German "duale ausbildung" vocational education and its enlightenment to China's vocational education

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Abstract. Taking the key factors for the success of German "duale ausbildung" vocational education as the starting point, this paper introduces in detail five aspects: the leading role of the government, the main role of enterprises, the degree of social recognition, the team of dual qualified teachers, and the assessment and evaluation system. This paper analyzes the problems faced by vocational education in China, such as low social recognition, weak cooperation between schools and enterprises, inadequate talent training in schools to meet social needs, and insufficient attention from the government, and draws on the successful factors of dual vocational education in Germany to propose four inspirations for the reform of vocational education in China, including: improving laws and regulations, improving the security mechanism, improving the attractiveness of vocational education, strengthening the construction of "dual teachers" team Improve the social applicability of vocational education.

1 Introduction

With the development of vocational education and the transformation and upgrading of national industries, new requirements for talents are put forward, and the contradiction between talent training and social needs is particularly prominent[1]. The German vocational education and training system has always been a model for all countries to learn from[2]. The "duale ausbildung" vocational education and training model is the pillar and key of German vocational education[3]. The dual ausbildung is a school running system supported by national legislation and co built by schools and enterprises, which highlights the cultivation of practical ability, gives consideration to the study of theoretical knowledge, and aims to cultivate high-quality skilled talents[4]. Through in-depth analysis of the characteristics of German vocational education and the current situation of vocational education in China, this paper draws on the German "duale ausbildung" vocational education model to provide effective reference for the reform and development of vocational education in China[5].

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2 Key factors of "duale ausbildung" vocational education

The characteristics of the duale ausbildung are as follows: First, a sound legal guarantee system. The federal government has issued the Federal Vocational Education Law and the Enterprise Training Regulations, which make unified provisions on enterprise training. Enterprises sign vocational education and training contracts with students and schools. Second, Social recognition is high, and students actively choose vocational education. Third, Vocational education takes enterprises as the main body, and enterprises are deeply involved in teaching and curriculum. Fourth, We have teachers with reasonable structure, clear responsibilities and qualified qualifications. Fifth, Complete assessment and evaluation system.

1. The government plays a leading role. The government plays a leading role in the success of Germany's "dual ausbildung". First, The German government provides financial support for public vocational schools. Second, The German government unifies the vocational education standards of enterprises and schools through the Federal Vocational Education Law, the Handicraft Regulations, the State School Law and other laws and regulations. Under the unified legal framework, schools, enterprises and students jointly implement the vocational education standards. Third, The government attracts enterprises to actively participate in vocational education through incentive policies, such as tax reduction, subsidies, incentive programs, etc., to encourage enterprises, especially small and medium-sized enterprises, to actively participate in vocational education and training. Fourth, The government provides a consultation and cooperation platform for enterprises, schools and industry associations to form a mechanism of multi-party cooperation.

2. The main role of the enterprise. In Germany's "dual ausbildung" education system, enterprises play a leading role. First, The students of the school are recruited independently by the enterprise according to the job needs, and the students are recruited to sign training contracts with the enterprise. Therefore, vocational education students have dual identities, both as employees of the enterprise and as students of the school. Second, The specialties and courses set up by the school shall be set by the enterprise under the supervision of the guild according to the regional economy. Third, The "dual ausbildung" vocational education funds in Germany are mainly invested by enterprises, which account for about 70% of the vocational education costs, while the government only accounts for about 30%. Fourth, The enterprise provides vocational education students with training and practical posts. The "dual ausbildung" vocational education students use the form of work study alternation. One third of the time they spend in school learning theoretical knowledge and public quality, and two thirds of the time they spend in the enterprise doing practical learning. The enterprise teachers are responsible for training the content of practical learning. The practical assessment of students is decided by the enterprise according to the requirements of laws and guilds.

3. High social recognition. Another reason for the success of Germany's "dual ausbildung" vocational education model lies in the respect and recognition given by the state to skilled workers. Germany's "dual ausbildung" vocational colleges are favored by young people. In the German education system, about 55.7% of young people choose to participate in vocational education. The first reason is the high employment rate. The employment rate of graduates of the "dual ausbildung" vocational education is as high as 95%, the unemployment rate is only 7%. The second is high salary. German vocational education students do not need to pay tuition fees. On the contrary, for students who have signed training contracts with enterprises, enterprises need to pay students an average monthly living allowance of 795 Euros, to provide living security for students. Third, the national qualification framework recognizes that higher vocational education has the same
academic level as higher education, vocational colleges have the opportunity to further their studies after graduation, and it is allowed to convert vocational knowledge and skills obtained outside of colleges and universities into credits, but not more than 50%.

4. "Double qualified" teachers. The teaching staff of Germany's "dual ausbildung" vocational education includes vocational school teachers and enterprise vocational educators. The two teams perform their respective duties in the training of vocational and technical personnel, and cooperate with each other. The two teams together form a complete "double qualified" teaching team, forming the "double qualified" quality of individual teachers and the "double qualified" structure of the team.

5. Complete assessment and evaluation system. German "dual ausbildung" vocational education has a complete set of assessment and evaluation system. The assessment covers a wide range of areas, is difficult and closely follows the economic development. The assessment is divided into three parts: school assessment, enterprise assessment and vocational skills assessment. Vocational schools are responsible for assessing students' basic theoretical knowledge, enterprises are responsible for assessing students' corporate training and training achievements, and two vocational skills assessments of relevant majors are conducted during the whole vocational education study period. If the assessment is qualified, the vocational qualification certificate of the Federation of Industry and Commerce (IHK) will be issued. Students can only graduate after obtaining academic certificates and vocational qualification certificates.

3 Problems in vocational education in China

Compared with the German "dual ausbildung" vocational education model, the development of vocational education in China still faces a series of problems.

1. Low social recognition. The social recognition of vocational education in China is not high, which is mainly reflected in: First, influenced by traditional ideological education, the society generally has a prejudice against vocational education, believing that only poor students can go to vocational colleges. In terms of schools, the evaluation of a middle school (junior high school, senior high school) is based on the number of students entering the general high school and the undergraduate rate. In terms of parents, many parents have the idea that vocational schools are inferior. Some parents of junior high school students would rather spend expensive tuition to send their children to international schools or private high schools than let their children go to vocational high schools. Second, the social status of vocational college graduates is not high. At present, there is a "diploma only" phenomenon in China. Some highly paid enterprises, government agencies, institutions and other institutions have a high threshold for employment. They only recruit people with ordinary higher education qualifications. The working environment of vocational college graduates is poor, their wages are low, and there is limited space for career improvement affected by their qualifications. Third, the society also has a prejudice against the teaching staff engaged in vocational education, believing that vocational colleges are lower than ordinary colleges and universities, so vocational colleges often cannot recruit talents with high skills, high quality and high scientific research ability to engage in teaching and research.

2. The school enterprise cooperation is not deep enough. At this stage, the main way of cooperation between enterprises and vocational colleges is to provide students in vocational colleges with post placement internships, followed by enterprise technicians serving as part-time teachers in vocational colleges, and again, enterprises entrust vocational colleges to train employees. It can be seen that the reason why enterprises are willing to cooperate is that they can recruit appropriate employees and train employees through cooperation, and they are unwilling to have more in-depth cooperation. The first reason is that there is no
incentive policy and cooperation mechanism, the investment and return of enterprises are not proportional, and the interests of enterprises are not guaranteed. Second, the students' loyalty to the enterprise is not high. Now, the students are unwilling to engage in front-line work, can't bear hardships, and the resignation rate is high. Therefore, the enterprise is worried about the loss of trained talents, and is unwilling to spend much effort to train students. Third, the overall scientific research ability of vocational colleges is not strong, and there are few projects that can cooperate with enterprises to tackle key problems. In addition, due to the heavy teaching workload of teachers in vocational colleges and the lack of incentive policies for scientific research, teachers' enthusiasm to participate in enterprise research projects is not high.

3. The school's talent cultivation cannot meet the social needs. The school's talent cultivation cannot meet the social needs. The author found that the students trained by the school are out of touch with the needs of the enterprise and need to be retrained by the enterprise. The reasons are as follows: First, the traditional curriculum system is used in the course setting, the talent training program formulated by the school has no standards to follow, and whether the talent training program meets the regional economic development cannot be judged. Second, in terms of the teaching staff, the vocational education teachers in China are mainly school teachers. From school graduation to vocational school employment, teachers often lack enterprise work experience, so the professional and technical abilities of teachers themselves are not strong. On the other hand, vocational schools will hire technical personnel from enterprises to teach as external teachers. However, because enterprise personnel have not received special training, they are often skilled, but do not know how to speak. In addition, the school has not built a cooperation platform for on-the-job teachers and external teachers. School teachers and external teachers of enterprises often do not communicate with each other, do not divide labor, do not cooperate, and only complete their own teaching tasks. Therefore, they cannot learn from each other. Third, in terms of student assessment, the current vocational education examination lays particular emphasis on theoretical knowledge, while the vocational skills assessment is little or no, and the examination content is assessed according to the experience of teachers and the overall receptivity of student groups. Different teachers or students of the same course often have different contents, and there is no standard scale to measure whether students meet professional requirements.

4. The government pays insufficient attention. The fundamental reason why the society does not recognize vocational education and the school enterprise cooperation is not deep enough is that the government does not pay enough attention to vocational education. On the one hand, the government has no overall planning for vocational education, and the implementation of vocational education lacks reference standards, resulting in the development of vocational education not keeping up with the economic development. On the other hand, although the country has issued a series of policies on vocational education, they are not fully implemented, and there is no strong mechanism to ensure the implementation of policies. Third, few local government staff know about vocational education and do not know about vocational education, so it is difficult to make correct decisions.

4 The enlightenment of "Dual System" on China's vocational education reform

1. Improve laws and regulations and safeguard mechanism. Relevant departments of the national government should issue detailed laws and regulations to clarify the responsibilities and rights of enterprises, industries and schools in vocational education. Relevant incentive policies have been introduced, and a multi-party cooperation platform
has been created to encourage enterprises to devote themselves to education, give play to the main role of enterprises in vocational education, and stimulate enterprises and schools to deepen the integration of industry and education. Organize enterprises, guilds, education and other departments to jointly draft and formulate vocational education teaching framework standards and enterprise training rules, define the training objectives, teaching and training contents, assessment and evaluation standards of each specialty, and incorporate them into legislation to ensure that school teaching and enterprise training are implemented in accordance with the standards. Give play to the supervision role of industry associations and other third parties, develop a third-party assessment and evaluation system, and actively carry out the separation system of teaching and examination. Create a collaborative development and cooperation model of education and economy featuring "government, universities, industries, enterprises and capital".

2. Improve the attractiveness of vocational education. Governments at all levels should innovate the talent evaluation mechanism, improve the social status of highly skilled talents, break the tradition of academic credentials, and promote vocational college graduates to enjoy the same treatment as ordinary college graduates in terms of settlement, employment, participation in recruitment of institutions, professional title evaluation, rank promotion, etc. Enterprises should improve the treatment of technical and skilled talents, and the salary treatment and promotion opportunities should be inclined to front-line highly skilled talents. At the same time, the government, society and education departments should vigorously promote the spirit of craftsmanship, and start the enlightenment of professional quality and skills from the education of children and primary and secondary schools, so as to make the most glorious concept of loving science and technology, loving skills and working deeply rooted in the hearts of the people.

3. Strengthen the construction of "double division" team. As the saying goes, "A good teacher makes a good student". The ability of teachers directly determines the quality of students. To cultivate highly skilled talents, teachers should first be highly skilled talents. Therefore, to improve the selection criteria of vocational teachers, vocational teachers should not only have a high degree, but also have relevant professional enterprise work experience. Therefore, it is necessary to break the existing educational background oriented mechanism of teacher recruitment, and allow enterprises' technical experts and skilled masters to apply for vocational teacher posts. At the same time, it is also necessary to introduce incentive policies to encourage teachers to constantly improve their personal technical ability and scientific and technological breakthrough ability, break the paper only title promotion evaluation system, and adopt flexible title evaluation mechanism. For example, teachers with outstanding skills can be specially employed as industry professors. As vocational education enterprise training teachers are indispensable, the government departments should issue corresponding policies to give enterprises and enterprise training teachers participating in vocational education training corresponding welfare treatment and preferential policies. At the same time, government functional departments should also formulate corresponding regulations on the qualification of enterprise training teachers. Only those who meet the vocational training qualification can engage in enterprise training when they have obtained the vocational teaching qualification, so as to ensure the teaching quality of enterprise training.

4. Improve the social applicability of vocational education. First, reconstruct the curriculum system based on the professional work process. Courses shall be set according to the requirements of enterprise posts, work tasks and professional abilities, and curriculum standards shall be formulated and improved according to the requirements of professional posts (groups). New processes, new technologies and new specifications shall be included in the curriculum standards and teaching contents. Secondly, documentary evidence accommodation. The examination contents and evaluation standards of vocational
qualification certificates will be incorporated into the curriculum design, and practical skills and professional quality training will be strengthened to highlight the characteristics of vocational education with students as the main body and high skill training as the core. Finally, guide students with employment as the guidance, cultivate students' professional identity and healthy career outlook, pay attention to the cultivation of students' sustainable academic ability and social adaptability, pay attention to students' psychological health, and enable students to adapt to the identity change from learning to employment.

This work was supported by the Zhejiang Higher education in the 13th Five-Year Plan Foundation of China [Grant No. JG20190726], Zhejiang Education planning project Foundation of China [Grant No. 2021SCG106], Ningbo Education Science Planning Project [Grant No. 2022YZD019].

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