

**CHINA'S VOCATIONAL EDUCATION AND
TRAINING: THE NEXT KEY TARGET OF
EDUCATION PROMOTION**

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Executive Summary

1. Vocational education and training (VET) is a key component of China's educational system. In early 2009, the Chinese government designated VET as the next key target of education promotion to answer emerging challenges from both inside and outside the educational system.
2. VET is identified as a weak area in an ideal, balanced educational structure, after the successful 9-year compulsory education and expansion of higher education in recent years.
3. VET is also highly valued for its employment enhancing effect. Three factors contributed to the rising need for VET: critical shortage of qualified technicians and skilled workers, mass unemployment due to the economic downturn, and high employability of vocational school graduates.
4. The current VET system in China is multi-faceted. The merit of this complicated system is that everybody can find something to fit their specific needs. However, it also causes unwanted confusion and problems.
5. To tackle the problems the VET sector faces, the government has adopted a series of policies and measures. Priority will be given to the promotion of VET at the secondary level and in rural areas. Targets were set to fulfill two major tasks in the foreseeable future: expanding total enrolment of VET institutions and improving the quality of education.
6. Singapore's VET providers may find greater opportunities in expanding their operation in China, thanks to four favorable conditions: the Chinese government's recent policy of VET promotion, reputation of Singaporeans' expertise and professionalism, fewer language barriers and the cordial relationship between China and Singapore nurtured by senior leaders of the two countries.

CHINA'S VOCATIONAL EDUCATION AND TRAINING: THE NEXT KEY TARGET OF EDUCATION PROMOTION

YAN Hao*

- 1.1 In China, vocational education and training (VET) refers to technical education and skills training provided by pre-employment programs, job transfer programs, apprentice programs, on-the-job programs and various certificate programs. According to China's 1996 Vocational Education Law,¹ VET is a key component of China's educational system,² and an important means to promote employment, economic growth and social advancement.
- 1.2 The Chinese government has attached great importance to VET since the founding of the People's Republic in 1949. The 1996 Vocational Education Law and the State Council's 2002 Decision on Vigorously Promoting the Reform and Development of VET³ represents the government's renewed effort at supporting VET after the Cultural Revolution. In the 2005 national conference on VET, a new document, the Decision on Accelerating the Growth of VET,⁴ was issued by the State Council as a guideline for VET development during the 11th Five-Year period (2006-2010).
- 1.3 VET programs in China have made marked progress in recent years. According to the Ministry of Education,⁵ the number of tertiary VET institutes

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¹ The Vocational Education Law of the People's Republic of China.

² See Appendix I: China's educational system at a glance.

³ The State Council's Decision on Vigorously Promoting the Reform and Development of Vocational Education in China (2002) No. 16.

⁴ The State Council's Decision on Vigorously Promoting the Development of Vocational Education in China (2005) No 35.

⁵ http://www.edu.cn/fa_bu_hui_xin_xi_906/20090527/t20090527_380540.shtml

reached 1,184 and total enrolment reached 9 million, accounting for one third of total enrolment at 27 million in tertiary education as a whole. The number of secondary VET schools reached 14,767 and total enrolment reached 20.6 million, only about 20% less than the 25.3 million in ordinary senior high schools.

- 1.4 In his annual report to the People's Congress in March 2009, Premier Wen Jiabao announced that China will promote VET with greater efforts. Priority will be given to secondary VET, particularly VET in rural areas. On behalf of the State Council, Zhou Ji, Minister of Education, delivered a report on VET reform and development in China on 22 April 2009 to the Standing Committee of the National Congress.⁶ He promised to make VET a strategic center of education promotion and a key target for optimizing the educational structure. This shift in policy is widely seen as an answer to the emerging challenges from both inside and outside the educational system.

VET: A weak link in educational system

- 2.1 VET has been identified by the Chinese government as a weak area in an ideal, balanced educational structure, after the achievement of the 9-year compulsory education and the expansion of higher education in recent years.
- 2.2 The 9-year compulsory education program (6 years for primary education plus 3 years of lower secondary education) was launched when China's first Compulsory Education Law took effect in 1986. The program goal was achieved by the end of the 1990s as gross enrolment ratios in primary education increased from 95.9% in 1985 to 99.5% in 2007 and in lower secondary education from 36.7% to 98.0%.
- 2.3 A natural development after this achievement is the growing demand for higher secondary education among lower secondary school graduates. In 2008, 8.4 million of 19 million junior high school leavers went to general senior high schools in preparation for studies at universities or polytechnics, and 8.1

⁶ The State Council's Report on the Reform and Development of Vocational Education in China, 22 April 2009.

million went to vocational high schools in preparation for employment. However, there were still 2.5 million young people who directly entered the workforce without any proper training in knowledge and skills.

2.4 In 1999, the Chinese government expanded higher education to meet the growing need for qualified people in general, and to stimulate domestic demand in the aftermath of the Asian financial crisis in particular. In the following years, China has witnessed an unprecedented rapid growth in higher education. In 6 years from 2000 to 2006, for example, the number of higher educational institutions increased by 1.8 times from 1,041 to 1,867. During the same period, total undergraduate enrolment increased by 3.1 times from 5.5 million to 17.4 million, and graduate enrolment rose by 3.7 times from 0.3 million to 11.1 million. As a result, gross tertiary enrolment ratio increased from 10.5% to 23%, indicating that China is moving from the phase of elite higher education into the phase of mass higher education.⁷ Nevertheless, whether the expansion has shown any positive effect on domestic demand still remains a controversial topic.

2.5 With regard to VET, the recent expansion of higher education has a mixed impact. On the one hand, VET at the tertiary level has been boosted considerably as the number of tertiary VET institutions increases and total enrolment grows. For example, the number of polytechnics and tertiary vocational institutes increased by 2.6 times from 442 in 2000 to 1,147 in 2006. On the other hand, VET at the secondary level grows relatively slowly as more and more junior high school graduates opt for general senior high schools as there is more opportunity for pursuing university studies. From 2000 to 2006, for example, the total enrolment of general senior high schools increased by 2.1 times from 12 million to 25.1 million, while that of vocational high schools increased by only 1.5 times from 12.1 million to 18.1 million.⁸

⁷ According to Martin Trow, the transition of higher education can be divided into 3 phases by gross enrolment ratio (GER): the elite phase = GER 0-15%, the mass phase = GER 15-50%, and the universal phase = GER 50+.

⁸ See Appendix II and appendix III.

- 2.6 The expansion policy has not only a mixed impact but also a mixed assessment result. Falling teaching standards and rising unemployment among college graduates are the two most frequently mentioned side-effects. In a press conference in October 2008, an official of the Ministry of Education admitted that the 1999 policy was made to some extent prematurely, and the fast expansion of higher education so far is apparently unsustainable.⁹ It is decided that the growth of freshmen enrolment will be capped at 4% in 2009 and 3% in 2010. Once the enrolment of higher educational institutions slows down, it is natural that general senior high schools can hardly expand as fast as before. In this situation, therefore, to promote VET with greater efforts becomes a wise choice for the government to achieve its education promotion goals stated in the National Guidelines of Education Reform and Development.¹⁰

VET to serve employment directly

- 3.1 VET is also highly valued for its employment enhancing effect, especially in the current economic difficulties. Commenting on VET programs in Jiangsu, Premier Wen Jiaobao raised in early 2009 two issues relevant to tackling the economic downturn: one is to keep economic growth from major fluctuations, and the other is to avoid mass unemployment. He pointed out that job creation relies not only on economic growth, but also on skills training of workers. Therefore, VET should serve employment directly. “Serving employment directly” becomes now a guiding principle of all VET programs in China.
- 3.2 Three factors contribute to the rising need for VET on China’s labor market: critical shortage of qualified technicians and skilled workers, mass unemployment due to the economic downturn, and high employability of VET school graduates.

⁹ <http://news.163.com/08/1009/15/4NQTHUCV0001124J.html>

¹⁰ An Outline of the National Medium and Long-Term Plan for Education Reform and Development in China, 2010-2010, Draft I, August, 2008.

- 3.3 China has the largest population and the largest labor force in the world. The abundant supply of cheap labor is one of the major contributing factors to the economic miracle taking place in China over the last 30 years. However, the overall level of knowledge and skills of China's labor force is relatively low. According to the Ministry of Human Resources and Social Security, only half of China's 140 million employees of urban enterprises can be classified as skilled. Among skilled workers, 60% have junior certificates, 35% intermediate certificates and 3.5% senior certificates. This skills mix differs a lot from that of industrialized countries, where the respective figures stand at 15%, 50% and 35%. Therefore, there is a growing demand for qualified technicians and skilled workers, particularly in the manufacturing sector of the coastal regions.
- 3.4 As the 2008 labor market statistics of 113 cities show,¹¹ demand is higher than supply in almost all technical and skilled categories judging by the job opening to application ratio: for senior technicians at 2.4:1, technicians at 2.1:1, senior skilled workers at 1.8:1, intermediate skilled workers at 1.5:1, and junior skilled workers at 1:1. The situation becomes increasingly critical in recent years, as the number of senior skilled workers contracts quickly due to retirement.
- 3.5 China's economy suffers from the lack of qualified and skilled personnel in many ways: (a) Technical skills and craftsmanship of workers are essential for making quality products. It is estimated that 30% of Chinese products cannot pass qualification tests due to failures in skill, resulting in an annual loss of RMB 200 billion; (b) Many advanced equipment sets and production lines, including imported ones, cannot operate normally or in full capacity, or are even left to stand idle due to the lack of qualified engineers or maintenance workers; (c) It becomes a vicious circle where low skilled workers lead to low productivity and low productivity leads to low pay, attracting few qualified personnel. Therefore, it is hard for the Chinese economy as a whole to achieve technical upgrading, raise profit margin by producing high value-added goods

¹¹ http://www.lm.gov.cn/gb/data/2008-05/05/content_235424.htm

and services, enhance competitiveness and expand its share in the world's high-end market.

- 3.6 The current economic downturn has so far left tens of millions of workers jobless or laid-off in China, including 25 million migrant workers from rural areas. To help the unemployed find a job is important not only to people's livelihood but also to social stability. The State Council document No. 1 of 2009 has listed three measures to help unemployed migrant workers: creating more jobs in infrastructure sectors and public services in cities, introducing large-scale welfare-to-work programs in the countryside, and launching massive VET sessions in rural areas.¹²
- 3.7 Meanwhile, a special VET project for the period of 2009-2010 was initiated jointly by the National Development and Reform Commission, the Ministry of Human Resources and Social Security and the Ministry of Finance.¹³ The project aims to promote VET among temporarily redundant employees of enterprises in difficulties, return migrant workers in the countryside, the hardcore unemployed and new labor market entrants in cities. Rural participants can apply for special funding to cover tuition fees. The target is to train up to 15 million person-times in two years' time. The major contents of the project have been introduced to the world by Yin Weimin, Minister of Human Resources and Social Security, at the ILO Summit on the Global Jobs Crisis (15-17 June 2009, Geneva).
- 3.8 According to the 2009 graduate employment report,¹⁴ the employment rate of college students was 86% in 2008, down by 2 percentage points over the previous year. However, there are marked differences from one field of study to another, with the highest rates registered in engineering and management sciences and the lowest in law and philosophy. As many as 27.7% of the graduates ended up working in areas not matching their professional training.

¹² The Opinions of the CCP Central Committee and The State Council on Promoting the Steady Growth of Agriculture and the Continued Increase of Farmer's Income, 2009.

¹³ The Circulation Concerning the Implementation of the Special Vocational Training Program (2009) No. 8.

¹⁴ China Annual Graduate Employment Report 2009.

The report finds that employers generally prefer graduates from polytechnics to those from universities. The latter is considered a “luxury” in times of economic difficulty. Meanwhile, the first job wage for the 2008 cohort also dropped, from the highest by 14% for university graduates to the lowest by 5% for polytechnic graduates, compared to 2007. This implies that graduates of polytechnics (or tertiary vocational-technical colleges) have a better chance of not only finding a job but also having a stable income.

- 3.9 Similar phenomenon can also be observed in secondary vocational schools. According to the Ministry of Education, the employment rate of graduates from secondary VET schools was 95.8% in 2008,¹⁵ down by only 0.6 percentage points over the previous year but still 10 percentage points higher than that of college graduates. The skills training courses with the highest rates were manufacturing (97.6%), information technology (96.5%), retail and hospitality (95%) and civil engineering (95%). The rest of the skills courses registered a rate above 90%. Therefore, some education experts predict that the high employability of their graduates may make VET schools more attractive to prospective students and their parents in future.¹⁶

China’s VET system in different perspectives

- 4.1 The current VET system in China, though a complicated system, enables everyone to find something to fit his or her specific need.
- 4.2 **By level of education:** According to the 1996 Vocational Education Law, China’s VET falls into three levels: primary, secondary and tertiary. Now that the 9-year compulsory education becomes universal, vocational education at the primary level loses its importance gradually.
- 4.3 Four types of non-university institutes provide VET courses at the tertiary level: (a) Vocational-technical colleges or polytechnic colleges (高等职业技

¹⁵ <http://www.jiaodong.net/edu/system/2009/05/31/010542373.shtml>

¹⁶ <http://www.tianjin.gov.cn/main/20071215118430/Page/200852215262159/NewsDetail.asp?NewsId=200963022354451>

术学院 or shortly 高职) provide 2- to 3-year diploma courses of occupational and technical training. Polytechnic colleges now play a key role in China's tertiary level VET. (b) Specialized junior colleges (高等专科学校 or 高专) provide 2 to 3-year diploma courses mainly for capacity building rather than technical training. Currently, only a small number of normal colleges belong to this category. (c) Technician colleges (技师学院) provide 2 to 3-year certificate courses specially designed for the state occupational license qualification of technicians; and (d) Adult higher educational institutes (成人高等学校) provide full time and part-time certificate courses to people who want to pursue higher education for capacity building, knowledge enrichment, or self improvement.

- 4.4 Four types of VET schools provide VET courses at higher secondary level: (a) Specialized high schools (中等职业技术学校 or 中职) provide 3-year certificate courses. This is the most popular form of VET in China. After graduation, students are more likely to enter the labor market directly. (b) Vocational high schools (职业高中 or 职高) are VET schools transformed only lately from general senior high schools. After graduation, students either enter the labor market or progress further to polytechnic colleges. (c) Skilled worker schools (技工学校) provide 3-year certificate courses specially designed for the state occupational license qualification of skilled workers; and (d) Adult specialized high schools (成人中等专业学校 or 成人中专) provide full-time and part-time courses for those who want to pursue senior high school education. Most short-term courses of occupational and technical training can be grouped into this category as well, since prospective applicants must complete junior high schools.

- 4.5 **By administration:** For historical reasons, the responsibility of VET administration in China is divided between the Ministry of Education and the Ministry of Human Resources and Social Security (formerly the Ministry of Labor). The former pays more attention to occupational and technical education while the latter pays more attention to skills training.

- 4.6 The responsibility of VET administration at the Ministry of Education is further divided between the Department of Higher Education and the Department of Vocational and Adult Education. The former is in charge of VET colleges and institutes, including polytechnic colleges, specialized junior colleges and adult higher educational institutes, while the latter is in charge of VET schools, including specialized high schools, vocational high schools and adult specialized high schools.
- 4.7 At the Ministry of Human Resources and Social Security, the Department of Occupational Capacity Building is responsible for the administration of VET programs in technician colleges and skills worker schools. The department is well positioned for the task because it is also in charge of formulating occupational skills standards, assessing skills qualifications and issuing occupational/professional licenses. In cooperation with the Department of Employment Promotion, the department overlooks short-term skills training programs run by 3,173 human resources service centers (job centers).
- 4.8 At the national level, the two ministries have similar tasks of VET administration, including strategic planning and policy making, cross-region coordination, setting VET standards and curriculum development. At the local level, the respective education departments and labor departments are responsible for the daily routines of VET administration, including budget allocation and personnel management of state-run VET institutions.
- 4.9 In theory, the two ministries may exercise their responsibilities independently because of varied interests and targets. However, differences and confusion cannot be ruled out completely in practice. There have been calls for measures to strengthen coordination and cooperation between the two ministries. Nevertheless, in the National Guidelines of Education Reform and Development, it is stated only vaguely that “the education authority coordinates and administers VET programs in an integrated manner, while other relevant departments exercise their respective responsibilities”. Some experts, therefore, suggest the reorganization of the Ministry of Education into the Ministry of General and Vocational Education by taking over all VET

responsibilities from the Ministry of Human Resources and Social Security. Another option put forth is the setting up of an independent ministry, either called the Ministry of Vocational Education and Training or the Ministry of Education No. II to look after VET matters.¹⁷ As a temporary measure, the State Council approved in 2004, the establishment of an inter-ministerial liaison meeting mechanism¹⁸ to coordinate activities of the seven ministries related to VET: the Ministry of Education, the National Development and Reform Commission, the Ministry of Finance, the Ministry of Labor, the Ministry of Personnel, the Ministry of Agriculture and the Poverty Alleviation Office.

4.10 **By organizational status:** Before the reform, VET colleges and schools were run primarily by the state, but for a small number by enterprises. After the reform, the government has adopted a series of measures to encourage the involvement of non-state sectors in VET development. At present, non-state VET providers are very active at various levels and in various forms of VET, particularly in the field of short-term certificate courses. Unlike state VET institutions that are managed by relevant government departments and financed by government budget, non-state VET providers are financially independent and usually have high degree of autonomy in decision making. They are therefore much more flexible in developing and tailoring their VET courses to meet changing market needs.

4.11 Non-state VET providers can be further divided into two groups: the not-for-profit and the commercial. Enterprises and sectoral associations are the two main players in the not-for-profit group. To provide VET courses to their employees is a legal obligation required by the Vocational Education Law. In 2008, there were over 22,000 training centers ran by enterprises of various industries. Other active players include mass organizations like trade unions, the women's federation and the youth league, social and professional associations, and various NGOs. Recently, the army has also launched its own

¹⁷ <http://money.163.com/09/0522/04/59T0MC4V00253B0H.html>

¹⁸ The State Council's Approval of the Establishment of the Inter-Ministrial Liaison Meeting Mechanism.

VET programs to bring up a large number of “servicemen for dual uses” (military and civilian uses, 军地两用人才) through professional education, military drills and vocational training.

- 4.12 China has witnessed a fast growth of commercial VET institutions in recent years. In 2008, for example, the number of commercial VET providers reached 21,811 nationally. Labeled as non-state, non-enterprise units (民办非企业机构), commercial VET institutions are treated differently from ordinary businesses. They are required to not only be registered at the taxation office and the civil affairs department, but also apply to the education department for a license in advance.
- 4.13 Except for a small number of VET colleges, commercial VET providers are mainly engaged in secondary level, short-term certificate courses designed in line with the state occupational and professional qualification standards. These certificates are extremely necessary to those who are either looking for a job or seeking a promotion. Because they are well targeted and highly practical, VET courses provided by commercial institutions are becoming increasingly popular nowadays. The most successful story comes from New Oriental Education and Technology Group in Beijing, which grows in just 13 years from a small class to a New York stock market listed company. By the end of 2007, the company had trained over 10 million person-times in its 40 branches at home and abroad. Yu Hongmin, the founding father of New Oriental, is considered the richest teacher in China, with a total fortune of US\$121 million.
- 4.14 China Society of Vocational Education and Training, established in 1990, is the national organization for facilitating coordination and cooperation among VET institutions of different background. It also has a department responsible for exchange with foreign VET organizations.
- 4.15 **By key school status:** The separation of key schools from ordinary schools is a common phenomenon at all levels of education in China. The VET sector is no exception. Key schools usually enjoy high reputation and rich resources for high-quality education, effective management, and standardized facilities. In

recent years, the government has made efforts to downgrade the importance of key schools at the compulsory education level in order to equalize basic education provision. In VET institutions, however, the aim of identifying key schools is to set high standards for teaching quality and school management.

4.16 In 2006, the Ministry of Education and the Ministry of Finance announced a joint project “Tertiary VET 211”¹⁹ to make available an additional RMB 2 billion by the end of 2009 to upgrade 100 state exemplary tertiary vocational colleges (国家示范性高等职业院校). Since 2003, the Ministry of Education has published an annual list of key state vocational high schools (国家级重点中等职业学校). Education departments of provincial governments also identify key vocational high schools at local levels. By the end of 2008, there were about 2,000 state designated key VET schools and 3,000 provincially designated key VET schools.

4.17 The Ministry of Human Resources and Social Security has established its own system of recognizing key VET schools since 1989. By the end of 2007, the Ministry had listed 618 key state skilled worker schools (国家重点技工学校). Among them, 397 were also awarded the title of advanced skilled worker schools (高级技工学校) for achieving SO9000 standards.

Problems and major measures of VET promotion

5.1 According to the State Council’s report of April 2009, China’s VET sector currently faces 6 problems: (a) underdeveloped VETs which failed to produce sufficient and qualified skilled manpower to meet the needs of China’s socio-economic development; (b) defects in VET administration and management systems at macro and micro levels; (c) lack of coordination between tertiary and secondary VET, as well as between VET and general education; (d) poorly designed courses and curriculums which are also not well-targeted for practical employment needs; (e) shortage of teaching personnel and unsatisfactory teaching quality; and (f) inadequate resources and poor facilities.

¹⁹ A follow-up of the project “Higher Education 211” launched by the Ministry of Education in 1995 to upgrade 100 key universities so as to improve the overall standard of higher education in China in the 21st century.

- 5.2 To tackle the aforementioned problems, the government has adopted a series of VET promotion targets and measures. First, greater importance will be attached to VET in China's development plans and efforts will be made to achieve a balanced growth between VET and other education sectors. At present, priority will be given to VET at the secondary level in general and in rural areas in particular.
- 5.3 The administrative system of VET is subject to further reform outlined in the National Guidelines of Education Reform and Development. At the national level, the inter-ministerial liaison meeting mechanism is responsible for formulating major VET strategies and policies. At the local level, provincial governments are responsible for planning, resource allocation and supervision. The government will continue to play a leading role in VET funding, while people from all walks of life are encouraged to participate in VET provision.
- 5.4 Two tasks of VET promotion are set for the foreseeable future: expanding total enrolment of VET institutions and improving quality of education. The expansion targets include (a) Secondary VET institutions: annual freshmen enrolment of 8.6 million, and total student enrolment of 24 million; (b) Tertiary VET institutions: annual freshmen enrolment of 3 million, and total student enrolment of 10 million; and (c) Short-term VET courses of various types: total trainees of 150 million person-times annually. From 2009, the current tuition allowance program has extended from a small number of poor students to all students of secondary VET schools.
- 5.5 Quality of education is vital to the growth of the VET sector and the employability of VET graduates and trainees. VET programs and courses should be practice-oriented and labor market-oriented and VET training should combine school learning with hands-on practices. More resources will be made available to upgrade school facilities and attract more qualified teaching personnel. Successful graduates will be issued both a school qualification certificate and an occupational-professional qualification certificate under the "dual certificate" system.

- 5.6 These are mainly supply-side measures. To boost the growth of the VET sector, demand-side factors are also relevant and largely decided by students and their parents. That “scholars are superior to all other walks of life” (万般皆下品唯有读书高) is an old tradition in all Chinese societies. Parents normally try their best to support children to complete education at highest possible level. Young people with just a trainee certificate are usually looked down upon. Apart from government promotion and media awareness programs to boost skilled workers’ social status, recent development of the labor market has also played a role in making VET programs and courses more attractive. Compared with graduates from general schools, as mentioned previously, graduates of VET programs usually have a better chance of finding a job or face lesser problem with wage cut.
- 5.7 It has been 13 years since the coming into effect of the Vocational Education Law in 1996. As the external environment changes, the National Congress decided to amend the law in 2009. The Ministry of Education began field investigation and organized seminars for preparing a recommendation report in 2008.

Chances for Singapore’s VET providers

- 6.1 Singapore runs a very successful VET system and provides world-class VET programs and courses. The VET sector is not only a complementary part of the country’s education system, but also an important contributor to its economic development since the 1960s.
- 6.2 During the economic take-off in the 1960s and 1970s, Singapore’s VET institutions focused mainly on training skilled workers at the primary and secondary levels for the booming manufacturing sectors under the supervision of the government’s Vocational and Industrial Training Board (VITB). When the economy upgraded from labor and skills-intensive, manufacturing sector-based to technology and knowledge-intensive, service sector-based after the 1980s, VET institutions readjusted quickly to market trends by shifting their attention to tertiary programs and courses. The institutes of technical

education (ITE) specialize in training skilled technicians and professionals, while the polytechnics specialize in training technologists and middle-level professionals. Now, Singapore has 5 polytechnics with a total student enrolment of over 60,000.

- 6.3 In recent years, the Singaporean model has been copied by many developing countries. In China, VET programs have also been introduced in two China-Singapore joint projects: the Tianjin Eco-City project and the Hangzhou Science and Technology Park project. Singapore's VET providers may find greater opportunities in expanding their operation in China in future, thanks to four favorable conditions: the Chinese government's recent policy of VET promotion, reputation of Singaporeans' expertise and professionalism, fewer language barriers and cordial relationship between China and Singapore nurtured by senior leaders of the two countries.
- 6.4 Although solely foreign-owned education institutions are not permitted in China at present, foreign organizations are welcome to operate VET joint ventures in cooperation with Chinese partners. The State Council has adopted a series of policies in recent years, embodied in two relevant documents: the Regulations concerning Chinese-Foreign Education Joint Ventures²⁰ of 2003, and the Measures for the Management of Chinese-Foreign VET Joint Ventures²¹ of 2006. There are certain minor variations in provincial regulations.
- 6.5 At present, Singaporean VET providers may not be very experienced in the area to which the Chinese government attaches great importance: VET programs at the secondary level and VET courses related to agricultural production. Nevertheless, they certainly have a competitive edge in the highly specialized VET programs and courses at the tertiary level, such as IT, finance, bio-engineering, aviation, logistics management and sea port management. Due to possible personnel constraints, they should do well in the provision of

²⁰ The Regulations of the People's Republic of China on Chinese-Foreign Cooperation in Running Schools.

²¹ Measures for the Administration of Chinese-foreign Cooperative Education on Occupational Skills Training.

innovative ideas and expertise in areas like course development, textbook design, teaching techniques, and program management skills. Frontline teachers and instructors can be recruited or trained locally.

- 6.6 While Singapore's polytechnics can look for potential Chinese partners among vocational-technical colleges or polytechnic colleges, ITEs can do so among technician colleges. Sectoral associations and large enterprises can also become potential partners if the Singaporean programs are specially tailored to their specific industry or profession. Partnering with key state-run institutes or large state-owned enterprises often has dual advantages: abundant financial resources and fewer hazards from bureaucratic red tapes. Apart from education and labor authorities, China Society of Vocational Education and Training and its local branches are also places to seek advice and assistance.
- 6.7 Singaporean VET providers can start their China operation from large cities like Beijing, Shanghai, Tianjin, Chongqing and Shenzhen, where an advanced economy and a large number of professionals and technologists can generate a sizeable, top-end market.²² Large cities are also places to build market/brand awareness and reputation for a lasting business success. Top price for top quality is always the rule for tuition fees, though profit should not be the major concern at the initial stage.

²² For example, Character Montessori, a pre-school education chain from Singapore has made a big name among urban white-collar professionals in Beijing, Shanghai and Xi'an, by managing pre-school joint ventures in many luxurious condominiums.

APPENDIX I CHINA'S EDUCATIONAL SYSTEM AT A GLANCE

Level of education	General education	Vocational education and training	Adult and continuing education	Special education
Tertiary education	Universities - Undergraduate studies - Graduate studies - Post-doctoral studies	- Polytechnic colleges - Specialized junior colleges - Technician colleges	- Adult higher educational institutes - Correspondence colleges - TV colleges	
Higher secondary education	General senior high schools	- Specialized high schools - Vocational high schools - Skilled worker schools - Adult specialized high schools Short-term courses of various types	Adult senior high schools	
Lower secondary education	General junior high schools	Vocational junior high schools Short-term courses of various types	Adult junior high schools	- Special schools for the disabled - Correctional work-study schools
Primary education	Primary schools		- Adult primary schools - Literacy classes	Special schools for the disabled
Pre-school education	Pre-schools			

**APPENDIX II NUMBER OF SCHOOLS BY LEVEL AND TYPE IN
SELECTED YEARS**

Item	Year					
	1980	1985	2000	2005	2007	2008
A. Higher education	675	1,016	1,041	1,792	1,908	2,263
• Universities			599	701	740	1,079
• Polytechnics				921	1,015	1,036
B. Higher secondary education				31,522	31,255	30,806
• Regular senior high schools	31,300	17,318	14,564	16,092	15,681	15,206
• Specialized high schools	3,069	3,557	3,646	3,207	3,801	3,846
• Vocational high schools			7,655	5,822	5,916	5,915
• Skilled worker schools	3,305	3,548	3,792	2,855	2,995	3,103
C. Lower secondary education				64,550	61,012	59,315
• Regular junior high schools	87,077	75,903	62,704	61,885	59,109	57,701
• Vocational junior high schools			1,194	601	275	213
D. Primary education				427,697	369,063	349,126
• Primary schools	917,316	832,309	553,622	366,213	320,061	300,854
E. Pre-school education						
• Pre-schools	170,419	172,262	175,836	124,402	129,086	133,722
F. Special education for the disabled						
• Special education schools	292	375	1,539	1,593	1,618	1,640

Source: Data from 1980 to 2006 from China Statistical Yearbook of Education; data for 2007 and 2008 from China Statistical Yearbook. Various years.

**APPENDIX III NUMBER OF STUDENTS BY LEVEL AND TYPE IN
SELECTED YEARS ('1000)**

Item	Year					
	1980	1985	2000	2005	2007	2008
A. Higher education						
• Universities + Polytechnics	1,143.7	1,703.1	5,560.9	15,617.8	18,849	20,210
B. Higher secondary education						
• Regular senior high schools	9,697.9	7,411.3	12,012.6	24,090.9	25,224	24,763
• Specialized high schools	1,243.4	1,571.1	4,895.2	6,297.7	7,916.3	8,172.8
• Vocational high schools	319.2	1,843.4	4,145.6	5,824.3	7,252.5	7,503.2
• Skilled worker schools	700.4	741.7	1,401.0	2,753.0	3,671.5	3,988.5
C. Lower secondary education						
• Regular junior high schools	45,382.9	39,648.3	61,676.5	61,718.1	57,209	55,742
• Vocational junior high schools	134.5	452.3	886.4	431.4	153.0	108.2
D. Primary education						
• Primary schools	146,270	133,702	130,132	108,641	105,640	103,315
E. Pre-school education						
• Pre-schools	11,508.0	14,797.0	22,441.8	21,790.3	23,488	24,750
F. Special education for the disabled						
• Special education schools	33.1	41.7	377.6	364.4	419	417

Source: Data from 1980 to 2006 from China Statistical Yearbook of Education; data for 2007 and 2008 from China Statistical Yearbook. Various years.