



Analysis of Difficulties in the Development of China General and Vocational Education—Comparison with Singapore Education Streaming System Diversion Policy

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Abstract. Singapore is generally regarded as a leader in the practice of the education Streaming System and has achieved a balance between elite education and mass education in its education strategy. Moreover, according to the conditions and characteristics of Singapore, a distinctive and mature education Streaming Policy was formed. The success of Singapore’s vocational education Streaming Policy provides excellent theoretical support for the implementation of the education Streaming system. Taking Singapore’s vocational and general education Streaming Policy as a reference to discuss the differences between China and Singapore in the implementation of policies. It can be found that the difficulties in the development of China’s vocational and general education Streaming Policy are mainly concentrated in social discrimination, uneven distribution of resources, and blocked access to higher education. Recognizing the core problems that restrict the development of vocational education in China has enlightenment and reference significance for finding the development of vocational education.

Keywords: Education Streaming System · Singapore · Vocational Education · General Education · Education system

1 Introduction

From the perspective of world history, the education Streaming system first appeared in Western Europe before the capitalist industrial revolution in the 18th century. As the development of industrial production, the requirements of the society for the quality and skill level of the labor force are increasing, and the public’s demand for education is also gradually enhance. The government began to try to provide the lower classes with educational opportunities, which was the earliest Dual-track system, the orbital education in Western society. The dual-track is divided into the “academic track” and “vocational track”. The academic track evolved from traditional schools, consisting of academic schools with vestiges of capitalist privilege. Students will have the opportunity to continue their higher academic education after completing their secondary education.

The “vocational track” is mainly composed of mass schools for the children of the lower-class society arising from the background of industrial development. After receiving secondary education, they enter different types of vocational schools [1].

According to Max Weber, from the perspective of goals and methods, social action is divided into purpose rationality and value rationality [2]. According to this basis, it can try to divide education into two aspects: value rationality and instrumental rationality. Therefore, education Streaming has a new development in modern society. It is reflected in the concept of educational fairness that no longer only focuses on the quality of talent training brought about by sustainable development and maximizing the efficiency of educational resources, but gradually focuses on individual differences.

The educational Streaming includes intra-school diversion and extra-school diversion. Intra-school diversion means that different students receive different kinds of classes and courses. The extra-school diversion takes the “vocational general diversion” as the main form. The main task of general education is to provide a reserve force to meet the social demand for labor, and to supply qualified new student to higher education institutions. Vocational education is mainly to educate students in relevant professional knowledge, skills, professional ethics, and other aspects in order to adapt to a certain occupation. These are mainly the delivery of skilled labor to society. The basic point of the educational Streaming theory is to adjust the teaching content and teaching methods according to the different ability levels of students. Schools can teach students in accordance with their aptitude, thereby promoting the development of student’s cognitive ability. Moreover, it can ensure the quality of education in the whole country.

Singapore is generally regarded as a leader in the practice of the education Streaming system. It has achieved a balance between elite education and mass education in its education strategy. According to the country’s national conditions, it has formed a distinctive and systematic education system and mature educational Streaming policy after four stages of education reform [3]. Singapore’s successful implementation of this policy is its own development, maximizing economic, social and political benefits. In contrast, the practice and development of the education Streaming system in China faces multiple development difficulties, including social cognition, education discrimination, employment difficulties, and enrollment difficulties. By distinguishing and analyzing the comparison of the application of China’s and Singapore’s education Streaming system, this paper recognizes and analyzes the main problems currently faced by China’s education Streaming system, so as to promote the further optimization of China’s education and vocational Streaming system.

2 The Streaming System in Singapore and China

2.1 Singapore

Singapore’s education Streaming system is roughly divided into two stages, namely primary school and secondary school.

The first stage is in primary schools. After six years of study in primary schools, student will take the Primary School Leaving Examination (PSLE). According to their grades, they will be admitted to special the Integrated Programme, Express, Normal (Academic) (Selected (A)), and Normal (Technical) (N(T)). The first three are mainly

oriented to further education, and the last one is oriented to learning skills and facilitating employment.

The second triage is based on the results of the O-level examinations (Singapore-Cambridge General Certificate of Education Ordinary Level Examinations). O-level is a unified examination jointly sponsored by the Ministry of Education of Singapore and the Cambridge University Examinations Authority of the United Kingdom. The test results are recognized and accepted by various countries in the Commonwealth of Nations. The O-level test at this stage is equivalent to the National College Entrance Examination in China. The Integrated Programme students do not need to take O-levels examinations, they will take A-level exams after two years of high school study, and directly to university. Express students can take O-level exams after completing a 4-year secondary school program. Students in Normal (Academic) (N(A)) classes are required to take additional N-level exams after the fourth year. Those with excellent test scores can continue to study for the fifth year and take the O-level test together with the Express student. Students with average test scores enter the polytechnic preparatory classes. Students with poor test scores go to the Normal (Technical) (N(T)) for technical education.

The second Streaming policy is divided according to students' talents, abilities, characters, and interests, and it is clear whether students should pursue a higher level of academic education or enter a polytechnic that combines both academic and application, or employment-oriented vocational and technical education.

Regardless of the type of education, students can get into better schools through an individual effort by completing exams. As a result, vocational education and general education are further subdivided in Singapore's Streaming system. At the same time, the internal mutual accessibility and mobility can help to weaken the contradictions in education, so that education can develop in a balanced way. At the same time, it also provides more opportunities and paths for students to plan their future life and development.

2.2 China

China's basic education Streaming system relies only on two unified national examinations, which are the Chinese Senior High School Entrance Examination and the National College Entrance Examination. The Chinese Senior High School Entrance Examination is the first basic education Streaming for students after the stipulated nine-year compulsory education. The National College Entrance Examination is the second Streaming for students to receive higher academic education in the future. In terms of importance, Chinese Senior High School Entrance Examination as the first Streaming is more intense than the college entrance examination.

The "Guidance on further promoting the reform of the Examination and enrollment System for Senior high school students" promulgated by the Ministry of Education of China clearly stated that all provinces (regions and municipalities) should finish the work of education admissions in recruiting junior school graduates to secondary vocational schools in accordance with the same requirements for the enrollment of ordinary vocational schools [4].

Due to the impact of China's current huge population base on examination education, the Streaming of the senior high school entrance examination is actually still a single Streaming based on further education, and the policy is relatively simple. Students who score in the top 50% of junior high school graduation examinations can successfully enter ordinary high schools in China. And 50% of the students after the junior high school graduation examination results enter secondary vocational and technical schools.

3 Comparison of Differences Between China and Singapore's Education Streaming System

3.1 Education Streaming System and Vocational and Technical Education

The application method of Singapore's education Streaming examination system presents an overall style of "overpass", cross-connect horizontally and vertically. The horizontal is the traditional dual-track system, with general education and vocational education running in parallel. Longitudinal from PSLE examinations in primary schools, O-levels, A-levels, N-levels and other different stages of examinations in middle schools, students are flexibly divided into multiple layers. Amplify the efficiency of educational resources while giving students more opportunities and choices. The school uses an educational model of teaching students in accordance with their aptitude, which can ensure the full development of students. In addition, it can also reduce the possible disadvantages of the education Streaming system.

China's current implementation of the split examination system is relatively simple and traditional, showing a "one-size-fits-all" situation. According to Chinese government regulations, students who fail the senior high school entrance examination are currently not allowed to repeat their studies, and middle schools and educational institutions are not allowed to accept repeat students in the third year of junior high school. This made Chinese students lose the right to choose when faced with the education Streaming system. This policy has also gradually evolved from the "education Streaming system" to the "education elimination system" in public opinion. A high school entrance examination will directly determine the entire educational destiny of students in the future, which may exacerbate the contradiction of fairness in social education results.

3.2 Social Recognition of Vocational Technical Schools

Singapore has 5 public universities, 5 polytechnics, and 1 Technical Education Bureau, which are adapted to the different characteristics of the students. Each school has a clear teaching orientation, distinct educational philosophy, and its own teaching characteristics. According to the characteristics of different students, each school has a unique teaching method that can help to give full play to the potential of each student. For example, Republic Polytechnic adopts the "Problem-based Learning" teaching method, in which professors take students one class a day, ask students a question, and then help students answer the question in various ways. Compared with the traditional academic teaching mode, these methods can fully realize the teaching concept of teaching students according to their aptitude [5]. In Singapore, the whole society has a high degree

of recognition of vocational education, and there is no obvious distinction between the two institutions.

Although China has many ordinary public universities and colleges, there are significant differences in grades among institutions. China has established a “two-type, three-level” degree system in an all-round way. The three levels correspond to bachelor’s, master’s and doctoral degrees respectively, but no degrees are set for junior colleges. This institutional defect of lack of degrees has widened the grade gap between the two institutions, leaving vocational education graduates in a serious disadvantaged position in the job market after completing their studies [6]. At the same time, social recognition and educational resources are also obviously tilted towards ordinary universities, which makes the education Streaming system become a watershed for students to receive “first-class” or “second-class” education in the future. And this is also the source of the increasing psychological pressure and learning pressure for students and parents when they face the primary education Streaming in secondary schools. At this stage, the reason why students are under too much pressure may not be due to the difficulty of the coursework, but rather the fierce academic competition caused by the scarcity of educational opportunities and resources.

4 Analysis on the Development of China’s General Vocational Education

At present, there are still significant problems and contradictions in the development of education Streaming system and vocational schools in China. As the largest developing country in the world, China has a huge population base and a huge advantage in human resources internationally. But when this huge talent pool floods into the same track of ordinary high schools, there will be a high degree of educational involution. In the past, elite education in colleges and universities has become mass education, which brings huge pressure on students to face academic examinations and employment. However, at the same time, the country is faced with a large number of job and talent gaps, and vocational high schools are facing the problem of recruiting students. This increasingly obvious contradiction in Chinese education is also one of the main reasons for the firm implementation of the education Streaming system in China.

4.1 Stereotype

In the 1980s, China’s education was in the early stage of development, and vocational colleges and ordinary colleges had a common social status. With the development of society, affected by educational reform, economic development and cultural concepts, the social status of vocational colleges has declined sharply. In recent years, being admitted to a vocational college is regarded as a symbol of “loser”. What’s more serious is that “anti-school culture” is frequently set off in vocational colleges, and students gain self-esteem by despising the school’s value system and resisting teachers after being admitted. Students who are “academic losers” have shifted from objective rejection by society to self-elimination and self-abandonment, which leads to a vicious circle of deepening the society’s stereotype of “inferior education” in vocational colleges. This has also brought about serious social cognition discrimination and employment discrimination.

4.2 Unequal Distribution of Educational Resources

The relevant data survey of the World Bank shows that the proportion of China's primary, secondary and higher education investment is 1:3:52. In the investment funds, higher education accounts for a high proportion, while the investment in vocational education is much lower than that in higher education. Compared with Singapore, higher education funds account for 26%–28% of the total funds, but more than 50% of the funds are allocated to vocational education [3]. Differences in the distribution of educational funds have resulted in unequal teaching resources and teacher resources between ordinary schools and vocational schools.

In addition, from the perspective of students, according to data, 70% of vocational school students come from poor families in rural or urban areas. Throughout the history of education development in the East and the West, children from middle- and upper-class families are more likely to acquire artistic literacy, practical ability and learning ability, while children of disadvantaged groups are limited by family capital. Therefore, in terms of artistic literacy, practical ability and learning ability, children of disadvantaged groups are obviously inferior to children of higher social classes. This undoubtedly aggravates the solidification of social class, so that students with disadvantaged family backgrounds can only choose to enter low-level schools. Behind the seemingly uniform examination for everyone to be equal, the differences between individuals and family backgrounds are concealed [6].

4.3 Lack of Communication and Cohesion

At this stage, the education system implemented in China makes it impossible to communicate and connect flexibly between ordinary colleges and vocational colleges. It is difficult for students to transfer to ordinary colleges after being diverted to vocational colleges, or to obtain higher education through examinations. The procedures between ordinary colleges and vocational colleges are cumbersome and the access is blocked. Although the positioning between vocational colleges and ordinary colleges is very clear after the Streaming, they should be connected to each other to facilitate the further development of students in their studies. For example, through examinations organized by the state and other forms, research and establish an examination and enrollment system that conforms to the characteristics of vocational education. At present, there is a lack of an examination system similar to the "Vocational Education College Entrance Examination" that can serve as a bridge of communication between vocational colleges and ordinary colleges, and there is a lack of channels suitable for vocational college students to further their studies.

5 Conclusion

By comparing the differences in the education Streaming systems between China and Singapore, it can be found that the differences exist in terms of Streaming methods, pathways to higher education, and social recognition.

At the same time, the main problems faced by China's current vocational and general education distribution include social discrimination, uneven distribution of resources,

and blocked promotion channels. In response to these problems, the following inspirations and suggestions are put forward based on the development results of Singapore's education Streaming system.

Firstly, the development of the vocational education Streaming system is closely related to the government's investment tendency and emphasis. To promote the development of vocational education Streaming, we should first solve the development dilemma of vocational education. In response to social discrimination and prejudice in vocational education, the government should first balance the allocation of resources between ordinary colleges and vocational colleges. Increase the attractiveness of vocational education by improving the quality of vocational education. At the same time, it absorbs the mature concepts of vocational education in Singapore and improves the current school-running system, such as innovative school-enterprise cooperation, teaching models and other school-running mechanisms. In addition, in terms of social public opinion and employment, the government and universities can strengthen the guidance to enterprises to establish the correct concept of selection and employment. Get rid of the concept of employment based on academic qualifications and famous schools, so as to protect the employment rights and equal opportunities of competition for graduates of vocational colleges. The government and schools can encourage enterprises to pay more attention to vocational education talents in recruitment. Gradually eliminate social prejudice and discrimination against vocational education through different methods.

Secondly, to enhance the attractiveness of vocational education, it is necessary to broaden the channels for the rise of vocational education students. By building a bridge of communication between ordinary colleges and vocational colleges, students have the opportunity to choose freely. Promote the vertical and horizontal integration of education at different levels in terms of policies and systems, so as to break the traditional degree system and weaken the level gap between the two institutions. Only by comprehensively removing obstacles in the entrance examinations and employment, the disadvantaged position of vocational education will be changed entirely, and meet the demand of education equality, diversification, and multi-level development.

In the future research, the author will focus on establish a promotion channel suitable for vocational college students through the communication and connection mechanism between general education and vocational education. Changing the disadvantaged position of vocational education in the education Streaming system will greatly promote the development of the education Streaming system. This is also significance for balancing the social talent structure and solving employment problems.

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