry, as well as to take a new road to industrialization. Especially vocational education for its importance cannot be ignored.

In the scientific era, technology closely combined together with industry. Therefore, there come higher requirements mainly on professional skills, literacy and technical theory to the laborers who directly engaged in the production. And the high skilled workforces which can flexible use the knowledge of technical principles, as well as solve the practical production problem, must rely on vocational education. To achieve the target on the consistency cultivation of skillful talent, it should be based on the well connection between secondary and higher vocational education. On one hand, China gets huge number of technical workers. On the other hand, advanced worker, technician or severities are in severe shortage, especially, in the Pearl River delta, Yangtze River delta. This problem fully reflects the urgently needs for skillful talents of social and economic development.

2.2 The requirements of the age for vocational education connotative development

The secondary vocational education in China has been opened to the higher stage, however, narrow channel and still in a state of "summative employment education". It is neither in line with the inherent developing law of vocational education, nor does it satisfy the actual needs of the practical working conditions. Besides, it does not conform to the cultivation of skillful talents. Also, it is unfavorable for individual to promote the professional development.

In the past few decades, the quantity of vocational education enjoyed great growth, while the quality did not attach much attention. Therefore, problems appeared in vocational education system such as structural contradictions, developmental obstacles, imperfect school system, and lack of communication between vocational education and general education, unbalance between academic education and non-academic education development, as well as the inadequate connection of higher vocational education and secondary vocational education.

The traditional Chinese view of education is "vocational education graduates face the market and high school graduates enter college", this must be broken. Moreover, the existing system of education should be adjusted, and the vocational education should be well connected with

other kinds of education. This is both the needs of the economic development and the choice of market system transition in China.

In 2010, China published the National Medium and Long-Term Education Reform and Development Plan Outline in which determines the target and core tasks of development and reform for Chinese vocational education in the following 10 years. By 2020, the modern vocational education system would have been established, which adapt to the transformation of economic development patterns and industrial structure adjustment. Furthermore, it calls for life-long education in the new system, as well as the coordinated development of secondary and higher vocational education. Specifically, it shows as follow in the document "by 2020, establish the modern vocational system that adapts to the transformation and development of economic as well as the industrial structure adjustment. It reflects the lifelong education concepts, and realize the coordinated development of secondary and higher vocational education. So as to meet the society needs and the requirements that cultivates high-quality workers as well as cut down skilled personnel shortage. It is an era requirement of Chinese vocational education's connotation development.

2.3 Improve the national education system which reflects the inevitable choice of lifelong education

In general, Chinese general education relatively perfect in development and is of a long history. While, vocational education is younger, and the development system is not very complete, specifically, the unreasonable structure of education layout. In fact, there appear some contradictions in Chinese education system, for example, the unbalanced development of general education and vocational education; and the bad connection between vocational education and general education; also, lack of high-quality vocational education to fit with the fast developing social economy.

Following methods are come out to solve the problems and to improve the national education system. Firstly, deepen reform of the present education system, and promote the harmonious development for all kinds of education at all levels. Secondly, especially intensify the development of vocational education. Thirdly, increase funding and policy support. Fourthly, balance the vocational education development of rural and urban cities. All these methods should be based on the overall view and strengthen the plan fundamentally, to promote the development of education system in the whole nation, and further improve the modern national education system.

Due to the rapid development of science and technology progress, the refinement of social labor division, and the update of cultural knowledge, objectively requires workers keep learning, and constantly to obtain new knowledge as well as skills. And therefore vocational education must help the students to build up lifelong learning concept.

Additionally, personal career development requires that we can no longer obtain knowledge once and for all. Learn to survive and study, became the first need for everyone. Besides, to accept education in a person's whole life process, and the society becomes the most important place for education. Therefore, in order to meet the needs of the people in different stages for vocational education, a complete modern vocational education system should be built.

2.4 The inevitable trend of vocational education and its internationalization development

In present, the international education system can be classified into ordinary education and vocational education including most of the world's developed countries, such as, community education in the United States, Dual system of Germany, TAFE College in Australia and Technical University in Taiwan China. Among which, most of them are well structured and has a relatively complete system of vocational education as well as technical education. In addition, the general education and vocational education system in these countries and regions are well-interacted and well-connected with each other. Furthermore, the schooling system in these countries or regions are comparatively complete, including undergraduate courses, master graduate courses and doctoral students courses, which constitute a complete system of vocational education.

With the internationalization development of vocational education, and the demand of the vocational education development in new situation, more and more requirements added to high-quality skilled personnel. In order to keep up with the pace of the international vocational education development, the old Chinese vocational education system must be broken. And a new education system, which suitable for China's current development in vocational education, and meet the requirements of constructing the modern international vocational education system, must be established. This is also the calling of the historical trend and the healthy development for Chinese vocational education.

3. The main problems of China's vocational education system

Vocational education is the weakness of China's education system. It is caused by the systematically imperfect, imbalance development of the overall system, lack of attraction for students, and comparatively low social status which influenced by the traditional concepts. In general, there are many difficulties and problems, for specific, they are in the following aspects:

3.1 The vocational education system is relatively closed, and seriously divorced with the society and economy

In present, the Chinese vocational education system is predominantly occupied by vocational schools, which are almost closed, and lack of connection with industries and enterprises. That mainly because vocational schools are unattractive to the industries as well as enterprise. Vocational education must open to the society; so as to closely contact with the industry and enterprises. The major setting, curriculum content, teaching process and evaluation criteria in secondary and higher vocational education can't meet the needs of economic and social development very well. Moreover, quantity and quality of vocational education teachers also can't adapt to the cultivation of skilled talents. Vocational colleges' management is lack of characteristics, even no difference from ordinary education. Thus, vocational schools cannot absorb any benefits from industry and enterprise, including course, internship and teaching.

3.2 The traditional prejudice makes China's vocational education descend to the second-rate education

Vocational education and ordinary education they are two different types of education, mainly different from the curriculum goal and the teaching content. Therefore, they both contribute to the society at the same level and are of the same significance. While, the traditional ideas influenced by Chinese culture, attaches much importance on theory learning and academic study, instead of practical skills and vocational technique.

In the social reality, the excellent students choose high school, while the poor enter vocational schools. Therefore, general education has long been regarded as mainstream education; however, vocational education has become the second-rate. On one hand, it is led by people's traditional prejudice; on the other hand, resulted from the imperfect vocational education system in China. In order to solve these problems, reasons should be explored from the education policy and system.

Jiang Dayuan, a famous vocational education scholar in China, pointed out that, the modern vocational education should not only construct a complete system, but also be the bridge between vocational education and ordinary education. Additionally, vocational education system should include both vocational colleges which evaluated by both process and results and vocational schools only evaluate results; these two kinds of schools are equal in stage and value. So talents trained by different types of education in the same level, are irreplaceable. Similarly, skillful talents in vocational colleges are equals to academic talents in general universities (Jiang, 2011).

3.3 The obvious deficiencies of internal and external connections for vocational education

From the view of internal connection in vocational education, the higher vocational education system is incomplete. And vocational school students are lack of the space for sustainable development in skill learning. At present, the proportion of secondary vocational school students with ordinary high school students is 1:1. However, 90% secondary vocational school students start to work after graduation and less than 10% secondary students for higher vocational college to continue study. Therefore, higher stage education is mainly occupied by general education students. In general, there are two big problems to the internal system of vocational education.

Firstly, secondary level vocational schools are lack of connection with higher stage vocational college education. Secondly, the vocational college education ends the vocational education in a low stage, the undergraduates level vocational education has not been established yet. It is due to the unattractive vocational education system. Although, there are some vocational college students further their study in general education through self-study exam, but the entrance ratio is rather low. And the certificate they get after graduation is less valuable, compared with the undergraduates' certification in general education system.

From the external point of view, vocational education does not have effective connection with other education. Vocational schools pay much attention to the working skills and technical training, while ordinary education concerns much on university entrance exam and lack of understanding about social occupations. Consequently, there are two categories in education system, which are totally separated from each other. Although, according to Chinese

regulations on relevant documents, it is possible for secondary vocational graduates to further their studies in the ordinary education institutions. But as a result of the complex examination regulations in general education, secondary vocational graduates can hardly enter into ordinary higher colleges or universities.

However, it is easy for anyone to enter the vocational colleges, in which lack of a strict selecting system. Moreover, the status of skilled talents is not high in society. Therefore, vocational education is developing in a poor social atmosphere. And high school graduates in general education system are unwilling to get into the higher vocational colleges.

3.4 Vocational education lacks of investment as well as effective operational supports

Overall resources shortage in vocational education caused the urgent needs to intensify investment and resources well-managing. Currently, China's vocational education is mainly invested by the states and lack of social capitals. Multiple investment system for vocational system is promoted; however, it has not been established yet. Therefore, the vocational education is always in financial constraints, which leads to relatively backward management, insufficient facilities and poor equipment, it is deeply affected the quality of the modern vocational education. It is an essential reason for the vocational education system that cannot adapt with the development of economy and society.

In addition, compared with the universities in ordinary higher education, most Chinese vocational colleges do not meet with the standard of average allocation for students which within the national budget. Also, the teaching instruments and equipment is insufficient. The shortage of funds and investment become a bottleneck of the construction for modern vocational education system, which deepen the gap between vocational education and general education. To solve the problem caused by limited funds and resources, a complete set of system and operational mechanism must be established to guarantee the financial support. Furthermore, the policy should be strengthened and each process of vocational education planning should in accordance with the law, in order to achieve scientific, normative, operational, protective and mandatory system protection of vocational education.

4. The basic factors for China to build the modern vocational education system

Education structure system refers to the internal composition of various components in education system and its internal relations, which is the main element that influences the vocational education system. And the components of vocational education structure system including category, level, major, form and layout of vocational education. Moreover, there are factors which affect the structure of the vocational education system, mainly show as follow, the economic, industrial as well as employment structure and also the demand for certain talents.

4.1 The category of vocational education

The category of vocational education means the classification of the education or training which related to occupation (OuYanghe, 2009). In detail, it is geared to the needs of occupational to orderly promote the following courses including professional ethics, skills, and

ability. The category of vocational education should adapt to the social economic structure, ownership structure, science and technology development, the labor market and education for specialized personnel.

The occupations should adapt to the level of economic development, which called the requirements of the time. Therefore, the classification of vocational education also needs to be adjusted with time, so as to meet the requirements of the national and regional economic development. From the world view of vocational education development, the category of vocational education is closely connected with the economic and social development progress. Furthermore, the development of Chinese vocational education follows the same law. For instance, with the rise and development of tertiary industry in China, occupations in industry and trade services will be the popular category of Chinese vocational education.

4.2 The level of the vocational education

Levels of the modern vocational education system usually include primary, secondary and higher education. Also, it is associated with other education systems and formed overpasses among corresponding level. In addition, the theoretical knowledge and pragmatic skill of these three levels are closely docking with each other, form an orderly hierarchy internal structure. Respectively speaking, the elementary level of vocational education mainly aimed to develop the preliminary occupational knowledge and skills of workers. While the secondary level mainly trains medium-skilled workers who are directly devoted into production, service, technology and management. In terms of the higher level of vocational education, it is mainly focuses on cultivating skillful talents who are applied to meet with the economic construction needs, familiar with the advanced technology and scientific management.

The hierarchical structure of the vocational education mainly aims to meet the needs of the various levels of technical structure, because each level of different jobs requires different knowledge and skills. With the development of the society, the labor-intensive industries will gradually replaced by technology-intensive industries, accordingly, the vocational education will be improved in a higher stage. Because of the difference of social labor division and the regional unbalancing development, different levels of technical personnel and workers are needed. For example, the western developed countries which marched in post-industrial era give priority to the higher vocational education. While, in China a certain number of elementary vocational schools still needed, because of the unbalanced economic development in rural and underdeveloped regions.

4.3 Phases of vocational education

Vocational education can be divided into three phases according to the international vocational education stage classification, which include enlightenment education, preparing education and continuing education. Firstly, the enlightenment phase refers to the inspiration to students' occupational consciousness, ethics and common sense from primary and secondary schools, families as well as society. Secondly, the preparing phase, it is an employment oriented education, which facing to the job-hunting group. Thirdly, continuing education gears to people

who are already out of school education system. And it is a training project to improve working skills as well as a channel of retraining and re-employment.

4.4 Major of vocational education

The major setting of vocational education should adapt to the needs of social transformation as well as the adjustment of industrial structure. Furthermore, the industrial structure can be divided into three parts, which include agriculture, industry and tertiary. Accordingly, specialized talents training in vocational education should fit with the transformation and upgrading of industrial structure and promote industry development.

To speed up the transformation and upgrading of industrial structure in China, the traditional industries should be replaced by advanced and new technology (information, biology etc). So the major setting of vocational education should be adjusted according to the development of other high and new technology industry. For example, professional typist, used to be called "still type" in the 1980s, were required with serious carefulness and quick action only, however, today they are asked to perform directly on the computer typing and printing. Hence, they need to be master in typing software, as well as familiar with related computer using skills; in this process a revolutionary change has taken place. Above is an example for the development of professional training with the change of the industry, in which shows significance of vocational education to social and economy development.

4.5 The form of vocational education

The form of vocational education mainly means the form of school operation and the education mode. Vocational school operation system mainly contains the government running, enterprise running and some other social power running schools (The government-running vocational schools is in charged by the administration, the labour administration or other official departments.). The diversification form of vocational education is to meet the needs of social and economy diversity, which include the public, civilian private, non-government and chinese-foreign cooperation running schools.

From the perception of the education mode, the vocational education can be divided into two kinds, academic education and non-academic education. Among which, the academic education includes full time education and partime education (distance education). Non-academic education mainly contains job training in different institutions in all levels. Moreover, job training can be divided into working training, employment training, job-transfer training, apprenticeship training, promotion training and other categories of vocational trainings; it is closely linked to the life-long education concept.

4.6 The layout of the vocational education

Vocational education layout is mainly refers to the location distribution of the vocational education within the national region. And it is including vocational education institutions in urban and rural area. Due to the unbalanced economic development, vocational education shows the regional characteristics. Additionally, the nation gives full consideration to the layout of vocational education, which is variouse according to different stages of economic

development of the regions. Since vocational education layout should also be adapt with the regional economic development. Therefore, vocational education layout is diversified in different countries and regions. Especially in China, the imbalance social and economic development in urban and rural, eastern and western, coastal and inland, thus, is forming different vocational education layout.

It is a long-term task for China to build up the modern vocational education system, also will be a great project in the development of Chinese education history as well as the great reform of the top design and overall layout for China's vocational education in the future.

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