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Finding the "Right Path" of Vocational Education: A Comparison Between China and European Countries

Xuanzi Zhou

Jinan Foreign Language School, Jinan, China
x40498875@gmail.com

Abstract. Nowadays, global economy is developing rapidly. Fast technological iteration boosts the transforming and upgrading of industries. The popularization of higher education in recent decades leads to a surge in the number of graduates with certificates. Various factors result in the fiercely competitive labor market today. As a consequence, unemployment has become a widespread difficulty faced by a large number of young people worldwide. In this case, vocational education has gradually become an effective way to relieve this problem and ensure sustainable economic growth. This article will discuss the social and systematical causes of the marginalization of vocational education in China. It will also compare Chinese system with two typical European vocational education patterns, apprenticeship in Denmark and dual system in Germany, in an attempt to find an ideal and relatively complete vocational education systems to deal with youth unemployment across societies. This article mainly uses comparative research method to analyze the differences between education systems. Several overall practical suggestions of improvement of vocational education system are also given.

Keywords: Sociology of Education, vocational education, unemployment, education system, sociology

1. Introduction

Due to the rapid changes in the economic situation, the characteristic demand of labor has changed significantly. The urgently required labor types shift towards experienced and technically skilled labor who can adapt to new production methods. Currently, a large number of higher education graduates from different countries are unable to find jobs, making unemployment a global issue. Based on this issue, vocational education has obviously become a high-quality solution [1]. The key to successful vocational training is the cooperation of schools, governments and companies. Not only offering students theoretical knowledge but also provide students with enough practical experience can easily accommodate students from school to workplace. For example, in European countries that implement a dual education system, such as Germany, graduates acquire both technical skills and necessary practical experience, making it easier to meet employers' demand for experienced employees [2]. They can even choose self-employment, significantly reducing the unemployment rate. This also enhances the resilience and vitality of the national economy as a great vocational education system offers enough labor to cover the needs of a growing economy.

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However, in many countries and regions, vocational education remains in a marginalized position passively. The fact is that a well-established regional vocational education systems need multi-party cooperation, innovation of existing system and social tolerance.

2. The marginalization of vocational education in China

The fundamental problems listed in part one are related to the reforms in the Chinese education system and the expansion of higher education. These all result in the majority of students flocking to universities, making it a common phenomenon for graduates to be unable to find employment. A large number of graduates are facing unemployment or underemployment, accompanied by a decline in graduate wages. Their existing knowledge and skills do not match the abilities required by industrial development. However, in terms of manufacturing, many production lines lack experienced workers and are unable to maintain normal production [3]. The cause of this kind of structural unemployment lies in the shortage of skilled workforce. The most direct way to address the shortage of suitable labor is through vocational education.

2.1. The education system in China

Chinese senior secondary education system mainly consists of normal secondary schools and vocational secondary schools. In normal secondary schools, students study academic knowledge to prepare for the university entrance exam, known as the Gaokao, in order to enter universities for higher academic achievements. In vocational secondary schools, students have the opportunity to learn practical skills, preparing either to enter the labor market or to pursue further degrees. Chinese vocational education system is mainly divided into three levels. The first level is secondary vocational schools, which train workers to acquire basic skills. Most students will take exams to enter higher vocational colleges for further education. The second level is the higher vocational colleges. These institutions can be roughly divided into four types. The first type is specialized secondary schools, where students can study and then directly enter the workforce as experienced laborers; the second type is vocational high schools, whose students generally come from regular high schools or secondary vocational schools. Some students choose to continue their education by entering higher technical vocational schools, while others choose to enter the labor market; the third type is those skilled worker schools, where students can obtain certifications after several years of study, allowing them to enter the workforce directly; the fourth type is designed for adults, providing full-time or part-time learning opportunities. The third level is higher technical vocational education, which comes in various forms. Some programs may offer study periods of two to three years, and courses are available for adults in either full-time or part-time patterns [3].

The Ministry of Education of the People's Republic of China is not the only institution that set up vocational schools. Large state-owned enterprises or the military also establish similar vocational education institutions. Vocational training schools run by big state-owned enterprises can provide a reliable source of labor for itself. In recent years, the military's vocational education has also included industries related to traditional Chinese culture [3].

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2.2. The development and challenge of Chinese vocational education

2.2.1. The development of Chinese vocational education

When discussing the challenges currently faced by vocational education in China, it is necessary to mention its development. The turning point for Chinese vocational education appeared in the early 20th century, when China was in its early stages of development. The operation of the industrial sector raises the demand of a large number of skilled workers. At this time, vocational schools mainly focused on training workers to satisfy intensive industrial production. Students were generally willing to enter vocational institutions for study, primarily because of the job allocation system, also known as the "iron rice bowl" [4]. They will be given jobs immediately after graduate from vocational school. After the education reform of 1990, higher education expanded and more students tended to choose to attend universities. Vocational schools have to lower their admission standards, and the coming problem was that the decline in the quality of incoming students affected teaching outcomes, with most students unwilling to learn practical skills [4]. In the highly competitive labor market, these vocational school students were often at a disadvantage when compared to those undergraduate students.

2.2.2. The challenges faced by Chinese vocational education

The main problems faced by vocational education in China can mainly be divided into three types: curriculum designs, the education system, and the real-life challenges students encounter in society. The following issues are particularly notable. Firstly, outdated curriculum, ineffective teaching methods and poor management always appear at vocational schools. At present, most of the higher vocational colleges and secondary vocational schools teach knowledge that does not enable students to directly adapt to job positions after graduation. The teaching content cannot closely integrate with the development of science and technology [3]. One of the reasons of this may be lack of vocational education teachers with up-to-date skills. Vocational education teacher training is crucial to ensure that teachers are able to pass the latest technique to vocational education students. The proportionate of vocational education teachers from the industry with abundant practical skills should be increased. In addition, it is difficult to provide practical opportunities. It is a common situation that the majority of vocational school students show an unwillingness to learn practical skills, resulting in a worse learning atmosphere than that of regular high schools. Teachers and students are unable to engage in effective interaction, and this phenomenon largely lower the outcomes and quality of education. Due to the educational reforms, the decline in the quality of vocational school students has become common [4]. Schools mostly respond to students' misbehavior with militarized management, forming a vicious cycle. Secondly, the lack of cooperation with international or multinational enterprises is concerning [5]. It cannot ensure students up-to-date technique acquiring and practical experience. Schools shift the employment pressure onto individual students. Job fairs or school-enterprise cooperation is not aimed at fundamentally resolve this problem [6]. In fact, even students with excellent skills and certificates are still unable to find employment. Thirdly, social bias perspective is constantly faced by vocational education students. Vocational education students are generally regarded as lack of knowledge and occupying a lower status. Society tends to narrowly define academic achievement primarily in terms of academic results and holds a negative attitude towards other types of learning, particularly vocational education [3]. Moreover, parents are more inclined to send their children to normal high schools with the aim of entering university, rather than opting for vocational education.

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3. The development of vocational education in European countries

In this changing era, European countries devoted budget and time to its education system development. Dynamic and efficient education systems ensure the competitiveness of these countries and support the rapid development of economies [6]. In the article below, the education system of two European countries, Denmark's apprenticeship and Germany's dual system will be analyzed as examples of European countries.

3.1.Denmark

Denmark is a European country with flexible labor policy and highly active working population, which keep its unemployment rate much lower in Europe. However, the increasing aging population in the country still act as a reminder of lack of skilled labor in the long-term. Denmark's vocational education system is relatively flexible and demonstrates overall mobility, such as the use of transdisciplinary teaching method [7]. Moreover, Denmark's apprenticeship education system involves a high level of collaboration among the government, enterprises, and VET (Vocational Education and Training) institutions, providing a basic guarantee for students' employment [8]. It is worth to mention that such an education system offers vocational education students the choice to pursue higher academic degrees as well as to enter the labor market, ensuring the diversity of their development. Students who have gone through vocational education generally have a high chance of obtaining well-paying and stable jobs. To some extent, vocational education has become a tool for reducing social inequality [8].

Denmark's high school system is divided into two categories: vocational education and academic education. Unlike regular high schools, which focus on academic achievement, vocational education more focus on skills training which aimed at employment. The apprenticeship system is not included in either of these and is referred to as gymnasiums [8]. Gymnasiums provide vocational education students with the possibility of entering the academic track. They offer basic skills training and academic education. While their structure is similar to that of vocational schools, they avoid the drawback of vocational education, which limits students from pursuing higher levels of education.

The apprenticeship system cultivates the all-round development of vocational education students. It not only aimed at improving their skills but also fosters their creativity, innovation and awareness of social development. This is beneficial to their personal growth [9]. Learning in two environments helps students smoothly adapt to the work environment. Furthermore, the apprenticeship system also provides them with opportunities to pursue higher levels of education.

The good cooperation between government agencies and companies in the apprenticeship system provides more employment opportunities for vocational education students. For example, government financial or non-financial support to encourage companies to maintain or expand the scale of apprenticeships. Financial support may include the government covering part of the cost of apprentice training or providing certain bonuses to companies that support the apprenticeship system. Supervision by relevant departments over the school learning and job training of apprenticeship students is also crucial [9].

3.2. Germany

German vocational education system has mainly three components: the dual system, the school-based vocational education programs and the prevocational programs. The dual system contains both participation of firms and schools, where students are able to have access to the fully working

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practice for three to four days a week with theoretical knowledge for the rest of days [10]. What worth to pay attention is that the categories of jobs of dual system graduates are quite different. For those enter dual system with lower degrees before, they are more likely to pursue a career in some industrial related works and agriculture sector. For those with high school graduation certificates, they are more likely to do more well-paid jobs such as freelance work or bank and insurance related jobs. After finishing the training in dual system, the youth can enter the workplace neither in large companies or in small companies. Nearly 60% of the apprenticeship students is able to find a job in their area in companies where their apprenticeships are offered [10]. They might have to go through two or three years of practice to become a formal employee in these firms. Apart from dual system, the school-based vocational education programs are aimed at cultivate labor with more advanced skills in the service sector. The careers of these students are always well-paid, white-collar work such as pre-school teachers, nurses and several computer-based jobs. The entering barrier in those two types of schools are often higher than the prevocational education programs. For example, the participants always hold the degree of high school education instead of some junior secondary school graduation certificates. Finally, the prevocational programs offer short-term training for about one year or two years without certificates [10].

The advantage of dual system is apparent especially in periods of financial crisis and the influence of pandemic. German youth unemployment rate maintains a low level among European countries. In addition, the dual system also ensures enough skilled labor to satisfy the need in developing industrial sector and service sector. Standardized procedure and corporation between schools, firms, government and labor union provide students with another possibility other than academic study [10].

However, the drawbacks of this system cannot be ignored. Firstly, as the development of technology, Germany diverts to knowledge-based economy, which means the decline of manufacture and handicraft industry. The increasing demand for labor with advanced knowledge of developing industry cannot match the existing vocational education contents. Secondly, a considerable decrease appeared in German vocational program students in the last decade due to the expansion of higher education. The number of students join vocational education programs is influenced by this change. Thirdly, vocational education might create potential inequality between different social status as most students join the vocational training program are born in the working class [10]. Some of them choose vocational education due to their parents' experiences. They are separated from higher academic achievements in university.

4. Comparison between policies and systems

As the countries adopt apprenticeship systems, Denmark and Germany have many similarities on their vocational education system designs, such as state-funded education programs and the cooperation between schools and firms. However, there are still several differences of two education systems.

Firstly, the contents of vocational education have different focus. In German apprenticeship, students spend more times in firms to gain hands-on experiences. However, in Demark, vocational education students acquire more knowledge on academic area. Secondly, the level of standardized procedure of teaching contents are various. German apprenticeship has national framework and regulation on school learning sector and company practice sector [10]. Each state also set up their own regulations and standard on several detailed parts such as the teaching content and the standards of examination of valid certificates for vocational education students. However, in Denmark, employers and vocational training institution have no specific fixed guideline of teaching content. It

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highly depends on students. Thirdly, the specialization of occupation in Germany is different from Denmark. Germany has more species of works contained in vocational education than Demark. The German system is highly specialized and majority of students work in the company of their apprenticeship located. The mobility of labor is low as changing jobs may expose workers to unemployment. Denish system gives students wider practice experience which considerably increase the mobility of vocational students [9].

While when involving Chinese VET programs into comparison, the difficulties and backgrounds are distinct. Chinese vocational education faces problems mostly related to the curriculum contents, tuition fees and weak connections of schools and firms, which is truly different from Denmark and Germany. According to the above passage, dual system and apprenticeship develop practical and rigorous instructions for students. In addition, they provide internships in real workplace environment for students during their learning process. Governments in dual systems and apprenticeship are responsible for vocational students' financial costs [9]. Firms regard the training cost for apprenticeship as cultivate their own employees and will bear some cost of apprenticeships. However, for problems such as the potential inequality caused by vocational education are equally faced by different education systems. Vocational education is regarded as the end of most students' education process and there are limited paths to higher academic achievements. The similar background of students attending vocational education is also concerning in all the three vocational education systems. Additionally, with the expansion trend of higher education, how to increase the quality of vocational education students and attract students to attend vocational education are fundamental problems faced by the three education systems. The core solution is to improve the quality of vocational education program through the efforts of government and society, ensuring the diversification of stable future employment.

5. Conclusion

In the trend of globalization and fast technological advancement, the world is changing constantly. In order to keep pace with the developing labor market, vocational education is certainly becoming an increasingly important part of education systems and societies. This article analyzed three different vocational education systems of China, Denmark and Germany. Through comparison, the distinct strength and weakness of each system are clear. It is obvious that improvements for a well-functioned vocational educational system still require efforts from each party of a society. There are several suggestions of the development of vocational education system according to the points listed above. Firstly, improving cooperation and supervision is the key to better quality education. The active and responsible participation of government, firms and schools is equally important. The understanding of current situations of vocational education students and their difficulties on both curriculum study and workplace practice should go deeper in order to give practical adjustments. Secondly, the education system depends on the culture and economic development of a country, so simply copying the successful model of vocational education is not able to solve the fundamental problems in any country, such as social bias perspectives and low-income current situation for vocational students in China. As the realistic situations are different between different countries, a comprehensive system needs to consider the actual conditions. Thirdly, the improvement of national education system and labor market is a long-term process. Reforms are under the influence of advancement of society and economic growth. As education is the foundation of society, it can provide fundamental guidance to current challenges such as unemployment and inequality. For a more equal and progressive society, vocational education still has a long way to go.

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