Article

A Comparative Study of Social Recognition of Vocational Education in China and Germany

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Abstract: The paper presents a comprehensive comparative study on the social recognition of vocational education in China and Germany. It begins by highlighting the importance of vocational education in enhancing human capital and talent employment, and notes the global trend of governments optimizing their vocational education systems to meet societal and industrial needs. The study acknowledges the challenge of improving social recognition for vocational education, which is a critical bottleneck in its development. The study concludes by identifying key differences in the vocational education models of the two countries, including education streaming methods, social evaluation and salary treatment, enterprise participation, and teaching modes. It suggests that China can learn from Germany's experience to improve the strategic position, education model, enterprise involvement, and assessment systems of its vocational education. The document emphasizes the importance of vocational education for economic development and industrial transformation and calls for multi-disciplinary research and policy-making to enhance its social recognition and effectiveness.

Keywords: comparative study; social recognition; vocational education; education policy; China; Germany

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1. Introduction

Vocational education is an important component of each country's education, playing a crucial role in improving the quality of human capital and promoting talent employment. With the development of economic globalization, governments around the world are increasingly valuing the development of vocational education and continuously optimizing the vocational education system through legislation and other means to cultivate diverse skilled talents needed by society and enterprises. Previous educational practices have confirmed that a sound vocational education system can not only help participants smoothly integrate into the labor market in the initial stage and obtain positive long-term labor market returns, but also transform advanced technology and equipment into productivity, promoting the improvement of labor productivity (Biavaschi et al., 2012).

Currently, countries around the world have explored and chosen different models of vocational education in the context of their economic development, including school-based training, "dual apprenticeships" and on-the-job learning, and have achieved good results (Quintini and Manfredi, 2009). However, how to improve social recognition of vocational education remains a global problem that needs to be addressed (Mortaki, 2012). In order to break through the bottleneck in the development of social recognition of vocational education, governments have continuously tried to establish an advanced voca-

tional education system and promote the institutionalized development of vocational education through legislation. At the same time, governments also clarify the goals and tasks of vocational education development through policy adjustments and other means to promote vocational education to meet the needs of national economy and social development.

China and Germany, as big education countries, have quite different education systems. Germany's vocational education is the result of centuries of bottom-up development. It is based on the dual system model of vocational education, which improves the skills and the social recognition of vocational education through the joint completion of students' education by enterprises and schools (Deissinger, 2015). In contrast, China's vocational education system is relatively new and based on a top-down (i.e. government-driven) approach; although one can observe a significant rise of the quality and the income of technicians and other skilled workers, the social recognition of vocational education is not high. Interestingly, and despite the significant differences between the two countries' systems, the latter phenomenon appears both in China and in Germany, resulting in a shortage of skilled workers on the one hand and unemployment of university graduates[1].

Against this background, this essay will start from the development history of vocational education in China and Germany, comparatively analyze the development mode and development stage of vocational education in the two countries and explore the social recognition of vocational education in the two countries. Finally, this essay will combine the development status of German vocational education and Chinese vocational education to make suggestions for further improving the social recognition of vocational education in China.

2. Theoretical Foundation

2.1. Introduction to Vocational Education

Knowledge, skills, abilities and attitudes determine whether a person can perform a specific position and succeed in the workplace. In the education system of some countries, it is difficult for students to apply the acquired theoretical knowledge in their professional life, which makes it difficult for them to meet the requirements of the market (Mohanty & Zunjur, 2023). In order to bridge the education gap and enhance the employability of students, governments have provided training for students in specific occupations or industries by integrating vocational education into the education system.

Vocational education is defined differently by different sectors of society, depending on the content of the teaching and the purpose of the training. UNESCO (2012) suggests that vocational education is career-oriented education that is received in order to equip recipients with the knowledge, skills and competencies for a specific occupation or trade. Its pedagogical content is work-based and promises a relevant market-recognized vocational qualification upon completion. From another perspective, vocational education is distinctly different from university education. Vocational education, as an essential part of the education system, is coordinated with the requirements of the labor market and teaches the specific crafts, skills, and knowledge needed for a particular field or occupation (Musseau, 2023). Moreover, depending on the group of people receiving the education, vocational education can be categorized into primary vocational education and continuing or higher vocational education. From the definition of vocational education, it can be seen that vocational education can help different groups of people to acquire the skills needed in the workplace and jobs, and to realize the role change from school to society. And vocational education, as an important and valuable project, not only helps educated

[1] The situation is different in Switzerland, although it applies a very similar dual VE model as Germa: Two thirds of Swiss high school graduates first do an apprenticeship to learn a trade, as their primary vocational qualification, then choose between entering the job market or going for higher education
https://www.sbfi.admin.ch/sbfi/de/home/bildung/bildungsraum-schweiz/bildungssystem-schweiz.html

people to achieve outstanding social, economic and personal purposes, but also facilitates employed people to maintain their vocational competence and employability in the process of prolonging their working life (Małgorzata & Shinyoung, 2019). Indeed, the functions and values of vocational education go far beyond these. For the recipients, they can enhance their financial capacity to work, gain more employment opportunities and a better working environment through vocational education. For enterprises, they benefit from increased employee productivity and improved labor effects. For the country as a whole, both the state and the government can benefit by virtue of the positive externalities of vocational education and obtain higher fiscal revenues (Hoeckel, 2008).

2.2. Social Recognition of Vocational Education

In order to meet the needs of economic development, governments have adopted different models of vocational education development in the light of their own circumstances. For example, the United Kingdom has adopted the modern apprenticeship education model, which combines in-school training and on-the-job training on the premise that enterprises take the lead (Huddleston, 1998). Similarly, Canada has adopted a vocational education model that encompasses apprenticeship education and dual-track education. Being a federalized country, the model of vocational education varies from province to province in Canada, but they all focus on developing students' competence for their positions (Schuetze & Archer, 2019). In addition, Germany mainly adopts the dual system model, in which enterprises take the lead while (mostly state-run) vocational schools fulfill a subsidiary function to complete the education of students.

However, despite the fact that many governments have formulated policies to support the development of vocational education, vocational education still faces low social status and negative social sentiment in many countries and regions (Hillmert & Jacob, 2003). It seems to be an indisputable social reality that the social status of vocational education is lower than that of higher education. This lower level of social recognition includes not only serious social prejudice and fewer opportunities for career development, but also limited policy support and lack of educational attractiveness. Take the cognitive bias of the community towards vocational education as an example, under the atmosphere of elite education, people tend to over-emphasize knowledge education and neglect skill education. This cognitive bias has led to an over-emphasis on diplomas and a lack of understanding and recognition of vocational qualification.

In addition, Billett (2014) interpreted the low social recognition of vocational education from another perspective. He argued that the social status of professions and their means of preparation are largely shaped by "privileged people". Negative social sentiments become a problem when practitioners, educators of skills and learners in vocational education do not have a voice for their own education. While Bosch and Charest (2009) argued that the low social acceptance of vocational education stems from the low status of vocational education in the education system and the low status of vocational education in the labor market. Unlike higher education, vocational education is often perceived as an alternate option for academically weaker students. At the same time, in many countries, it is difficult for students in vocational education to have access to good career development opportunities.

3. Vocational Education in China and Germany

3.1. Vocational Education in China

3.1.1. History of Chinese Vocational Education

Vocational education is an important part of China's modern education system, which has a history of more than 160 years since the introduction of industrial and commercial education in the 1860s. However, limited by the underdeveloped state of industrial development and the influence of the traditional social concept of favoring higher

education, the development of vocational education in China has gone through a rough patch over a long period of time (Wu & Ye, 2018).

Prior to China's reform and opening up, the state provided a talent pool for the development of basic industries mainly through secondary specialized schools and worker training schools. However, it was not until after 1985 that China began to implement a systematic vocational training system to train workers and technicians to meet the challenges of globalization (Yuan & Wang, 2021). After that, with the promulgation of the *Vocational Education Law of the People's Republic of China* in 1996, China's vocational education system began to enter into formalization, and the vocational education system, with secondary vocational education as the mainstay, took shape (Liu & He, 2019). At the end of the 20th century, China's vocational education system was gradually divided into four types, such as secondary specialized schools, workers' training schools, vocational high schools, and adult secondary specialized schools and played an extremely strong role in promoting economic and social development (Yan, 2013). At the same stage, the Chinese government also began to promote the development of vocational education by implementing a series of reform policies. For example, the *Action Plan for the Promotion of Education in the 21st Century* issued during this period proposed that graduates of vocational and technical schools could receive higher education through examinations and other means. This reform measure broke down the barriers between vocational and technical education and higher education and greatly improved China's modern vocational education system (Yuan & Wang, 2021).

With the rapid development of China's market economy, the Chinese government has become more aware of the importance of training professionals with vocational skills and has begun to pay more attention to the development of vocational education. Nowadays, vocational education has not only got rid of the subordinate status to general education in the past, but also become an important part of the national education strategy (Yuan & Wang, 2021). In 2002, the Chinese government further expanded the scale of higher vocational education by adopting policy guidelines related to vigorously promoting the reform and development of vocational education. Subsequently, the Chinese government adopted the *Plan for the Construction of a Modern Vocational Education System (2014-2020)*, which further refined the content and development of the modern vocational education system. With the introduction of a series of policies to support and encourage the development of the vocational education system, China's vocational education has gradually formed a multilayered vocational education system consisting of secondary vocational education, vocational colleges and applied undergraduate colleges and universities, and the level of education has been continuously improved. Moreover, the newly promulgated *Vocational Education Law* in 2022 once again reaffirms the important role of vocational education, emphasizing that vocational education is of equal importance to general education (Yuan & Wang, 2021). It can be seen that, after entering the 21st century, the Chinese government has attached great importance to the development of vocational education, and has continued to explore development programs for vocational education in China.

3.1.2. Social Recognition of Vocational Education in China

Through the implementation of a series of reform policies, China's vocational education has seen unprecedented development in terms of both training modes and educational standards over the past few decades. However, despite the fact that vocational education has become an important part of China's education system, its social recognition remains low (Ling, Jeong & Wang, 2021). Not only has vocational education received less attention than general education, but it has also been viewed as a suboptimal choice by Chinese students and parents (Wang & Endrano, 2023). When choosing a form of education, Chinese students and parents tend to prefer general education. Only when students'

test scores can hardly support them to be admitted to general higher education institutions do they choose vocational education. The low level of social acceptance also makes vocational education relatively poorly resourced, making it difficult to improve educational standards and falling into the trap of the "loss spiral".

Social reputation and salary treatment are the main ways to reflect the degree of social recognition of talents (Mohammed & Mgabhi, 2018). In terms of professional reputation and wage treatment, Chinese people tend to categorize talents into five types based on their income status and job position, including the affluent class, the gold-collar class, the white-collar class, the blue-collar class, and the gray-collar class. Skilled personnel trained through vocational education are belonging to the blue-collar and gray-collar classes. Their annual income is much lower than that of employees in other classes (Wang et al., 2022). Moreover, the blue-collar and gray-collar classes also have a more difficult working environment, and need to face harsh working conditions and high consumption of physical labor (Stoyanets, Zhao & Li, 2020).

In addition, students' choice of further education can reflect the low recognition of vocational education in Chinese society. In China, students often decide whether to enter a general education institution or a vocational education institution through their test scores. Generally, students with high scores will be admitted to general schools, while those with low scores will be admitted to vocational schools. A large number of students also drop out of vocational education institutions midway through their studies for reasons such as not recognizing the value of vocational education and training. This phenomenon is very common worldwide (Frey & Ruppert, 2017).

3.2. Vocational Education in Germany

3.2.1. Origins of Vocational Education in Germany

Germany was one of the first countries in the world to introduce systematic and standardized vocational education, the roots of which go back ss early as the twelfth century. Over the centuries, Germany has developed a unique model of vocational education known as the "dual system". This system, in which companies and vocational schools complement each other in the training of students/apprentices, is still the main model of vocational education in Germany and some neighboring countries.

The dual system model of vocational education could not be shaped without the formation of craft organizations (Pleshakova, 2019). Craftsmen and entrepreneurs of the same trade – such as carpenters, smiths or brewers – would found such associations, also known as guilds, and formulated rules according to which a craftsman needed specified training and experience before being allowed to set up his own shop and train apprentices. The initial purpose was clearly protective, namely as to keep competitors from other cities or with insufficient qualification out of business. The two major positive effects were high quality standards for products and services, and an increasingly unified system of training apprentices. It can be assumed that these two factors have significantly contributed to Germany's rise as a nation of technology and to the good name "Made in Germany". Today, the role of the guilds has been taken over by the Chambers of Commerce who care for nation-wide uniform curricula and examinations and actually bestow the diplomas.

The rise of the Industrial Revolution in Germany in the late 19th century greatly contributed to the overall development of the German economy. Industrialization brought about many social changes, and it also put challenges on VE as job profiles which had remained almost static over centuries changed at an unknown pace. Apprenticeship remained the dominant method of training technicians during this period. Before the First World War, with the rapid development of German industry, industrial employers began to face a shortage of skilled workers (Frommberger & Reinisch, 2002). Due to the political monopoly of the craft industry, firms were unable to meet production demands by training their own workers. In response to this challenge, industrial employers' associations continued to train new types of skilled workers through the use of traditional forms of

craft trade training. This model was later widely used in other fields such as business, finance, and insurance (Frommberger & Reinisch, 2002), a reality until today as apprenticeships are not only offered by craft shops and factories, but by all kind of enterprises, including government offices and agencies.

Later, in the aftermath of the Second World War, the German Democratic Republic (GDR) adopted a socialist ideology and proclaimed universal and collective values. The values of German vocational education underwent collapse and reconstruction, and despite the fact that the German vocational education system was interrupted for a time, the basic features of the dual system have remained unchanged. The concept of labor education and the approach centered on the realization of students' self-worth were constantly renewed and German vocational education was further developed (Pleshakova, 2019). However, it is worth noting that the changes in the power market sector and occupational structure in post-war Germany, and the increased skill requirements of employees in industrial firms also became major challenges for the VET system in Germany at that time (Thelen, 2014).

After entering the 1980s, the German vocational education system underwent a series of adjustments in terms of institutions, curriculum, and educational processes (Fü rstenau, Pilz & Gonon, 2014). The rationalization of the dual system and the country's influence have been further enhanced within the system. Relevant policy documents require both government departments and corporate units to clarify their responsibilities in developing vocational education.

Overall, the current dual-system model in Germany is effective in supporting young people's successful transition from student to skilled worker roles and in helping students to acquire career development competencies (Fürstenau, Pilz & Gonon, 2014). Because of this, the German model of vocational education has become a model for vocational education that is imitated and studied by many countries around the world. Specifically, China has since the reform and opening in the 1980's shown a continued interest in the German model, and a number of cooperation programs run e.g. by the GIZ, the German Chamber of Commerce and the Hans-Seidel-Foundation have worked towards transferring German experiences in the field of VE to China. However, these efforts do not – although often so labelled – mean an introduction of the dual system to China, at least not the core feature of that system which is the leading role of companies in practical education and training and a subsidiary role of mostly state-run vocational schools.

3.2.2. Social Recognition of Vocational Education in Germany

The clear boundary between vocational education and higher education makes it difficult for the public, which supports elite education, to recognize the social status of vocational education. In the traditional training model, there is a strict division between vocational education and higher education in Germany, which is similar to the situation in China (Wolter & Kerst, 2015). However, unlike China, the boundaries between vocational education and higher education in Germany are gradually blurred, which has led to a further increase in the social recognition of vocational education. With the changes in social attitudes and people's behavioral patterns, the educational decisions and career paths pursued by the younger generation in Germany are becoming less and less in line with the traditional industry model. And this shift is closely related to the educational reforms introduced by the government. On the one hand, students holding vocational qualifications began to have access to higher education; on the other hand, the development and promotion of dual study programs allowed students to receive an apprenticeship wage by signing a contract with a company while pursuing a higher education program (Wolter and Kerst, 2015).

Besides, at the beginning of 2020, a new version of the German Vocational Education Act came into force. According to German industry practitioners, the impact of the introduction of the law on the social recognition of vocational education is two-sided. First, the

new education law introduces a three-level degree system. However, some industry representatives believe that this system is a mimicry of the third-level degree in academic education, which will undermine the otherwise widely recognized designation of vocational qualifications and affect the attractiveness of vocational education (Stellungnahme zum, 2019). Secondly, the bill also established a minimum salary for vocational education. For trainees, this system enhances their labor rights, which contributes to the attractiveness of vocational education for trainees and the social recognition of vocational education.

4. Comparison of Vocational Education Models in the Two Countries

Vocational education in Germany has been developed for hundreds of years, while China's vocational education has a shorter history of development and is still in the primary stage of development. The lack of development experience has led to the low social recognition of vocational education in China, and the quantity and quality of talents cultivated cannot meet the needs of China's rapid economic development (Wang et al., 2022). Specifically, there are the following differences in vocational education between China and Germany, which directly lead to the gap in social recognition of vocational education between the two countries.

First of all, the education streaming methods of vocational education in the two countries are different. Educational streaming refers to dividing students who have completed basic education into different parts by means of examinations, etc., so that they can flow to different educational institutions and thus become various kinds of talents needed by the society (Mandel, 2023). The streaming of basic education is a two-way choice, not only pay attention to the students' own ability and interest, but also emphasize the social choice of students. Germany adopts a comprehensive consideration of the education streaming model. Through comprehensive consideration of students' academic performance and interests, teachers will communicate with students' parents and recommend students to enter educational institutions that meet their personal development needs. Moerover, in Germany, there are courses on vocational education and hobbies in elementary school classrooms, which help teachers to better understand the situation of students. And Germany has adopted a changeable education streaming model, which means that students can choose to receive different education contents in different periods. Different from it, the streaming of basic education in China mainly assesses the situation of students through their academic performance. Generally speaking, students with good academic performance will successfully enter higher education institutions to receive general education, while students with poor academic performance will be streamed into vocational institutions. This labels students in vocational institutions as "underprivileged students" from the outset, further reducing the social recognition of vocational education.

Secondly, the social evaluation and salary treatment of vocational education in the two countries are different. In comparison, the social evaluation system in Germany is more tolerant and fully respects different vocational and technical talents. Vocational education in Germany has cultivated many highly specialized technical talents, and won many social reputations for vocational education students. The enterprises participating in the German dual education model are also large-scale successful enterprises, willing to provide high remuneration for students receiving vocational education (Deissinger, 2015). At present, the wages of skilled workers with vocational education in Germany are often higher than those of ordinary civil servants and ordinary university graduates. The high content of vocational qualification certificates and the high salary of vocational education graduates have won social recognition for German vocational education graduates. However, at present, China's social evaluation standard is relatively single, and the social recognition of white-collar workers is much higher than that of blue-collar and gray-collar talents. At the same time, due to the low learning ability of students admitted to vocational education in China, the jobs they take up after graduation are often of low technical difficulty, and the level of pay and benefits is also relatively poor. This makes fewer students

willing to accept vocational education, and the dropout rate of vocational education remains high.

In addition, there is a big difference in the degree of enterprise participation in vocational education between the two countries. German vocational education mainly adopts the dual system training mode, where vocational colleges are responsible for the training of professional theoretical knowledge, while enterprises are mainly responsible for the training of technical operation and vocational ability (Deissinger, 2015). Under this mode of personnel training, the degree of participation of enterprises is quite high. At the same time, the enterprise will pay a certain amount of salary for the internship students according to the agreement with the school. The students can also have direct contact with the enterprises in the course of training and have the opportunity to obtain job opportunities directly. Good job hunting opportunities and attractive remuneration packages invariably enhance the social attractiveness of vocational education. China's vocational education model has also recocknized the value of school-enterprise cooperation, but in general, enterprises are not directly involved in the education and teaching of students. Due to the lack of effective cooperation between schools and enterprises, the evaluation of students is still based on examination results, which undoubtedly affects the training effect of students' professional skills.

Furthermore, there are also obvious differences in the teaching mode and teaching staff of vocational education in the two countries. For example, German vocational education still adopts the apprenticeship teaching method, students can learn from the master of the practical skills and work experience, practical problems can also get timely feedback. The practical courses in Chinese vocational education are often difficult to obtain timely feedback and guidance from senior technical staff of enterprises, which seriously affects the teaching effect. It is for these reasons that even though the Chinese and German governments attach great importance to vocational education and actively promote the integration of vocational education with industrial development, the social recognition of vocational education in China is still at a relatively low level.

5. Conclusion

China and Germany have quite distinct vocational education systems which both have their advantages and shortcomings. In a nutshell, China relies largely on state-run vocational colleges with full-time professors and trainers, whereas in Germany's dual system the bulk of knowledge transfer happens in companies, with almost 3 million skilled workers nationwide acting as vocational trainers (98% part-time, only 2% as full-time educators). Despite these systemic differences, there are two remarkable communalities. One is a reality-check on the success of national economies. China has in recent years become world champion as an exporter, while Germany defended its position as a technology leader in a number of fields. The authors argue that these successes would have been impossible without a functioning vocational education system in both countries. Second, and as regards the social recognition of VE, both Germany and China face a shortage of skilled personnel both in production and in the service sector. This phenomenon and underlying reasons are amazingly similar in both countries: More and more families, including from the working class, strive for their children having higher education instead of learning a practical profession. This leads on the job market to an increasing disbalance of offer and demand. Both countries therefore try to improve the social recognition of VE with various measures. An interesting model are the dual study programs in Germany through which students can obtain both a skilled worker's diploma and an academic degree (Ling, Jeong & Wang, 2021).

Although the Chinese Government has enacted numerous policies to promote the development of vocational education, the promotion of vocational education is not an overnight task and requires more comprehensive exploration and reflection. First of all, the Chinese government should learn from Germany's experience and endeavor to raise

the strategic position of vocational education in social development, and improve the education model of vocational education in terms of education streaming. Secondly, China also needs to actively promote the participation of enterprises in vocational education, strengthen the links between enterprises, students and schools, and ensure that the students trained meet the needs of industrial development. In addition, China needs to improve the streaming, training and assessment model of vocational education and establish a multi-stage and multi-angle assessment system. Finally, China can also improve the level of students' personal cognition and publicize the concept of vocational equality by learning from Germany's experience. Meanwhile, China can also learn from Germany's experience in building vocational education faculties, and attract teachers with high professional and technical ability and theoretical level to join the construction of vocational education system.

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