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# Comparative Study of TVET Education System in China and Finland

**Xinsen Xu[1]*, Weijia Zhou[2]**
[1] Faculty of Educational Studies, Universiti Putra Malaysia, 43400, Malaysia
[2] Faculty of Nursing, Burapha University, 20131, Thailand

**Author to whom correspondence should be addressed.*



**Abstract**

This study compares how China and Finland structure and implement technical and vocational education and training (TVET). Although China has expanded vocational programs to support industrial upgrading, the sector still operates under limited social recognition, uneven cooperation with industry, and a legal framework that has not fully kept pace with reforms. Finland, on the other hand, has built a more integrated TVET model with flexible movement between vocational and general tracks and a long-established apprenticeship system, supported by stable national policies. Recent financial cuts, however, and gaps in teachers' practical experience have created new pressures within the Finnish system. By examining these differences, the study points to several directions for improving China's TVET development, particularly in legislation, school–industry collaboration, and teacher preparation. The comparison offers insights for policymakers seeking to strengthen TVET's contribution to national development.

**Keywords**

Technical and Vocational Education and Training (TVET); Comparative Education; Education Policy

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## 1. Introduction

Widianingsih (2018) who emphasized that vocational education prepares students to work in specific fields and aims to examine the aspects and sphere of research related to vocational education. Under the requirement of improving students' employment competitiveness, the training goals of vocational colleges are to continuously improve students' employability, train students to master specific knowledge and specific skills sufficient to hold some jobs, meet the job standards required by employers, and have the working hours necessary job skills, etc. The role of vocational education in addressing employment challenges is crucial, especially in the context of rapid technological change. It is essential to ensure that the vocational guidance system is effective, involving various conditions such as the activity and ongoing impact from the state, society, administration, and teaching staff of educational institutions [1].

Additionally, interdisciplinary research in vocational guidance is important for understanding the vocational guidance process as joint, goal-directed action. Vocational education and training (VET) is often seen as a solution to youth joblessness. Furthermore, employment has been linked to improvements in quality of life, mental health, social networks, and social inclusion. In the education system, vocational education has the closest relationship with economic development. Vocational education provides high-quality talents for the economy and society. Education and vocational education are education guided by employment. Vocational education not only focuses on workers' employment skills, but also on workers' future career planning, which can alleviate employment pressure, adjust workers' structural unemployment, improve students' employment skills, and narrow the gap between workers and jobs[2]. The differences have practical significance.

China is vigorously developing TVET, has formulated development strategies such as "Made in China 2025", emphasizing technological innovation and intelligent manufacturing. Address employment challenges, improving workforce quality, adapting to talent cultivation models, social stability and sustainable development.... As we all know, Finland education is very famous, the technical and vocational education and training in Finland is named VET, it also developed very well. It has many characteristics, such as high-quality internship, school-enterprise cooperation model is mature, comprehensive career development plan, high-quality of employment, advocating practicality and flexibility, high social recognition and so on. In the process of exploration and development of TVET, many vocational colleges in China take the introduction of Finland and other developed countries TVET concept and mode, got certain results, but also found that the traditional culture, training system and employment mechanism, thriving professional teaching in our country appear the phenomenon such as inefficient or ineffective teaching, eager for quickly employment and successful, seriously affected the benign development of vocational education[3]. We hope that through the comparison of the China and Finland technical and vocational education and training systems could provide some references for the development of TVET in China.

# 2. Problem statement

## 2.1. The brief introduction about Chinese and Finnish education systems

### 2.1.1. Chinese education system introduction

China implements a nine-year compulsory education system. Students enter first grade at the age of 6 and graduate from junior high school at the age of 15. The tuition for these nine years is paid by the government, but students within this age group must receive compulsory education. The implementation of nine-year compulsory education has greatly promoted the improvement of the quality of Chinese people. Since China's reform and opening up, the market economy has begun to flourish in China. With the development of economy, China has become the "world's factory", transformed into a world manufacturing power and the world's second economy. However, in recent years, due to the upgrading of industrial technology, the "demographic dividend" has gradually faded, and China's labor market and education have developed faults. Therefore, the Chinese government started to reform the education system[4]. On the one hand, it reduced the enrollment ratio of general education, and on the other hand, it increased the promotion of vocational and technical education. Through a series of measures, the government hopes to promote the gradual integration of the labor market and education and achieve a balanced supply in the labor market. Below we will further introduce China's vocational and technical education system.

Students in China when they graduate from the junior high school, they need to attend the high school entrance examination. If they pass the exam, they can continue studying for 3 years in high school. After they graduate from the high school, they can take the college entrance examination. If they pass the score line, at least they can enter the college. The score determines what kind of university they can get into. if they enter the college, usually the students will study for 3 years and gain the college diploma. If the students can enter the university, they will study 4 or 5 years, then they can gain the bachelor degree. Both of these two kinds of graduates can continue to study for the Master degree even PHD. If students with a college diploma want to continue their studies, they can take the Adult Higher Education Entrance Examination. After passing the exam, they can

obtain a part-time undergraduate degree after two and a half years of part-time study. They can also pursue further studies[5].

As mentioned above, although China's education reform has promoted the development of the vocational and technical education system to a certain extent, this development is still in its infancy. For now, China's vocational and technical education system still has many problems, such as unclear classification, low social recognition, and poor student resources. Whether these problems can be solved determines whether China's industrial upgrading and labor market upgrading can proceed smoothly[6].

### 2.2. Finnish education system introduction

Finland implemented educational reforms in the 1970s. Before the education reform, students in Finland were simply divided into two parts: academically oriented and practical oriented, and students needed to make a choice at the age of 11. Under the old education system, many inequalities occurred: many schools were able to provide teaching resources that far exceeded those of other schools. In addition, the old education system was based on the idea that talent is inherently unevenly distributed, so some students have more potential to receive education than others. Therefore, it seriously hinders Finland's social and educational development. As a result, Finland began to implement a nine-year compulsory education system in 1972, replacing the old dual-track system, and all the previous problems gradually disappeared[7].

Nowadays, students in Finland will begin the compulsory education at the age of 7. After they get into school, they will face 9 years compulsory education. At the first 6 years (primary school stage), they are taught by class-teacher; at the last 3 years (secondary school stage), they will be taught by subject-teacher, they can choose the different subjects they like or they are interested in. When the students graduate from compulsory education, they need to make choice: academic upper secondary education or vocational upper secondary education.

The students who chose the academic upper education, they could study in academic high school for 3 years. After that, they could use their score and certificates to apply the universities that they want to get into. When they graduate from the university, they can get the bachelor degree, and they could continue to chaise the Master degree even PHD. The students who chose the vocational high school, they should also study 3 years, which includes 6 months on-the-job-training. After they graduate from the vocational high school, they could use their certificates to apply the polytechnics (University of applied sciences). When they graduate from the polytechnic, they can get the bachelor degree. Of course, they could continue chaise the Master degree[8].

## 3. Differences in the vocational education systems between China and Finland

### 3.1. Finnish vocational education system

According to the United Nations International Standard Classification of Education (ISCED), education can be categorised into seven levels, as shown in Figure 1. At the tertiary level, according to the type of education, it can be categorised as academic (5A) and technical (5B), and China's higher vocational education belongs to level 5B[9].

The structure of education in Finland is similar to that in China, divided into pre- school education, compulsory education, upper secondary education and higher education, as shown in Figure 2. In Finland, there is a streaming system after compulsory education (lower secondary school), with the option of choosing either general or vocational upper secondary school, and graduates of general upper secondary schools can also choose to enter secondary vocational schools in order to obtain vocational qualifications and enter the labour market earlier. At the higher education level, there are academic universities and multidisciplinary technical colleges. As can be seen from Figure 2, general and vocational education in Finland are interoperable, with no major differences between schools, and the level of teachers, treatment of students, and the degree of national importance are the same as in Finland. In Finland, there are no major differences between schools, and the level of teachers, the treatment of students, and the degree of national importance are all the same. The scale of vocational education is also similar, and graduates of professional colleges also have a professional master's degree at the postgraduate level, thus forming a complete vocational education system from secondary vocational

education (speciality), higher vocational education (professional colleges) to professional master's degree[10].

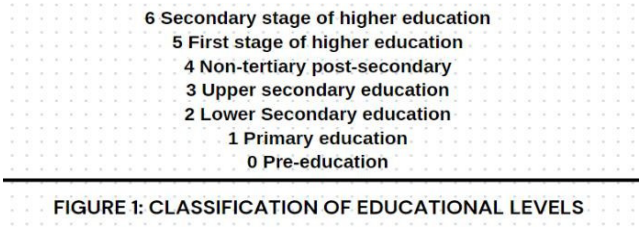


**Figure 1.** Classification of Education Levels

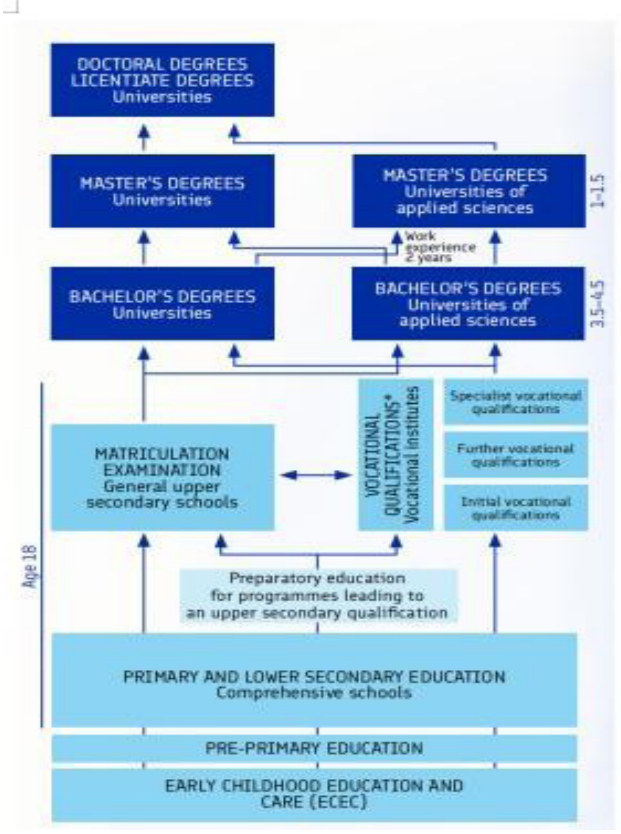


**Figure 2.** Finnish education system

## 3.2. Characteristics of vocational education in Finland

### 3.2.1. Interface between general and vocational education

In Finland, there is horizontal and vertical mobility between general and vocational upper secondary schools, universities and polytechnics, and vocational education can lead to technical degrees at the higher education level. Students in vocational upper secondary schools can continue their studies at universities, and students in general upper secondary schools can also receive vocational education and training, which gives vocational education an equal status with general education[11].

### 3.2.2. Implementation of apprenticeship training

Apprenticeship training is the main mode of vocational education in Finland. As early as 1992, the Finnish government enacted the Act on Apprenticeship Training to regulate the implementation of apprenticeship training, and successfully implemented the apprenticeship training model. As apprenticeship training is not only a form of training but also a form of employment, it is stipulated that only young people who have reached the age of 15 and have completed basic education can participate in apprenticeship training. Apprenticeship training is centred on the national core curriculum and the skills required for the relevant vocational qualifications, with a key focus on on-the-job training, with nearly 70 to 80 per cent of the time spent in the training venue, and with more adults generally taking part. Before the start of the training, the trainee is required to sign a contract of apprenticeship with the employer or enterprise, and all trainees are awarded the vocational qualification after passing a certain test. Vocational qualifications[12].

## 3.3. China vocational education system

### 3.3.1. Emphasis on the vocational education system

In China, secondary vocational education and higher vocational education exist as supplements to general education, and have yet to form an independent vocational education system. Since higher vocational education is currently focused on specialist qualifications, and higher vocational undergraduate programmes have been introduced on a pilot basis in recent years but have not yet become commonplace, the main sources of enrolment for higher vocational education are high school graduates who have taken the General College Entrance Examination (GCE), or graduates of secondary vocational education who have specialised in the same field. It should be noted that these students often enter vocational colleges and universities with low scores in the secondary or higher education examinations, which creates a situation where vocational education is dependent on general education[13]. Therefore, we can learn from the Finnish model of interoperability between general education and vocational education to improve China's vocational education system, establish an independent vocational education system, set up technical degrees at the higher education level, increase students' independent

choices, and improve the source of vocational education students.

Vocational and technical education in China is usually at the secondary education level, as a parallel option to regular high schools. In addition, Chinese vocational education also includes higher vocational education, but its status is relatively low[14].

#### 3.3.2. Differences in deepening the school-enterprise/ institution co-operation training model

The mode of school-enterprise co-operation and education in vocational colleges and universities is one of the main modes for the development of vocational education in China at present, and the problems of insufficient motivation and weak willingness of the enterprise side to co-operate in school-enterprise co-operation and education in China have come to the forefront in all walks of life. In 2014, China's Ministry of Education formulated the Opinions of the Ministry of Education on Carrying Out the Pilot Work of Modern Apprenticeship, proposing that: focusing on the construction of modern apprenticeship cultivation system, it will comprehensively improve the cultivation capacity and level of technical and skilled talents[15]. Based on the fact that China is currently carrying out the pilot work of modern apprenticeship system in vocational education, learning the management experience and practice of apprenticeship training in Finland, focusing on the process management and promoting the successful cases will help to form a favourable atmosphere that pays general attention to the operation of modern apprenticeship system.

## 4. Conclusion

The structure and content of China's traditional TVET system are deeply influenced by the planned economy, traditional Confucianism, and its own development characteristics. After the reform and opening up, there has also been a trend of extensive international cooperation in the education system. Finland's vocational and technical education is mainly based on the need of industry, which provides employment security, perfect education and training services such as vocational preparation, vocational basic education, secondary education, higher education, and on-the-job training.

As a powerhouse in vocational education, Finland has a complete vocational education system that is highly operational. As a country with a strong vocational education system, China has a complete vocational education system, but it is still relatively general and needs further regulations or rules to make the system run more smoothly.

### Disclosure statement

The author declares no conflict of interest.

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