



Vocational Education in China: Its History, Roles, Challenges and the Way Forward

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ABSTRACT

Vocational education plays an essential role in developing diverse human talents, passing on technical skills, and promoting employment, innovation, and entrepreneurship. As a critical part of the national education system and the development of human resources, vocational education in China plays a crucial role in the development of diverse talents, the transfer of technical skills, and the promotion of employment and entrepreneurship. This paper aims to explore the history, roles, challenges, and the way forward for vocational education in China. It is found that vocational education in China has gone through a series of name changes before settling on its current nomenclature. Although vocational education is essential to complement general academic education to build a nation, it faces an uphill battle to gain the same status and recognition bestowed on general education. These challenges include curriculum design, poor linkages with industries, public perception, and other structural issues. This paper also discusses how to overcome these challenges to improve vocational education in China.

Keywords: vocational education, technical and vocational education, challenges

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1 INTRODUCTION

With the rapid pace of globalisation, many countries worldwide face increasingly fierce competition. At the centre of this competition is the competition for talents, and the development of talents is realised through education. Education is directly related to economic, social, and political advancement.

In China, higher vocational education or *gaodeng zhiye jiaoyu* is part of Technical and Vocational Education and Training (TVET). According to UNESCO's (2003) International Standard Classification of Education 1997, rather than leading directly to an advanced research qualification such as a degree, higher vocational education is in the junior stage of post-secondary education. It provides programs focusing on specific skills and practical occupational for workforce preparation. In addition, public higher vocational education is the major component of higher vocational education. It includes several categories, such as adult colleges, independent vocational and technical colleges, regular junior colleges, independent four-year colleges, and vocational and technical colleges run by universities. While most institutions are designed as institutions with two to three-year programmes, higher vocational education programs last up to five years in some secondary vocational schools at the upper secondary level. Figure 1 illustrates.

Since the reform and opening up in 1978, China's vocational education has undergone a process of significant development and transformation. It has produced many high-level technical and skilled talents, extensively promoting China's socialist market economy. The reform has also improved the overall cultural literacy of the public and enhanced the general happiness of the society (Guo, 2010).

During the past 40 years, vocational education in Ningxia has grown tremendously. It has directly contributed to the development of local and regional economies. However, there are persistent challenges in developing vocational education in Ningxia, especially in the current era, which is rather prominent. There is no ready-made, one-size-fits-all solutions. With every challenge, there are also opportunities to be explored. Therefore, this paper intends to chart the history of vocational education in China before moving on to vocational education in Ningxia, followed by a discussion of its importance, challenges, and the way forward in reforming vocational education in Ningxia and China.

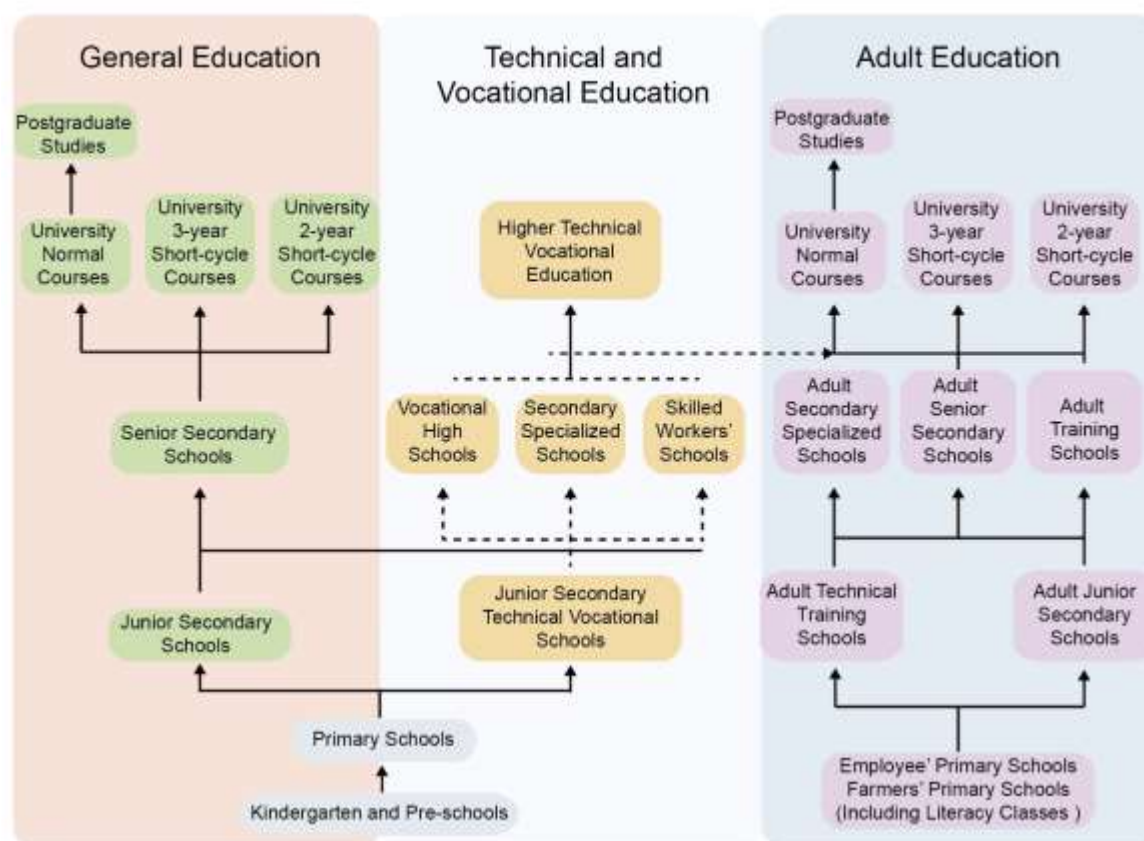


Figure 1. The contemporary education structure in China (Guo, 2010).

2 EDUCATION AND VOCATIONAL EDUCATION IN CHINA: A BRIEF HISTORY

Education is fundamental to the well-being of a nation and is the foundation for a strong country. The Chinese government has permanently attached great importance to education and has given priority to its development. It has established the world's most extensive education system, guaranteeing the rights of hundreds of millions of Chinese people to receive education and significantly improving the quality of the entire nation. At the end of 2020, China had 537,100 schools of all types and levels, increasing 7,000 or 1.33% from 2019. There were 289 million students in schools at all levels, up 6.7448 million or 2.39% since 2019. There were 17,929,700 full-time teachers, 609,400 more than in 2019, or an increase of 3.52%. The average length of education of the newly added labour force nationwide was 13.8%, 0.1 years higher than in 2019, and 53.5% of them received higher education, 2.6% higher than in 2019 (Ministry of Education of the People's Republic of China, 2021).

On the other hand, vocational education is claimed to have the closest connection with the economy and society, with the most direct contribution and the most apparent effects (Pavlova, 2014). Moore and Hickox (1999) mentioned that "in the contemporary world, a better educated

and trained workforce is an indispensable prerequisite for any economy that wishes to compete at the level of high quality, value-added products" (p. 50). On the other hand, vocational revolves around the belief that formal education should prepare the workforce for national and global economies (Grubb, 2006; Grubb & Lazerson, 2004, 2005; Hayward, 2004). By the end of 2020, there were 11,500 vocational schools nationwide, with 28.5718 million students. Secondary vocational enrolment reached 6.0037 million, accounting for 41.7% of high school education. Higher vocational college enrolment reached 4.8361 million, accounting for 52.9%. 54.52 million college graduates have been trained in continuing education, and 320 million people have received community education and training programs (Ministry of Education of the People's Republic of China, 2021). Vocational education provides indispensable human resources to support national economic and social development.

Located in northwest China and the upper reaches of the Yellow River, the Ningxia Hui Autonomous Region, abbreviated "Ning", covers a land area of 66,400 square kilometres and consists of five prefectural-level cities, including Yinchuan, Shizuishan, Wuzhong, Guyuan, and Zhongwei, and 22 counties (cities and districts). Ningxia has a permanent population of 7,202,654 and is one of China's five ethnic autonomous regions. Among permanent residents, there are 1,248,938 people with university education (college education or above), 967,429 people with high school education (including technical secondary school education), and 2,140,403 people with junior high school education. The population with primary education is 1,880,672 (Statistics Bureau of the Ningxia Hui Autonomous Region, 2021). In 2020, Ningxia had 39 independent vocational schools, 12 higher vocational schools, 27 secondary vocational schools, 31 public schools, and six private schools. These schools had 132,000 students, of whom 57,000 were in higher vocational schools and 75,000 in secondary vocational schools, including 7,000 in technical schools (Ministry of Education of the People's Republic of China, 2021).

Vocational education has a historical and dynamic concept endowed with new meanings with time development (Cong & Wang, 2012). In modern China, the idea of vocational education has resulted in long-standing and numerous debates. In 1904, the term vocational education first appeared in Yao Wendong, the general office of Shanxi Agriculture and Forestry School; in his article, he opined that on the principles of education, one was General Education, and the other was vocational education, with the latter being more relevant to the people. Although the concept varied, they were complementary and not opposite. Before this, vocational education was also known as *Practical Education, Agriculture, Industry and Business, Arts, and Special Schools in China*. Collectively, they were referred to as industrial education. In 1917, Huang Yanpei, a famous educator in modern China, founded the Chinese Vocational Education Association in Shanghai, officially changing the name of Industrial Education to Vocational Education. Since then, vocational education has become a familiar name accepted by most people in education (Zhang & Sheese, 2017). In 1949, on the eve of the founding of the People's Republic of China, Zhu De, Li Lisan and Huang Yanpei suggested that the development of vocational education should be included in the Common Program of the Chinese People's Political Consultative Conference, but this attracted fierce opposition from dogmatists. The Common Program adopted by the political party only included technical education in addition to formal education. Technical education has replaced vocational education.

In 1958, under the guidance of Liu Shaoqi's idea of walking on two legs, agricultural middle schools, industrial middle schools, and handicraft middle schools were established, and these technical middle schools were called Vocational Middle Schools. In 1966, after the Cultural Revolution had begun, this education category was firmly attached to the bourgeois dual-track system, was criticised, and the name of vocational education disappeared (Wu & Ye, 2018). In 1978, after the Third Plenary Session of the eleventh Central Committee of the Communist Party of China (CPC), the history of the development of Vocational Education was divided into two groups. Northern China agreed with the term Vocational Education while Southern China advocated Vocational and Technical Education. In 1985, the Decision to reform the education system of the central committee of the communist party of China beyond ordinary higher education to cultivate intermediate, junior technical personnel, management personnel, technicians and other educated professional training in urban and rural labour institutions was collectively referred to as Vocational and Technical Education. However, the Vocational Education Law of the People's Republic of China in 1996 finally adopted the name Vocational Education.

Vocational education in China has experienced disputes between Industrial Education and Vocational Education, between Vocational Education and Technical Education, between Vocational Technical Education and Vocational Education. With the promulgation of the Vocational Education Law of the People's Republic of China, the term Vocational Education has been formally regarded in official documents, speeches, scholarly articles, and lectures (Wu & Ye, 2018).

3 THE ROLE OF VOCATIONAL EDUCATION

Vocational education is an essential part of education. It plays a critical cornerstone in helping, benefiting, and enriching the people and is a reliable guarantee for improving the quality of development and comprehensive competitiveness. Vocational education plays a vital role in promoting the improvement of comprehensive national strength. In particular, vocational education plays a crucial role in the new wave of scientific and technological revolution and industrial reform and the development of the Chinese economy. Looking to the future, the development of vocational education in China is essential to developing high-quality, multi-level and innovative skilled talents and thus promoting the development of various fields and industries. Skilled talent is the talent guarantee for the new wave of scientific and technological revolution and industrial transformation. Multi-level skilled talents are the basis for developing the real economy.

Nowadays, the development of vocational education in China is flourishing. Among the academic circles, domestic scholars have paid great attention to the development of vocational education in China. They have spent a great deal of attention in their studies on the policy changes in secondary vocational education and higher vocational education in China. Benchmarking has been done by comparing with the successful vocational education implementation in developed countries, especially in the United States, Germany, and The United Kingdom. At the national level, since the 21st century, China has entered the stage of emphasising vocational education policies and successively issued several policies to promote the sustainable development of vocational education (Li, 2021). It is of great practical significance for the development and prosperity of the

Chinese economy to strengthen vocational education's theoretical and empirical research. As China moves towards capitalism, it is also vigorously developing vocational education and speeding up human resources development as a primary measure to rejuvenate the country through science and education. It is a significant measure to comprehensively improve the quality of the whole people and turn the considerable population pressure into an advantage in human resources. It is also part of the plan to push Ningxia to take a new road of industrialisation, solve the problems concerning agriculture, rural areas, and farmers, and promote employment and re-employment.

4 CHALLENGES FACING VOCATIONAL EDUCATION IN CHINA

China has the most extensive vocational education globally. It has grown by leaps and bounds in a relatively short period, providing opportunities for millions of students from low-income families and skills training to boost the economy. However, vocational education in China faces various challenges. According to Steward (2015), these challenges could be viewed and summarised from curriculum design, industry connections, status, and structures. The following sections summarise these challenges.

a. Vocational education curriculum lacks breadth

Many of the vocational education programmes in China focus mainly on the entry-level skills needed for students to secure their first job instead of providing a more profound and broader skillset required for career advancement. This phenomenon has its roots in the human resource planning model that had set the foundation for schools' development in China (Wu & Ye, 2018). Although there have been efforts to broaden vocational education curricula, the skills training provided is not high enough to meet the demand of the changing economic landscape to allow the individual to advance economically. Apart from that, curriculum development is not designed in partnership with leading companies with cutting edge technology nor advancing the economy in mind. There was little focus on entrepreneurship and innovation, two components gaining greater traction in the world economy.

b. Weak connection with industries

Although there are some connections between vocational schools, universities and industries, these connections are somewhat weak. Behind the façade of modern buildings, some vocational education institutions do not have modern and up-to-date equipment. Apart from that, practical training, a compulsory part of vocational education, only consisted of weeks of attachment at the end of the program. Furthermore, the program lacks a systematic implementation that incorporates supervision of learning and work. Currently, vocational education institutions in China are also in a deficit of connection to foreign-owned companies with international standards and advanced industries. In sum, there is a disconnection between vocational education and employers. The situation is that there are not many incentives for companies to collaborate with vocational education institutions. Also, with the high rates of labour mobility, especially in the eastern provinces of China, there are not many economic reasons for employers to train vocational education students

who are assumed to move around different companies in search of better wages and opportunities.

c. Low status in the eyes of the public

Apart from the weak connections to industry, the next challenge is related to the status of vocational education. It is undeniable that the status bestowed on academic education far exceeds that of vocational education in many countries worldwide. However, this root is deeper in China than in any other country. It is common in China that knowledge workers or the k-economy players would always rule those who do manual labour. While Dewey is a strong proponent of working with both mind and hands, education is directly translated as pure "academic reading" in China. As a result, vocational education has been perceived by the public as having lower status.

d. Structural barriers

In addition to the cultural problem, the next challenge is related to structural issues. Until recently, there has been no natural pathway between vocational education and academic education until recently. In China, any student can take *gaokao*, or any student can take the national university entrance examination system; however, the reality is that only students who are adequately prepared and taught can pass this examination to gain entry to higher education. For most vocational education school students, education is deemed to finish with the end of secondary school. In other words, vocational education is an educational dead end with no prospects (Chen, 2021). Compounding this problem is that white-collar salaries are much higher than blue-collar salaries. Therefore, economic, cultural, and structural reasons have provided evidence and suggestions that if they can take the general academic path, there are no valid reasons for Chinese parents to send their only child into vocational education.

5 THE WAY FORWARD

Having identified challenges facing vocational education in China, the vocational education system should optimise curriculum design, integrate industry and education, improve the public's view, and overcome structural barriers by revamping the current vocational education policy. The following section presents a combination of the authors' thoughts supported by relevant literature.

Vocational education's curriculum should have its characteristics (Wu & Ye, 2018). Specifically, when designing a general cultural course, the curriculum should be based on the work process's needs and the orientation of professional competence, especially the competence of method and society invocation. It is necessary to connect with the actual life of students to cultivate students' cultural literacy fully. The curriculum should pay attention to professional career and professional ethics education, interpersonal communication, psychological education, and environmental education. At the same time, it is also necessary to focus on the practicality and life nature of the knowledge. When a professional course is designed, the school should strengthen cooperation with the most advanced companies in the industry, focus on major national strategies, closely match the trend of industrial upgrading and technological change, and set up more short professional courses than the past meet market needs. The professional curriculum system should form a closely

connected industrial chain and an innovation chain. The design of the knowledge of all courses must consider the needs of the work process and the individual's future career development, closely related to the context of life or work practice, point to the comprehensive professional ability, and highlight the depth, breadth, and innovation.

Deepening the integration of industry and education and school-enterprise cooperation is the key to strengthening the links between vocational schools, colleges and universities, industries, and employers. Among the recommendations are:

- a. Actively carry out bilateral and multilateral technical cooperation with domestic and foreign high-quality enterprises, and jointly build on-campus training bases, industrial alliances, secondary colleges, applied collaborative innovation centres and engineering technology research centres and the like, open schools in the factory, set up directed education, carried out industrial colleges and corporate colleges that are jointly building and managing in schools and enterprises, and extend the space of vocational schools.
- b. Actively attract leading domestic and foreign industrial companies to deeply participate in the professional planning curriculum setting, compile the textbooks, teaching design, and teaching implementation, set up new majors, and develop new courses.
- c. Hiring domestic and foreign corporate management personnel to conduct special lectures on campus and hiring corporate technical personnel to give lectures part-time. The school organises professional teachers for school-enterprise cooperative enterprises to run on-the-job training and train dual-qualified teachers.

In March 2019, the People's Forum Questionnaire Survey Centre issued an online questionnaire through the Internet and WeChat public platform channels to launch a survey entitled Vocational Education in the Eyes of the Public: Cognition, Evaluation and Expectation. The findings showed that the prevalent stereotype of vocational education being inferior would improve the popularisation of vocational education (Li, 2019). It is worth noting that the Chinese government has clearly stated in the National Vocational Education Reform Implementation Plan issued in 2019 that vocational education and general education are two different types of education with equal standing. In 2021, Opinions on Promoting a High-quality Development of Modern Vocational Education was issued, pointing out that vocational education has a broad and promising future in the new journey of comprehensively building a modern socialist country. It can be seen that the status of vocational education at the national level has been significantly improved, and relevant supporting policies have been gradually released. However, with the perception among the public to improve further, especially among parents, more concerted and rigorous effort is needed.

Vocational schools should open the ascending channel of technical and skilled talents, design an integrated vocational education talent training system, promote the convergence of professional settings, training goals, curriculum systems, and training programs at all levels of vocational education, and support implementation in professional fields with long training cycles and high skill requirements. Apart from that, vocational schools should expand the openness of the education system, which promotes the integration and development of vocational education with

general education, continuing education, and community education. Vocational schools should encourage the mutual selection of courses and mutual recognition of credits between secondary vocational schools, ordinary high schools, higher vocational schools, and applied universities, and recognise the critical role of vocational education in building a lifelong learning education system that serves all people. Vocational schools also need to accelerate the construction of a national qualifications framework and promote the implementation of credit banks (Chen, 2021).

6 CONCLUSION

As a type of education closely related to economic and social development, vocational education is an important channel to develop technical talents to build a nation. This paper has reviewed the brief history of Chinese vocational education clarified its roles and challenges facing vocational education in China. The ways forward have been proposed as well. Undoubtedly, it takes a tremendous effort to improve its most extensive vocational education system. However, this monumental task can be achieved with time, structural revamp, resources investment, and new policy implementation.

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