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บทคัดย่อ : ประเทศสิงคโปร์มีระบบการศึกษาที่ยอดเยี่ยมติดอันดับโลก ระบบการศึกษาระดับอาชีวศึกษาของประเทศสิงคโปร์ประสบความสำเร็จเป็นอย่างมาก ติดอันดับต้น ๆ ของโลกในด้านระบบการศึกษาระดับอาชีวศึกษาที่มีคุณภาพ ในด้านการวัดระดับการสอบ การศึกษาต่อเนื่อง การอบรม บุคลากรทางการศึกษาและการบริหารจัดการต่างมีระบบและมีคุณภาพมีเอกลักษณ์ที่โดดเด่น บทความวิจัยฉบับนี้มีวัตถุประสงค์เพื่อศึกษารูปแบบการศึกษาอาชีวศึกษาของสิงคโปร์นำมาเป็นต้นแบบให้กับการศึกษาอาชีวศึกษาของจีน และผู้วิจัยได้สรุปและรวบรวมวิจัยที่เกี่ยวข้องและเข้าใจภาพรวมของสถานการณ์ปัจจุบันของการศึกษาระดับอาชีวศึกษาและระบบการศึกษาในภาพรวม ผู้วิจัยได้ลงพื้นที่เก็บข้อมูลและศึกษา งานวิจัยที่เกี่ยวข้อง ผลการศึกษาพบว่า ระบบการจัดการระดับอาชีวศึกษาของประเทศสิงคโปร์จัดการได้ดีเยี่ยมและประสบความสำเร็จอย่างมาก จากการเปรียบเทียบระบบการศึกษาของอาชีวศึกษาในประเทศจีนพบว่ายังต้องพัฒนาเพิ่มเติม ในด้านคุณภาพของบุคลากรครูผู้สอน และผู้วิจัยยังได้วิเคราะห์ข้อจำกัดของระบบอาชีวศึกษาของประเทศจีน นำรูปแบบและการจัดการของสิงคโปร์เป็นแบบอย่างในการพัฒนาระบบการศึกษาระดับอาชีวศึกษาของประเทศจีน เพื่อร่วมสร้างนโยบายที่มีประโยชน์ต่อการศึกษาของชาติต่อไป

คำสำคัญ : สิงคโปร์; ระบบการศึกษาอาชีวศึกษา; ระบบการศึกษา

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Singapore's Vocational Education System and the Implications for China

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Abstract: Singapore has gained widespread recognition for its achievements in vocational education. It has a world-leading vocational education system with distinctive features in the examination and streaming system, continuing education, on-the-job training, teacher team building, and personnel management. The article comprehends Singapore's vocational education system through the synthesis of existing research. Through actual fieldwork and relevant information, the successful experience of Singapore in vocational education is drawn from it. Then, it compares vocational education in China and Singapore and analyzes the limitations of vocational education in China at present. Finally, the successful experience of vocational education in Singapore is drawn upon to provide suggestions for vocational education in China.

Keywords: Singapore; vocational education; education system

新加坡职业教育对中国的借鉴意义

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摘要: 新加坡的职业教育体系在全球范围内享有盛誉, 其在考试分流、继续教育、职业培训、师资队伍构建及人事管理等诸多层面均展现了显著的优势与特色。本文在系统回顾和分析现有研究的基础上, 深入了解了新加坡职业教育的现状及其教育体系, 并从中提炼出其成功的实践经验。进一步地, 将新加坡的职业教育体系与中国的职业教育进行了全面的比较分析, 深刻剖析了中国职业教育当前存在的短板与不足。通过借鉴新加坡在职业教育领域的先进理念和成功做法, 笔者期望能够为中国职业教育的改革与发展提供有益的参考与启示, 从而推动中国职业教育水平的整体提升。

关键词: 新加坡; 职业教育; 教育体系

Introduction

Singapore is an island country in Southeast Asia with relatively few natural resources, but with its economic and social development, Singapore has achieved great success in vocational education and constructed a first-class vocational education system, which is regarded as one of the most successful cases of vocational education in the world. Since the implementation of semi-autonomy in 1955, vocational education in Singapore has gone through three stages of arduous exploration, reform and innovation, and meandering. It can be said to have gone from a blank slate to becoming globally renowned and building a world-class vocational education system. From this, Singapore has distinctive characteristics and experiences in the education system, education model, integration of industry and education, continuing education and training, institution construction, etc. This will provide a reference for our country to improve further the theoretical research related to the development of vocational education, and at the same time, it will also play a certain role in promoting the development of relevant vocational colleges and universities, and the level of vocational education and teaching.

Through the combing of domestic and foreign literature on “vocational education in Singapore”, it is found that there are fewer foreign monographs on vocational education in Singapore, but they mainly focus on Singapore’s education, such as Singapore’s higher education, education profile, education system, language, society and education, and so on. In addition, in terms of thesis, researchers’ attention is mainly focused on the characteristics of vocational education in Singapore, which involves the education system, curriculum, personnel training, continuing education and training, school-enterprise cooperation and other aspects. Domestic researchers mainly focus on the development history, characteristics and unique programs of vocational education in Singapore. Based on this, this paper starts from the status quo and education system of vocational education in Singapore, and compares the vocational education of the two countries, draws on the successful experience of vocational education in Singapore, and provides suggestions for vocational education in China.

Literature review

Different scholars at home and abroad have studied vocational education in Singapore from different perspectives and published a large number of research results. Foreign studies include: Saranya Tarat and Teera Sinde charak, by comparing the management system, development guidelines, curriculum and teaching methods of vocational education in Thailand and Singapore, found that Singapore has the following advantages: First, in the management system, vocational education in Singapore is part of the high school curriculum, and vocational education is an educational choice for students; secondly, the development programs and activities for students in Singapore’s vocational and technical schools focus on theoretical school learning and project-based learning, and the skills of vocational school students

are linked to market demand; then, there are more programs and courses in Singapore than in Thailand, and in order to narrow the boundary between vocational education and university education and provide more choices and opportunities for high school students in vocational education in Singapore, the curriculum in Singapore is chosen to correspond to the university curriculum; meanwhile, Singapore's vocational education courses are increasingly adapted to economic, social and technological changes through public and private sector partnerships; finally, Singapore's vocational education and teaching style focuses on learning by doing and training, and technology is applied through instructional media. (Tarat & Sindecharak, 2020: 192-211)

Marc S. Tucker (2012) talks about the pattern of each stage of development of vocational education and training in Singapore matching the stage of economic development that Singapore is in, and thus adapting to the economic and social development. Law, Song Seng (1996) argues that the factors affecting technical education and training in Singapore include: Singapore's limited natural and human resources; declining labor force growth rate; large number of older workers with lower levels of education and skills; increasing global competitiveness and continuous upgrading and restructuring of the country's industries. In summary, through a review of foreign literature on vocational education research in Singapore, it is found that there are no foreign monographs on vocational education in Singapore, but mainly focus on the educational aspects of Singapore, such as higher education in Singapore, educational profile, educational system, language, society and education, etc. Besides, in terms of papers, it is found that the focus of existing scholars is mainly on the characteristics of vocational education in Singapore, which involves the education system, curriculum, talent training, continuing education and training, school-enterprise cooperation, etc.

Certain domestic researchers talk about the characteristics of vocational education in Singapore. Wei Xiaoliang (2021) believes that Singapore's vocational education emphasizes student-centered; Guo Lingyan et al. (2017) argue that vocational education in Singapore has a unique cultural connotation; according to Qing Zhongquan, Singapore's vocational education is characterized by a unique system of streaming education, an applied learning education model, and continuing education and training for lifelong learning for all (Qing, 2018: 195-200). Some researchers have also mentioned programs specific to vocational education in Singapore, such as Zhang Guomin (2018) who argues that Singapore's Skills for Life program has advanced the lifelong nature of vocational education in Singapore; In her research, Duan Lihua (2017) mentions that Singapore's Nanyang Polytechnic has achieved leapfrog development with "four innovative development paths such as 'border less' campus culture, 'teaching factory' schooling philosophy, shelf-less life training strategy and project-oriented teaching model".

Some researchers have divided the stages of development of vocational education in Singapore, such as Li Xiaojie (2013) who believes that vocational education in Singapore has gone through three stages

of development: the stage of emphasis on learning over art (from the early 19th century to the mid-20th century), the stage of primary transformation (from the late 1950s to the late 1970s), and the stage of fundamental change (from the late 1970s to the present), in which vocational education in Singapore has evolved from separation of academic subjects from job skills knowledge to giving a prominent place to education and training and skills development, to the establishment of a new system of streaming education, bridging the gap between general and vocational certificates, significantly increasing the funding earmarked for vocational education, and raising the level of vocational education teachers to achieve fundamental change in vocational education. In summary, through a review of the relevant literature on vocational education in Singapore, scholars have mainly focused on the development history of vocational education in Singapore, analysis of its characteristics, comparison of vocational education between Singapore and China, and inspiration from the experience of vocational education in Singapore.

To summarize, different scholars at home and abroad have paid attention and emphasized on vocational education in Singapore and published certain research results, and this paper further elaborates the current situation and education system of vocational education in Singapore in depth based on the existing research results.

Research methodology

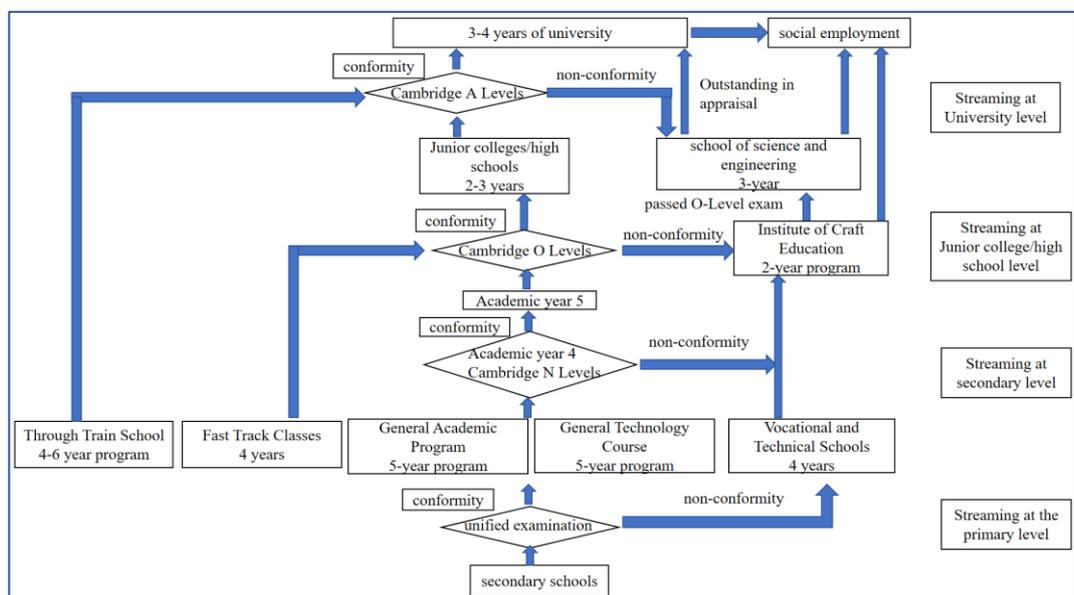
Literature research, field survey, comprehensive analysis are combined. Through the method of “literature research” to understand the relevant literature about vocational education in Singapore at home and abroad; through the “field survey” to understand the current situation of vocational education in Singapore, vocational education system; through the “comprehensive analysis” to understand the successful experience of vocational education in China and Singapore, and further to provide suggestions for vocational education in China. Through “comprehensive analysis”, we will learn about the successful experience of vocational education in Singapore and provide suggestions for vocational education in China.

Singapore's Vocational Education System

Singapore has a unique vocational education system with four streams available from primary to university level, giving students multiple opportunities to make choices about their studies. Singapore's vocational education system encompasses four important pillars: general technical classes and 4-year vocational-technical schools in secondary schools, 2-year colleges of technical education, 3-year polytechnics and continuing education and training for in-service personnel (Skills to Create Mileage Program). At the primary school level, the streaming is based on the results of the baccalaureate examination, and those who do not pass the examination are admitted to a four-year vocational-technical school to learn the relevant technical operations. After secondary school, they are streamed based on

Cambridge N and O Level exams into 2-3 year junior colleges/high schools, 3 year polytechnics, and 2 year institute of craft education. This shows that Singapore’s vocational education system is open and inclusive. According to the national target, upon completion of secondary education, about 25% of students will enter tertiary education, 40% will enter polytechnics and 25% will enter ITE technical colleges. This shows that vocational education in Singapore is concentrated in 4-year vocational and technical schools, 2-year colleges of technical education, 3-year polytechnics, related continuing education and training institutions, and the Singapore East Asia Institute of Management. Detailed information is as follows:

Figure 1 Singapore's Vocational Education System



4-year vocational and technical schools focus on technical operations (metalworking, carpentry, basic electrical work, etc.), while 2-year colleges of technical education aim to train practical personnel. It offers four levels of major courses, including National Institute of Technical Education Certificate, Advanced Certificate, Technician and Technical Diploma, as well as skills training for employed workers, course refresher and level appraisal examinations.

There are five 3-years polytechnics (Singapore Polytechnic, Ngee Ann Polytechnic, Temasek Polytechnic, Nanyang Polytechnic and Republic Polytechnic), each of which offers relevant majors based on their strengths and characteristics, considering the development of the country, industry and enterprises, as well as students. The curriculum is designed to cultivate students’ career development-related abilities, and the courses offered are mainly in engineering, technology and management, etc. The design of the curriculum is flexible (including core, limited and free elective courses), and these courses are revised and adjusted every year, and some majors are adjusted once in three years. At the same time, to better train students, the institute will strictly implement the recruitment, training and evaluation of teachers.

For example, Singapore Polytechnic is leading to adapt to industrial development, and its industries cover two major categories: wholesale and retail industries and manufacturing industries. To meet the needs of industrial development, Singapore Nanyang Polytechnic has opened electronic or mechanical electronic engineering, manufacturing engineering and other majors. Nanyang Polytechnic has set up a “teaching factory” (i.e. teaching and factory combined to achieve school-enterprise cooperation) with reference to the German dual-track system, to cultivate students’ relevant knowledge and skills. At the same time, Nanyang Polytechnic also breaks the boundaries of departments and disciplines, and re-establishes professional teams to develop relevant projects, and adopts the “dual-track teaching model” in teaching students. In addition, there is no age limit for teachers to study, and the concept of lifelong learning is advocated for teachers to achieve, and strict control and gate-keeping is implemented in all aspects of recruitment, assessment and study, and teachers are actively encouraged to improve their knowledge, skills and practical experience through study and training.

The relevant continuing education and training institutions (College of Technical Education, Bureau of Adult Education, etc.) provide relevant skills training for in-service personnel, such as the Bureau of Adult Education, which was established in 1960 to provide basic classes and skills training (language, kindergarten teacher, electrical and electrician, etc.) for schools and communities; In 2014, the Prime Minister of Singapore announced the Skills for Advancement Program, which gives in-service workers access to new professional knowledge and relevant professional skills.

Singapore East Asia Institute of Management (SEAIM) is a higher education institution approved by Singapore’s Ministry of Education to provide specialist, undergraduate, master’s and doctoral degree programs with a focus on the development of business, logistics management and other skills-related talent. New majors and courses are offered in accordance with social development and industrial restructuring.

Successful experience of vocational education in Singapore

1. Strength of government support

The remarkable achievements of vocational education in Singapore are inextricably linked to the high priority and strong support given to vocational education by the Singaporean government. Singapore regards vocational education as an accelerator of economic development, and the Ministry of Education directly manages the three-year polytechnics and two-year colleges of technical education, providing substantial financial support for the construction of the schools’ related infrastructure, reasonable daily operations, and related manpower costs. At the same time, in order to cope with the continuous development of Singapore’s economy and society, the Singapore government attaches great importance to the management and guidance of vocational education, and established the Vocational

Education and Training Department in 1968 to coordinate the relevant departments (Ministry of Education, Economic Development Board, Ministry of Health and other relevant government departments) to promote the employment of continuing education and training. In addition, the Singapore government has also reviewed the development mechanism of vocational education in light of the continuous economic and social development, reviewed and reformed the curriculum of vocational education, and further adjusted the training of vocational education personnel to respond to the global economic development trend.

2. Student-oriented concept

It can be seen from the design of Singapore's vocational education system (an educational overpass that integrates general education and vocational education), curriculum, specialties, and the supply of various resources (government, schools, polytechnics, education and training institutions, industry and enterprises, etc.) that Singapore's vocational education always puts the development and needs of students in the first place. The curriculum (modernized, with more emphasis on science, mathematics, language, and technology), specialization (to fit students' individual abilities and continuous development), teaching implementation (using less teaching and more learning, heuristic teaching, focusing on practical operations, etc.), and related assessment (teacher and student assessment, teacher assessment involves teacher teaching and student management, etc., and student assessment implements strict (theory, practice, certificate examinations, etc.) and other aspects of comprehensive consideration and control.

3. Continuing education and training for teachers

To enhance the professional competence and overall quality of vocational education teachers, Singapore always advocates the concept of lifelong learning for vocational education teachers and encourages them to go on field trips to industry enterprises to learn the latest technology and techniques. At the same time, vocational education teachers in Singapore are given 25 paid study days per year to pursue further education and learning in various fields of their choice, to acquire and accumulate new knowledge and skills. In addition, to enable vocational teachers to receive continuing education and training during their employment, Singapore considers reserving sufficient number of teachers for continuing education and training at the time of recruitment to ensure that vocational teachers' participation in training does not interfere with students' regular classes.

4. Experience of integration of industry-education and school-enterprise cooperation

Vocational education in Singapore pays particular attention to the integration of industry-education and school-enterprise cooperation. For example, the three-year polytechnic follows the lead in setting up majors to meet the development of industry, and the two-year technical education institute matches

the curriculum with job requirements. For example, Singapore Nanyang Polytechnic is typical of the “ ‘teaching factory’ talent training model”. At the same time, Singapore has also established technology training centers between schools and enterprises, such as “Republic Polytechnic and HMI to build a production laboratory, and the Institute of Technology Education and Huawei to build a technology training center” . In addition, Singapore companies are actively involved in the training of teachers in vocational institutions, providing relevant programs and adequate financial support to vocational teachers.

A Comparison of Vocational Education in China and Singapore

By comparing the vocational education in China and Singapore, it is found that the vocational education in China is slightly inadequate in the following aspects.

1. Insufficient attention from the national government

At present, the material basis and related needs provided by the state for vocational education are not enough, but the education investment plan is more on basic education as well as higher education. Although “the project team of the Annual Report on the Quality of Vocational Education in China 2020” has talked about the increase of the average public budget expenditure on education in higher vocational colleges and secondary schools from 19,575.9 in 2014 to 30,393.36 in 2018, there is still a big difference compared with the financial investment in basic and higher education. At the same time, with the reform of some government agencies and related enterprises, the reorganization and abolition of certain sectors and industries, the corresponding vocational education also disappears. In addition, with the development of China’s economy, society and industrial sectors, the country needs to be strengthened in adjusting the existing demand for vocational education.

2. The existing management system is lacking

China has built the world’s largest vocational education system, with 11,300 vocational schools and more than 30 million students enrolled. However, there are still barriers to coordination among various departments in the management system of vocational education in China, such as cross-mixed management and insufficient communication and articulation among the Ministry of Education, relevant government departments and industry enterprises. For example, Liu Shuyun and Qi Zhanyong (2018) believe that the existing management system of vocational education in China still has the following problems: “low degree of coordination and cooperation, unreasonable distribution of authority, unimplemented supervisory system, and insufficient social participation”. At the same time, the existing management system has a commanding and direct approach, which makes vocational colleges and universities restricted in the implementation of autonomous management, which in turn restricts the development and management of vocational education.

3. Decline in the scale of vocational education students

Although the state has put forward the equal importance of vocational education and general education from the policy level, the concept of valuing general education over vocational education is deep-rooted in people's mind. Meanwhile, the decline of school-age population, the lack of smooth transition to secondary and higher vocational education, the diversion of general vocational education by subject examination and the insufficient educational investment in the conditions of secondary and higher vocational education have made secondary and higher vocational education less attractive to secondary and higher vocational students. As Sun Cheng et al. (2021) mentioned in their study, "Since 2010, the scale of secondary vocational education students nationwide has been decreasing year by year, with 15.77 million students in 2019, which has not reached the target of 23.5 million expected by the Education Plan Outline". At the same time, according to statistics, the number of students enrolled in general specialties in higher education nationwide in 2021 is 145,954,488, and the number of students enrolled in secondary vocational schools is 12,678,379, totaling 272,738,667. This shows that the size of vocational education students enrolled in the country is not optimistic.

4. Weakness of the existing teaching staff

There is a shortage of "double-teacher" teachers in vocational colleges and universities, and the student-teacher ratio (i.e. the ratio of full-time teachers to the number of students in schools) is seriously insufficient, and the ratio of full-time and part-time teachers is not enough. As of October 2019, according to the official data of the Ministry of Education, from the demand side, the total number of "dual-teacher" teachers in China's vocational education is 455,600, of which 191,000 and 264,000 are in senior and middle schools respectively, accounting for 39.7% and 31.5% of full-time teachers respectively, and the number of dual-teacher teachers is increasing year by year, but it is not enough to meet the demand for "dual-teacher" teachers in vocational institutions. As "the project team of the Annual Report on the Quality of Vocational Education in China 2020" has said, "the proportion of 'double-teacher' teachers in some vocational schools and undergraduate vocational schools is still somewhat different from the latest requirement of 50%, and the ratio of 'two-teacher' teachers in a number of institutions is still less than 10%". This shows that there is still a gap in the number of "dual-teacher" teachers in vocational institutions.

5. Insufficient school-enterprise cooperation and integration of industry and education

Although the state has issued a series of policies for school-enterprise cooperation and integration of production and education in vocational education, such as "Measures for Promoting School-Enterprise Cooperation in Vocational Schools" and "Opinions on Deepening the Integration of Production and Education",

there is still a lack of relevant policy details for the cooperation between industry enterprises and vocational colleges in running schools, and there is a lack of endogenous motivation between relevant industry enterprises and vocational colleges. At the same time, there is a gap between the employment demand of industry enterprises and the talent cultivation of vocational colleges, and industry enterprises also bear various risks in taking over the internship training of vocational college students, etc. The state should give policy and financial support to industry enterprises in supporting vocational colleges and universities to cultivate talents, promote school-enterprise cooperation and integration of production and education, and realize the perfect docking of professional adaptation, school-enterprise cooperation, integration of production and education, and engineering integration, etc.

The significance of vocational education in Singapore for vocational education in China

1. The state strongly supports vocational education

First of all, China should continue to issue relevant policy documents to promote the development of vocational education, such as the system of vocational education entrance examination, rules and regulations and guidelines on school-enterprise cooperation in the integration of industry and education. Secondly, the state should also improve the corresponding system guarantee and incentive mechanism, and clarify the various responsibilities of the government, vocational colleges and universities, enterprises and industries as well as relevant institutions. Then, the state should continue to attach great importance to the development of vocational education, encourage the establishment of special vocational education teacher training colleges, increase financial support for vocational education, and improve the operating conditions of vocational colleges, so that vocational education has the same importance as general education.

To reflect the importance the state attaches to vocational education, on April 20, 2022, the thirty-fourth meeting of the Standing Committee of the Thirteenth National People's Congress amended the 1996 Law of the People's Republic of China on Vocational Education to "clarify that vocational education is a type of education with the same importance as general education, and make efforts to enhance the recognition of vocational education". Finally, "the state establishes and improves a modern vocational education system that meets the needs of economic and social development, deeply integrates industry and education, places equal emphasis on vocational school education and vocational training, integrates vocational education with general education, effectively connects different levels of vocational education, and serves lifelong learning for all", so that students can earlier according to their interests and wishes Multiple choices of schools and majors they like.

2. Vocational schools keep up with economic and social development

First of all, vocational colleges and universities in China should continue to move forward to high quality development, be forward-looking and adaptable, always pay attention to the development of economy and society and the development of industry, and adjust the professional settings and curriculum settings according to the development trend of relevant industries and industries. At the same time, vocational colleges and industry enterprises to carry out a high degree of integration and development, the two sides to do to pay attention to each other's interests, school-enterprise cooperation industry-education integration can provide high-quality resources for the training of vocational colleges, but also will enable industry enterprises to obtain long-term development.

For example, vocational colleges in China can learn from the practical operation of polytechnics in Singapore and consider in-depth cooperation with industry enterprises from the perspective of students (such as professional and curriculum setting, teaching implementation and assessment, practical training rooms and bases construction, etc.), vocational colleges can provide relevant technical guidance and management services for industry enterprises, and enterprises can also provide vocational colleges with corresponding practical training bases and relevant teachers, so as to improve the vocational skills and comprehensive quality of vocational college students. Then, the professional settings of vocational colleges should be in line with the market demand and student-oriented concept, and the cultivation of talents should move towards highly skilled talents, and the education and ability of talents should be improved according to the actual situation. Finally, vocational colleges and universities should realize professional certification and adopt the mechanism of credit certification to realize the educational upgrading channel from vocational specialist to undergraduate and general undergraduate.

3. Building a high-level teacher team

First, the state can issue corresponding policy documents to encourage professionals from industry enterprises and some skilled craftsmen to work as full-time and part-time teachers in vocational colleges. Secondly, the admission of teachers in vocational colleges should be strictly controlled, requiring teachers in vocational colleges not only to have a university degree or above, but also to have 2-3 years of working experience in enterprises, teachers in vocational colleges should have the professional skills and comprehensive quality of "double-teacher" teachers. Then, ensure that teachers in vocational colleges have close to one month of paid training or practice in enterprises each year, so as to understand the latest technology and relevant professional knowledge of the relevant industries and enterprises, and learn from the excellent technical skills of the industry and enterprises. Finally, strictly implement the training assessment, related treatment and promotion of teachers in vocational colleges and universities, strengthen the professional training and training of vocational education teachers, etc. , strengthen the care

for teachers in vocational colleges and universities as well as identify with the work of vocational education teachers, communicate more with teachers, and establish a reasonable teacher mobility mechanism to encourage and attract more excellent teachers to enjoy vocational education.

4. Building a student-centered education model

The state, vocational colleges, and relevant industry enterprises should establish a student-centered teaching model with the development of students as the goal. Firstly, students in vocational colleges and universities can directly participate in specific projects of industry enterprises or participate in on-the-job internships under the guidance of mentors, so that students can clearly position their careers in the process and have the relevant abilities to adapt to the market and achieve what they have learned. Secondly, students in vocational colleges are equipped with solid professional knowledge and relevant skills through the training of the teaching factory model, so that they can gain direct access to industry enterprises after graduation and can undertake relevant tasks of industry enterprises alone. Finally, respecting students' ability development and personal interests, the special role of secondary education is brought into play to provide students with quality and suitable education as early as possible.

Conclusion

In this essay, after understanding the status quo and education system of vocational education in Singapore, by comparing China's vocational education and Singapore's vocational education, we find that China's vocational education is still to be improved in the following aspects: the national government's attention is to be strengthened; the existing management system is to be perfected; the decline in the scale of vocational education students; the weakness of the existing teaching staff; and the integration of school-enterprise cooperation and production and education is to be in-depth.

At the same time, it was found that the successful experiences of vocational education in Singapore include: the strength of government support; the student-oriented philosophy; the continuing education and training of teachers; and the experience of school-enterprise cooperation in the integration of industry and education.

Finally, by drawing on the successful experience of vocational education in Singapore, it is proposed to optimize China's vocational education in four aspects, including strong state support for vocational education, vocational schools keeping up with economic and social development, building a high-level faculty, and constructing a student-centered model of parenting.

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