

The Application of Apprenticeships in Germany and the United Kingdom to the Reform of Chinese Vocational Education and Training

Yiying Liu^{1,a,*}

¹Shanghai International Studies University, Shanghai, 201620, China
a. 0191103014@shisu.edu.cn

*corresponding author

Abstract: Since the number of college students in China is tremendously increasing nowadays, the economic structure in China is going through a huge transformation, and adequate human resources are being needed desperately by the skill-intensive industry. The Chinese government is concerned that the deficiency of apprentices in certain industries will threaten the economy. Effective policies, therefore, should be made to carry out reform of vocational education and the training system. This paper draws conclusions about the strategies applied in German and the United Kingdom apprenticeships from data, which originate from government documents and published papers. Furthermore, the author discusses how to apply useful experience to the reform in China, estimating the directions of vocational education and training development. Through research, it is suggested that reform should be based on the revised laws. The government should introduce more stakeholder participation mechanisms and improve education quality, guiding the ideology via mass media and publicizing the benefits of vocational education and its promising prospects after the reform. Planning should be strategic and closely related to facts. In addition, special institutional research organizations are supposed to be established.

Keywords: vocational education, China, the United Kingdom, Germany, apprenticeship

1. Introduction

The current vocational education in China is featured by characteristic complexity, and direct adoption of any of the classical vocational education experiences from abroad would reflect its shortcomings and hardly summarize the rich reality within China. At the same time, Chinese vocational education is in urgent need of reform to address the current dilemma of structural imbalance in the economy and the lack of talent in labor-intensive industries.

Through case studies, data analysis, and contrastive analysis, this paper first analyzes and summarizes the experience of apprenticeships in the United Kingdom and Germany, and then introduces the current plight China is facing, that is, the deficiency of talents educated through vocational training system. To this end, in a comparison with Germany and the United Kingdom, this paper attempts to answer the core issue that plagues the development of vocational education in China: what roles enterprise participation, school adaptation, industry-education integration, cost-sharing, and government should play. Finally, potential policies will be listed. Through this research, a better

understanding of the bottlenecks in the process of integration of industry and education in Chinese vocational education is offered. Additionally, the research is of considerable reference value for related personnel when they make policies for the future development and reform of vocational education and training system in China.

2. A Comparison Between the Apprenticeships in Britain and Germany

2.1. Factors Influencing the Policy Making

2.1.1. Economic Structure

Generally, social background is the dominant factor for policies. Based on the human capital theory, apprenticeship is conducive to economic growth, considering the administrative system, economy, culture, history, etc. in specific countries. Among the listed factors, it is especially necessary to attach great importance to the structure of the economy. The skill-intensive producing mode is suitable for an apprenticeship. In Germany, the economy is dominated by modern industry, and positions like technicians are always in need. By comparison, the demand for apprentice workers is less in the United Kingdom, due to the dominance of the service industry.

2.1.2. Cultural Awareness

Additionally, the cultural factor is embodied in ideology. People's perspectives and values directly decide the feasibility of policies and the simplicity of carrying them out. In Germany, people take vocational education and training for granted. While in the United Kingdom, people appreciate the elegant manner of gentlemen, making it harder for people to accept vocational education. Education in Germany splits into vocational education and general education just after primary education, helping ensure a certain number of students enrolled in vocational education. The upper secondary education in the United Kingdom, however, eliminates the possibility for students to take vocational training at an early stage of their lives.

2.1.3. Training System

Besides, vocational education serves as an essential source of human resources and an upper stage of entering the market, mediately affecting the economy. The scale of an enterprise is an indication of its capability of risk-taking. Enterprises of a large scale have enough funds to cultivate new human capital for themselves and thus are relatively less vulnerable to risks. By contrast, companies of a small scale are merely at the stage of surviving, meaning that they can neither afford the training nor possibly take a risk. Last but not least, the guarantee that apprentices will be immediately employed after finishing the training is decisive, because apprentices wish their opportunity cost can be paid off. In Germany, the dual system is not only closely linked to vocational qualifications, as in the United Kingdom, but also exclusive, meaning that enterprises do not accept other ways to apply for jobs. It consolidates the dual system's importance of vocational education in Germany.

2.2. The Four Stakeholders

A stakeholder refers to a party that has an interest in a company and can either affect or be affected by the business. When it comes to apprenticeship, there are four major stakeholders: the government, educational organizations, enterprises, and apprentices.

2.2.1. The Power and Interest Situation of the Government and Educational Organizations

In both the United Kingdom and Germany, the government has the power to lead and benefit from economic growth. While enterprises directly benefit from apprenticeship training, they also carry out apprenticeship training and obtain training grants from the government, so the two parties both have high levels of power and interest. However, the level of power of educational organizations in the United Kingdom is not high, for the fact that they serve as passive implementers. Apprentices, undoubtedly, is a stakeholder with a high level of interest in modern apprenticeship in the United Kingdom, and they expect to realize their career development. However, without participating in decision-making, development, implementation, and management, their actual power is low.

In German dual education system, stakeholders all have a high level of power, and they share the power in decision-making and management with the government. In terms of power distribution, the balance of interests and power in British modern apprenticeship is problematic. The power of apprentice and educational organizations is too weak, and the system fails to give these two high stakeholders sufficient opportunities to participate in decision-making and management. Enterprises' power is too strong. And the biased interest ratio poses threats to apprenticeships in the United Kingdom.

A conclusion therefore can be drawn: the four main stakeholders of the modern apprenticeship should be given power commensurate with their level of interest in order to promote cooperation among the four parties and to maintain the balance among them.

2.2.2. Factors Concerned and Policies Applied by Enterprises and Apprentices

Among the four stakeholders, the touchstone of policies are decisions made by two of them: enterprises and apprentices.

2.2.2.1. Factors Concerned and Policies Applied by Enterprises

The first concern of enterprises is the cost and the risk of losing their cultivated human capital. Chances are that apprentices may leave the company where training and education are offered in order to pursue better career development in another company that offers higher wages or allowances. The current labor market demands that people arm themselves with up-to-date knowledge and skills, so as to better contribute to work performance.

In terms of the policies applied, firstly, enterprises lower the workers' wages and get subsidies offered by the government. Beyond that, companies have a better chance of recovering their investment if apprenticeships can be made more sensitive to the needs of specific companies by limiting apprentice movement after graduation. It represents a change from a framework to standards that are driven and created by employers. Although England has less labor market regulation than other nations, it is likely that this bundling or specialization of skill sets, along with other methods the employer uses to forge a bond with their apprentices, are to blame for the fact that many employers there continue to pay significant net training costs [1]. What is more, those firms who do not actively participate in training the apprentices should pay the tax, while the money goes to the active firms in the form of incentives. But because the law of taxation is not mandatory, it has not worked well in the United Kingdom [2]. France, Denmark, and Ireland are countries with better implementation of taxation. Germany is also trying to realize the legislation.

2.2.2.2. Factors Concerned and Policies Applied by Apprentices

Apprentices are mainly concerned with their career development prospects and other educational options as a part of their opportunity cost. Even though apprentices can earn wages and learn

knowledge simultaneously, after finishing their training they actually will trade their labor forces with the enterprise. Apprentices wish that the tacit knowledge they obtained can create maximal profits for them, not to mention the fact that their career options are more limited compared to those who choose to accept general education. But there is an additional concern for the apprentices—the culture, to be more specific, social stigma. The cultural factor is about whether the ideology weighs the tacit knowledge over the general literal one. The one, in China, is the same as that in the United Kingdom. People do not reckon it decent to make a living via vocational education, so if going to college is viable, one will definitely accept higher education despite the prestige, if low, of the college. When it comes to the employees' side, policies were made to ensure that apprentices can get jobs without obstacles and prevent burning their bridges to other education options.

In terms of the policies applied, at the national level, both countries have established organizations for overall planning and management, such as the Federal Institute for Vocational Education and Research in Germany and the National Apprenticeship Service (NAS) in the United Kingdom.

3. The Vocational Education and Training System in China

3.1. Brief History of Apprenticeship and Vocational Education in China

Vocational education in China began with the inheritance of skills among family members. Later, it gradually expanded to the social area, became a purely private agreement between masters and apprentices, and was not bound by any formal organization. Except for family inheritance and folk apprenticeship, there was an official apprenticeship, which was formed and developed with the establishment and development of an official handicraft workshop. After the founding of the People's Republic of China, China reformed the apprenticeship system, removing the exploitative elements and guaranteeing the basic rights of apprentices. Technical school is a form of vocational education established on the foundation of experience learned from the Soviet Union, organized by industrial departments, and featured close cooperation between schools and enterprises. The introduction of the German dual education system model started in the early 1980s and has been applied to vocational education and training system in China till now.

3.2. The Current Situation and Dilemma

A characteristic of China's basic national conditions is the relatively backward economy, low level of industrialization, and unbalanced development [3], especially the current employment pressure in the labor market.

Firstly, there are no laws on how government funds should be distributed between schools and companies involved. China's vocational education system is not systematic, which results in the development tendency of weakening gradually since modern times.

The second one is that the current form of apprenticeship is behindhand and cannot meet the needs of enterprises and employees for its low education quality. Students are taught skills for only labor-intensive positions. This kind of apprenticeship lacks effective technical theory education and is limited to simple and repeated operation training. Reorienting and adapting apprenticeships to fit the unique requirements of adults and older employees in the context of lifelong learning is a significant issue because apprenticeships are typically geared for young people [4].

Additionally, the government bears the full cost of students' enterprise training and internship, which is not viable in China. In this way, the "inequity" of the funding mechanism directly leads to "inefficiency".

Moreover, there are objective factors for the low enthusiasm of the enterprises to participate. Employers tend to prevent risk when it comes to investing, especially where the cost is relatively high.

It is unaffordable for small-sized companies to invest in training, and they undertake the risk of having their qualified workers poached by other companies, so they are generally less motivated.

Chinese values have a negative impact on apprenticeship and arouse social stigma for vocational education. There has always been a tradition of valuing general education over vocational education and formal school education over non-formal education.

Finally, it is important to place apprenticeships within the framework of societies with rapid changes. A key question, therefore, resides in how apprenticeship can be more flexible to meet the learning needs of all individuals and provide opportunities to update knowledge throughout their careers.

3.3. The Particularity of Vocational Education in China

Firstly, since the beginning of the 20th century, schools have become the main body of vocational education. In terms of initiative, schools are more active, and industrial enterprises are more passive. In terms of the form of industry-education integration, there is more integration of curriculum and teaching links, but the integration at the level of education standards is still lacking.

Aside from this, the Chinese government plays an overall leading role. In terms of cost commitment, most of the regional government's public finance is responsible for the integration [5]. However, government intervention is mainly through "administrative acts" but not measures: laws and regulations are frequently set.

Furthermore, the atypical market mechanism can be reflected in the following phenomenon. The actual achievement of school-enterprise cooperation does not depend on market factors. China has a well-developed system of vocational schools that may work with companies [6]. Companies work with schools to find and hire apprentices in order to provide initial training for specialists; the specific arrangements are based on agreements between companies and schools. The basis of most school-enterprise cooperation is the personal relationship between principals and entrepreneurs. If the leaders are transferred elsewhere, such cooperation will disappear.

Diversified forms of vocational education can be another particularity. From the perspective of school-enterprise cooperation, training can be divided into several types, such as the vocational education group, school-enterprise integration, school-enterprise comprehensive cooperation, and school-enterprise partial cooperation. What is more, as China's territory is vast, it is a country with great regional diversity. There are great differences in economic development, industrial structure, and education level among regions. Differences are also reflected in vocational education.

4. Suggestions on the Future Development of China's Vocational Education

Since the government in China plays a decisive part in the improvement of vocational education, more work should be done in revolutionary ways. First of all, planning should be strategic, working out reasonable measures closely related to facts. In a rapidly-developing society, the training mode of the compound and innovative talents is required to be developed. What is more, policymakers should consolidate the core competence of vocational education. Core competence is constituted of three elements, namely resources (human resources, material resources), culture (spiritual culture, material culture, institutional culture), and capacity (talents training, scientific study, and social service) [7]. It is important to recognize and set as a goal the educational function of addressing social demands, promoting and constructing industrial civilization, and fostering corporate culture, which is more relevant to reality than undergraduate education. It is also suggested that the scope of duties of the two-level higher education management committee must be confirmed in the form of legislation [8]. In the revised Vocational Education Law, a comprehensive and detailed regulation should be carried out on the management system, funding system, and teaching. A regulatory

framework and equitable financing mechanism that balances the interest of both employers and apprentices should be provided [4]. Esteem for accepting vocational education and training can be promoted by the government's conscious guidance of social opinion. The concrete way of cultural construction can include the establishment of a special publicity website and using influential mass media to widely publicize the benefits of vocational education.

Besides, special institutional research organizations are needed to be established. In-depth efforts should be made by scientific means. Training programs should encourage students to take on a variety of demanding jobs within their field of study [9]. The team should consist of experts. Work should be done through scientific procedures, including data collecting, hypothesizing, and supervising, so as to enact strategies effectively and improve education quality. Regarding the apprentices, enough attention should be paid to individual development, especially one's personality. It is essential to create a personality-based education model that enables vocational psychologists to comprehend societal demands and assist people in making the best options in light of their abilities, knowledge, and real-world experience [8]. The model should focus on the psychological side of individuals [10], including their social perspectives, values, and personalities.

5. Conclusion

In the reform in China, the revised law is a necessary part, including incentives and punitive financial measures as well as taxation. Meanwhile, the government should introduce more mechanisms to encourage stakeholders' active participation, improve the quality of education, and guide ideology and values through the mass media to publicize the benefits and bright future of reformed vocational education. The plan should be strategic and closely related to the facts. In addition, a special institutional research body should be established in order to carry out authorized and scientific research. However, in this paper, the experiences of only two countries—Germany and the United Kingdom—are selected to total the development experience of the vocational education and training system in the complex national context of China. There may be excessive generalizations and omissions. In future studies, the number of countries can be increased, and the experience from more countries can be taken into account to make a more comprehensive analysis.

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