

Comparison Between Vocational Education in China and Germany

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Abstract:

The issue of VET (technical and vocational education and training) in China has recently become the subject of considerable attention, yet there remain shortcomings in the manner of its development. This paper examines the distinctions between technical training in China and Germany about the legal framework, social and cultural context, and the structure of the vocational education system. It finds that both countries emphasise the equal status of vocational and general education. Regarding social background, the lack of attention to vocational workers in China's Confucian culture affects the enrolment in vocational education and the job status of graduates. The German cultural background and the cultural advantages of German industrial culture provide a more favourable social environment for vocational education. In terms of the education system, the Chinese vocational education system is mainly dominated by vocational schools, with enterprises contributing less to vocational education. In Germany, however, vocational education is shared by government departments and enterprises, with school-enterprise cooperation being relatively close. In light of the aforementioned analysis, this paper proposes the suggestions as follows: at the legal level, the vocational education law in China should be further amended to provide more robust protection for the interests of VET apprentices; at the social and cultural level, China should place greater emphasis on the social status of Vocational education. In the matter of the education system, China's vocational education group should facilitate greater involvement of industry associations and local enterprises in vocational education.

Keywords: Vocational education; China; Germany

1. Introduction

Since the start of the Sino-German vocational training cooperation programme in the 1980s, the dual system has not been fully utilised in China and there is considerable scope for the development of vocational training in the country. By way of illustration, the dual system of vocational education and training, which originated in Germany, has several exemplary features and is a key element in the success of German vocational education and training. Nevertheless, in 2021, the report on the large-scale questionnaire survey on the development of vocational education in China indicates that 85.82% of respondents expressed a lack of comprehension regarding the modern apprenticeship system. Furthermore, the data indicated that only 23.88% of vocational school students had a stable employment rate of more than 80% one year after graduation [1]. The data indicates that this phenomenon indicates that it is still challenging to promote the localisation of the dual system. Therefore, this paper aims to analyse the obstacles facing the development of VET in China by comparing the differences between the vocational education systems of China and Germany and to create possible ways to help improve VET in China.

2. Current Situation and Difficulties in the Development of Vocational Education in China

Since the State Council released the National Vocational Education Reform Implementation Programme in 2019, China has initiated a series of reforms to its vocational education system, drawing on modern concepts such as the dual system and the modern apprenticeship system. However, the 2021 Report on the Development of Large-scale Vocational Education in China identifies several challenges hindering the advancement of vocational education in China. These include issues related to social recognition, the quality of the development of talent and the objectives of the training.

2.1 Spiritual Needs of Vocational Education Students

The results of the survey indicate that social recognition is the aspect that students are most concerned about, with an eight-percentage-point higher rating than the second option [1]. According to Maslow's hierarchy of needs theory, social recognition serves as a benchmark for students' self-worth and realization. In the present circumstances, students exhibit a pronounced deficiency in confidence regarding their vocational education qualifications and

perceived competitiveness in the job market. Furthermore, the survey identified mental health issues as a significant concern among students as the numbers on the necessity of mental health education in vocational colleges indicate that 45% of respondents identified "very necessary," "necessary," "unnecessary," and "unclear" as the most appropriate options. The respective percentages are 0.03%, 46.91%, 3.46% and 4.57% [1]. In other words, over 90% of respondents believe that mental health education should be a priority in vocational schools. It can be ascertained that the mental health and spiritual values of Chinese vocational education students have become an urgent concern.

2.2 Quality of Talent Development

The survey revealed that only 23.88% of vocational school students opted to achieve a stable employment rate of 80% or above within one year, while 36.34% selected a stable employment rate of 36.34% within the same time frame [1]. It can be concluded that the employment stability rates of graduates from vocational colleges are relatively low. The questionnaire on the most important employment factors for enterprises, graduates and teachers of vocational schools identified the top three factors in each category.

For enterprises, attitude, teamwork communication and practical experience are the top three factors, accounting for 84.69%, 75.00% and 65.16% respectively. For teachers, attitude, training, teamwork and communication are the three most important factors, accounting for 88.37%, 77.73% and 76.42% respectively. It can be seen that there is a difference between the training objectives of enterprises and those of teachers [2]. Moreover, the state of vocational students' training is poor, and the labour market has expressed concern about the quality of students in vocational colleges. 50 per cent of respondents had an average or below-average impression of the overall situation of students in vocational schools, partly because of a mismatch between the training of talent in schools and the needs of companies, and the need for companies to spend money on secondary education.; some schools only focus on further education but not on skills training; local administrations and schools have a strict control over the time of students' internship and training, which leads to the fact that students cannot meet the requirements of top-ranking jobs through the internships. It can be seen that at the teaching level, there is a disconnect between school training and market demand. Furthermore, the challenges faced in the implementation of the Modern Apprenticeship System in Chinese vocational education also warrant consideration. It is postulated that the implemen-

tation of apprenticeships is of paramount importance to the personal and professional development of young people, equipping them with the requisite skills to thrive in an evolving labour market, but the situation that 85.82 per cent of respondents said they were not aware of modern apprenticeships revealed that the apprenticeships are not universally implemented in Chinese vocational education schools [1].

This paper will compare the level of school-enterprise cooperation between Chinese and German vocational schools from the level of school-enterprise cooperation and look for solutions.

3. Differences between Vocational Education in China and Germany

3.1 Legal System

Vocational education law plays an important role in national vocational education. It is conducive to the development of vocational education in China to compare the vocational education laws of China and Germany.

As a cross-border education, vocational education has a strong ‘industry, locality and externality’, which involves the interaction of different interests [2]. Therefore, major amendments to vocational education laws are often of great practical significance. By comparing the similarities and differences between the main amendments to the VET laws of China and Germany, it is possible to identify the different national contexts and characteristics of the content of the amendments in vocational education in the two countries. Comparing the revision of the German Vocational Training Act helps to identify shortcomings in the operation of the revision of the Chinese Vocational Training Act. In addition, comparing the specific operation of the revision of the German Vocational Training Act is also instructive for improving the Chinese Vocational Training Act in the future.

The major amendments to both countries’ VET laws aim to make VET more attractive and promote high quality in response to the structural problems of their industries and the needs of the digital revolution. Since the promulgation of the State Council Decision on vigorously developing a modern vocational education system in 2005, vocational education in China has gradually developed into a modern vocational education system that combines vocational education and general education from secondary to higher education. However, the bad image of “bottom-up” vocational education still exists in China [2]. It can be said that the original law’s emphasis on the value of vocational education has had little effect on improving the social status

of vocational education. Amending the Vocational Education Law will help improve the external social environment from the legal level, improve the social status and treatment of professionals, and enhance the attractiveness of vocational education.

Germany’s revision of the Vocational Training Act is also a response to its problems. The overall trend of new births in Germany is declining, which has led to a decrease in the source of vocational education in Germany. In addition, due to the expansion of the German higher education system, vocational education in Germany has also suffered. Compared with 2005, enrolments in ‘dual’ vocational education and training fell by 4.8% in 2019, while enrolments in higher education rose by 39.7%. It can be seen that both China and Germany have amended their VET laws to increase the attractiveness of VET.

However, the major amendments to the German and Chinese Vocational Education Acts show different characteristics in terms of the micro- and micro-provisions to improve the system of protection of learners’ rights and interests. For example, Article 52 of China’s Vocational Education Law states that The State shall establish a system of rewards and financial assistance for students in vocational schools, rewarding those who are particularly outstanding and providing financial assistance to those whose families are in financial difficulty, with appropriate bias in favour of students in specialities such as arduous, special trades and professions. Similarly, the amendment to the German Vocational Education Act also focuses on protecting the rights of dual-system educators to receive remuneration and to leave the workplace and establishes several mini-provisions. The amendment adds a new minimum standard of remuneration to the ‘right to remuneration and specifies the minimum amount of remuneration in the second paragraph [3]. Due to the complexity of cross-border interests, high-quality VET cannot be developed without finely tuned micro-articles. As can be seen from the detailed regulations on the protection of the rights of Chinese and German system apprentices, China’s Vocational Education Law should further refine the micro-articles to clarify the minimum remuneration for workers and the amount of time conversion.

Furthermore, the paper posits that despite the legislative emphasis on the equivalence of vocational and general education in China and Germany, there is a discernible decline in student enrolment in both countries. The data indicate that some vocational schools are employing a strategy of prioritising further education over skills development to attract students, which is contrary to the objective of vocational education. In terms of potential solutions, the Chinese Vocational Education Law emphasises the equal status of vocational and general education, primarily from

a value perspective. Nevertheless, this does not directly address the aspiration of those who have received vocational education to pursue higher education. The discrepancy between the stated goals of vocational education in China and the actual development strategies of vocational education institutions illustrates the inadequacy of higher vocational education. Vocational education lacks the coherence and rigour that are characteristic of undergraduate and graduate-level higher education.

In response to the decline in enrolment in vocational education, the German government has proposed a new framework for vocational education in a report from the Federal Institute for Vocational Education (BFVO). This framework aims to align vocational education with general education by establishing a clear hierarchy of qualifications within the field of vocational further education. It also introduces new terminology, such as “Vocational Training,” to indicate advanced vocational qualifications that are on par with university education [3]. This establishes a parity between advanced vocational qualifications and university education.

It can be argued that the comparative analysis of vocational education in China and Germany also suffers from a lack of student interest. The modification of diploma titles in Germany is indicative of the influence of vocational education on university-level higher education. The equivalence of higher vocational qualifications with university education may help to mitigate the social stigma attached to vocational education. It is acknowledged that some studies have proposed that the new title may be at odds with the established German vocational education system and that there is still uncertainty about its practical effects [4]. However, it is paradoxical that Chinese entrepreneurs have indicated that graduating vocational students are unable to meet the needs of companies and that the quality of the student body produced by the profession does not align with market demand [1]. This paper posits that the issue of students’ self-identity may be a contributing factor to their suboptimal learning outcomes.

3.2 Cultural Context

The socio-cultural context often exerts an influence on individual choices and behaviours. Consequently, different social perceptions of vocational labour and vocational education can have both positive and negative impacts on the quality of vocational education and training.

It is important to note that there is a significant cultural divergence between the Chinese and German conceptualisations of occupation. This is also a significant factor influencing the disparate values attributed to vocational education in China and Germany.

Since the establishment of Protestantism by Martin Luther, the concept of the sacred has been ascribed to professions. The Protestant view of vocational education is that it is a sacred and ordered endeavour [5]. This implies that vocational education is not merely a means of earning a livelihood; rather, it is a religious mission with inherent sanctity. Vocational education is a role divinely appointed for human beings, and it is incumbent upon them to fulfil their duties with precision and conscientiousness. Concurrently, Germany’s conservative cultural heritage not only retained this value but also inherited the German apprenticeship system, thereby establishing a robust vocational education system.

However, the situation in China is different. It must be acknowledged that the Confucian tradition in traditional Chinese thought has influenced the evolution of China’s unique approach to vocational education. On the one hand, the value of ‘learning and excellence’ has led to Chinese civil society aspiring to become ‘political gentlemen’ with both talent and virtue. This has played a significant positive role in promoting the progress of civilisation and maintaining social order. However, on the other hand, Confucianism has also established the social concept of “those who work hard rule others, and those who work hard rule over others,” thus forming this value orientation: all things are inferior, but only the study of books is high. This social orientation has created a paradox in the society. On the one hand, policy and publicity constantly stress the importance of vocational education. However, on the other hand, the masses are reluctant to take the initiative to choose vocational education. This is because vocational education is pursued by people who are extremely eager for social recognition.

Furthermore, in comparison to the elevated status traditionally attributed to certain professions in Protestant Germany, the perception of professional roles in China, particularly those within the industrial sector, remains relatively nascent. In the Modern Chinese Dictionary, the term “occupation” is defined as the work that an individual performs in society as the primary source of income. Furthermore, the majority of individuals tend to base their career choices on the fundamental objective of survival. Consequently, it is challenging to integrate the concept of work with the broader notion of the meaning of life. Concurrently, the employment environment for the majority of skilled professionals remains suboptimal, characterised by inadequate economic remuneration and limited social benefits. This further perpetuates the social construct of those who labour to rule, and those who labour to rule over others. Last but not least, a notable correlation exists between social class and the German general schooling system. Individuals from higher social classes are more

likely to achieve educational success and a more seamless transition to VET [6]. In China, however, those from higher socioeconomic backgrounds frequently eschew vocational education, instead opting to send their children abroad for general education. In other words, China has not yet reached a stage of development where the general and vocational education systems are equally valued and accepted.

It can thus be argued that in the Chinese social and cultural context, vocational education and manual-based vocational labour are frequently devalued by the general public. This undoubtedly undermines the self-esteem of vocational education students and intensifies the psychological pressure they experience, given that their future role as “vocational labourers” is being questioned. In addition, amid a bleak global economic environment, the intensifying public examination craze in China has also hurt vocational education. Invisible benefits and stable job security have become the primary factors that people are looking for, while vocational education can hardly help them in their quest for public office, which further aggravates the stereotype of ‘bottom-up’ education.

3.3 Education System

Germany has a dual education system and the organisational framework for vocational education and training is usually shared between the federal government, the Länder and the municipalities. The German VET system consists of a dual system of full-time study at secondary and tertiary levels, with students pursuing their academic studies in vocational schools and companies. The dual system requires tripartite cooperation between employers, trade unions and the government. Dialogue and co-decision are crucial factors in ensuring that reforms are put into practice, which is essential.

China’s vocational education system has also taken the German dual system as a model and innovated the training group model and the school-enterprise cooperation model of cooperative education within the system. The vocational training group is one of the diversified vocational training models with Chinese characteristics. It covers a range of subjects such as schools, enterprises, industries, government and research institutions.

The next section examines the challenges facing the development of vocational education and training in China by comparing the Chinese and German vocational education and training systems.

The primary distinction between the Chinese and German educational systems pertains to the respective roles of the main body of education. In the German vocational education system, enterprises are significant contributors

to the educational process, assuming a prominent role in the advancement of vocational education. Additionally, they exert considerable influence on the selection of candidates for admission to vocational colleges and universities, as well as on the development of vocational education programmes. At the same time, enterprises play a leading role in the assessment and training of talent in vocational schools. It can be said that the substantial involvement of enterprises in the German dual system not only ensures that the training of vocational talent is in line with the needs of the labour market, but also safeguards the interests of enterprises and promotes constructive cooperation between schools and enterprises, while the needs and interests of each participating subject are taken into consideration, the subject also fulfils its obligations and behaviours to guarantee the smooth functioning of the dual system. However, in China, the primary drivers of vocational education are government-run education departments and vocational education schools. Enterprise involvement in the provision of vocational education does not extend to the development of teaching materials or the design of assessment tools. Furthermore, about the interests of enterprises, there is less demand for talent through school-enterprise cooperation [7]. In the context of China’s vocational schools, the development of school-enterprise cooperation is constrained by the country’s large working population base, which provides a sufficient supply of labour for enterprises. Consequently, enterprises have limited incentive to pursue a proactive role in school-enterprise cooperation. In other words, it is challenging for Chinese enterprises to assume an active role in school-enterprise cooperation in the field of education.

In addition, there is a clear contrast between how schools and enterprises cooperate in China and Germany. In the context of vocational education in Germany, the roles and rights of vocational institutions in the development process are clearly defined. The German Ministry of Education can implement uniform standards and management procedures for the education sector at the regional level. Additionally, German industry associations collaborate to guarantee that vocational colleges and universities can engage in school-enterprise collaboration in a manner that is conducive to the smooth functioning of such partnerships. In China, the responsibility for vocational education lies with the local education department. Despite the existence of clear laws and regulations about the business development of vocational schools, deficiencies remain in the promotion of cooperation and exchange between enterprises and vocational schools [8].

In Germany, the vocational training sector is mainly shaped by the participation of enterprises, whereas in the vocational training system, the role of schools in

school-enterprise cooperation is more prominent. The primary function of German vocational schools in the context of vocational training is to provide supplementary academic education in conjunction with dual vocational training, as well as to offer preparatory programmes for individuals who are not eligible to participate in vocational training. The enterprises identify apprenticeships by market demand, disseminate information on apprenticeships, conclude apprenticeship training programmes, conduct the in-house training of apprentices, and engage in apprenticeship assessment and vocational qualification. In China, the responsibility for school-enterprise cooperation and collaborative education is borne by schools. The education department is tasked with the development of teaching materials, while schools are solely responsible for the training of students and enterprises provide assistance only in the details of internships, practical training, and on-the-job training. Concurrently, some enterprises also commission schools to establish order classes and title classes for the training of personnel required by the enterprises. However, the primary contribution of enterprises in the cultivation of talent remains the provision of practical training sites and equipment.

Furthermore, at the local level, the roles played by the Chinese and German guilds are also markedly distinct. In Germany, the chambers of commerce and industry and the chambers of handicrafts play a significant role at the local level. Their responsibilities include the supervision and guidance of vocational training within local enterprises, the approval of the sustainability of vocational training programmes in enterprises, the accreditation of the competence of in-house training instructors, the registration of vocational training, the establishment of examination boards, the issuance of training regulations, and other related tasks. The Federal Länder Economic Affairs Departments are responsible for the supervision of industry.

The lack of legal protection, policy support and economic source restrictions in China's vocational education system has resulted in a lack of motivation and operational security for the guilds involved in the cooperation between enterprises and vocational colleges and universities. This makes it challenging for them to play a role similar to that of the German guilds in practice.

The unique characteristics of vocational education in China can make up for the shortcomings of the broad framework of vocational education in China. Vocational education groups are one of the representatives of the diversified model of vocational education with Chinese characteristics, covering various fields such as schools, enterprises, industries, government and research institutions. The establishment of a platform for VET groups can facilitate the integration, coordination and linkage of resource-

es, leading to a mutually beneficial situation for all parties involved. It is incumbent upon the vocational education industry to assume an active role in the functioning of VTC groups. In addressing the challenges encountered in the apprenticeship training process, such as the inadequate training capacity of enterprises and the lack of comprehensive resources, VTC groups can assume a coordinating role, facilitating the collaboration between enterprises and vocational colleges to establish inter-enterprise vocational training centres. This approach allows for the optimal utilisation of each entity's strengths, effectively addressing the limitations and ensuring a more robust training ecosystem. Additionally, VET groups are classified into two categories: industry-based VET groups and regional VET groups. The latter's pluralistic composition reflects the diversity of stakeholders involved. Accordingly, a contract regulating the specific responsibilities and details of the group, based on the basic charter, should be signed to clarify matters such as funding, training content, teachers, assessment, and so on. Furthermore, government bodies within the group may offer policy support, contingent on the specific circumstances, to facilitate the advancement of vocational education.

4. Prospects for the Development of Vocational Education in China

Vocational Education Development Prospects in China In his renowned discourse, the esteemed educator M. Sadler refuted the notion of uncritical replication of efficacious models from abroad. Nevertheless, an analysis of the German education system and its school-enterprise collaboration apparatus demonstrates that it can still provide valuable insights and inspiration for China's vocational education.

Primarily, at the legal level, China should further refine the terms and conditions of vocational education to safeguard the labour rights and interests of those who receive such education. Furthermore, relating to the value of vocational education, China's vocational education law should not only emphasise the equal status of vocational and higher education but also address the impact of undergraduate education on vocational education. This would entail improving the mutual transformation of vocational and higher education qualifications to cope with the decline in the number of vocational education enrolments.

In the socio-cultural context, it is recommended that China's vocational education system place greater emphasis on the psychological well-being of the educated and on fostering a sense of professional identity. Conversely, the government should accord greater attention to the explo-

ration of culture and the provision of humanistic care for vocational workers, particularly those in ordinary vocational roles, to establish a distinctive Chinese industrial culture.

Ultimately, about the education system, Chinese vocational education must pursue avenues of school-enterprise collaboration that align with the distinctive characteristics of the Chinese context. This entails not only an intensification of existing forms of collaboration but also the pursuit of novel avenues for engagement. One such avenue is the enhancement of scientific research collaboration between enterprises and educational institutions. Concurrently, within the context of the education group model, government departments should assume a more active role in mobilising vocational schools and enterprises to engage in collaborative efforts and enhance the terms and conditions of internal cooperation.

5. Conclusion

In conclusion, this paper provides a comparative analysis of the salient features of vocational education and training in China and Germany. It considers the influence of Chinese and German socio-cultural backgrounds on vocational education, as well as the Chinese and German vocational education systems. It can be seen that the Chinese vocational education law is unable to provide clarity on specific micro- and macro-level clauses. Furthermore, it has been demonstrated that the socio-cultural background exerts a negative influence on the construction of vocational education in China. Additionally, the model of school-enterprise cooperation is still in its infancy. It is therefore recommended that China's vocational education law should be further amended to improve the rules governing the remuneration of educated workers and to enhance the rights and interests of enterprises. Furthermore, industry associations and enterprises should be empow-

ered to assume greater responsibility for vocational education, to protect the interests of enterprises. From a cultural perspective, there is a need to reinforce the humanistic care for workers, enhance their treatment, and cultivate a distinctive Chinese industrial culture.

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