



**UNDERPINNING CHINA'S ECONOMIC GROWTH:
A Study of Urban Secondary Vocational and Technical Education
1978 - 2000**

by

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**The dominant vocation of all human beings at all times is living –
intellectual and moral growth.**

Democracy and Education, John Dewey

For my husband, and my daughter and son

This thesis contains no material which has been accepted for the award of any other degree or diploma in any university and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text of this thesis.

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ABBREVIATIONS

CCP	Chinese Communist Party
GNP	gross national product
KMT	Kuomintang (the Nationalist Party)
MOE	Ministry of Education, National Education Commission
NCRVE	National Centre for Vocational Education Research (USA)
NCVER	National Centre of Vocational Educational and Training Research Pty Ltd. (Australia)
PRC	The People's Republic of China
OECD	Organization for Economic Cooperation and Development
RMB	Renminbi (Chinese currency)
SES	socio-economic status
TAFE	(College of) Technical and Further Education
TVET	technical and vocational education and training
UNESCO	United Nations Educational, Scientific and Cultural Organization
VET	vocational education and training
VTE	vocational and technical education
WTO	World Trade Organization

ABSTRACT

In 1978, the Chinese Communist Party (CCP) embarked on the national economic reform and development. Education was identified as one of the strategies for this great endeavour. The CCP government soon launched a reform of educational structure, in which secondary vocational and technical education (VTE) was one of the focused areas in the reform. From the 1980s onwards, the Chinese government attempted to develop secondary VTE on a large scale, streaming 50% of senior secondary students into VTE, with the rhetoric that China needed tens of millions of skilled workers for the economic construction, and secondary VTE would play an important role in this process. Secondary VTE went through several stages of development and changes during the 1980s and 1990s. It can be summarized into three periods: restoring the old system developed before the “Cultural Revolution” from the end of 1970s, reforming and developing on a full scale from 1985, and stagnating from the second half of 1990s. In the different periods of time, secondary VTE had different impact on China’s economy and society.

This dissertation not only examines the achievements and problems in the structure, funding, teaching resources, curriculums as well as employment opportunities of the secondary VTE, but also assesses political, social and psychological effects on secondary VTE students and parents. Although the social bias against VTE has been rooted in the Chinese society for several thousand years, the government’s policy and attitudes were the major factors for the problems. The rigid streaming of secondary education in which the government favoured the general stream in funding and teaching resources, and the lack of opportunities of tertiary education for secondary VTE students failed to encourage students and parents to be enthusiastic about this option; and employers’ preference for university graduates and the saturated job markets since the late 1990s led secondary VTE to a gloomy future.

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CHAPTER ONE

INTRODUCTION

Human capital theory claims that education and training not only help individuals to increase their skills in employment and bring to them higher returns, but also bring profit to business firms and help to increase national income. Research findings have affirmed that fast economic development in Western countries in the 19th and 20th Century was due to vocational education. It helped the Western European countries to realise industrialization successfully, and after the Second World War, Germany and Japan relied on secondary vocational education to rehabilitate their economies rapidly. In the 1970s and 1980s it was also the secondary vocational education that helped the Four Little Dragons in Asia (Taiwan, South Korea, Hong Kong, and Singapore) in their rapid economic growth, which brought a great impact on the world economy. However, a number of Western scholars are sceptical about the value of school-based vocational and technical education (VTE) in developing countries, such as Ghana, Thailand, Columbia, Tanzania and Egypt.¹ They argue that school-based VTE was not effective or not better than general education in human resource development.

In 1978, the Chinese Communist Party (CCP) shifted its focus of attention from political struggle to economic construction, which led China progressing rapidly in the last two decades of the 20th Century. Education was identified as a decisive factor for human resource development in China's economic construction. Deng Xiaoping stressed that raising workers' technological knowledge and skills was significant for the socialist construction of China, and this task should be conducted

¹ See Foster, Philip (1966), "The Vocational School Fallacy in Development Planning", in C. Arnold Anderson & Mary Jean Bowman (eds.), *Education and Economic Development*, London: Aldine Publishing Company, pp.142-166 (p.146); Psacharopoulos, George & Loxley, William (1985), *Diversified Secondary Education and Development: Evidence from Colombia and Tanzania*, Baltimore: The Johns Hopkins University Press, pp.8-35; Metcalf, David H. (1985), *The Economics of Vocational Training: Past Evidence and Future Considerations*, Washington D.C.: The World Bank, p.28; Mark Blaug (1973), "Forecasting All Occupations - Thailand", in Bashir Ahamad and Mark Blaug, (eds.), *The Practice of Manpower Forecasting: a Collection of Case Studies*, Amsterdam: Elsevier Scientific Publishing Company, pp.106-130 (p.129).

through secondary VTE.² From the 1980s, the Chinese government advocated to develop secondary VTE on a large scale, streaming 50% of senior secondary students into VTE. This strategy had a great impact on China's education system and society. The government promoted the VTE streaming with the rhetoric that China needed tens of millions of skilled workers for the economic construction, and secondary VTE would play an important role in this process. Statistically, secondary VTE was developing at the fastest speed of all the educational sectors, especially from the mid 1980s to mid 1990s. From the educational point of view, this large mission would require a tremendous structural reform that involved curriculum reform and teacher development. It would also involve the cooperation of enterprises to run vocational education successfully. From the social perspectives, the streaming would have great impact on at least 50% of senior secondary students and parents. How did they look at the VTE option? Would VTE lead them to sound employment opportunities and social status? Most importantly, was the urban school-based VTE sector successful in human resource development for the country's economy? This dissertation attempts to answer these questions.

Until now, research on Chinese VTE, especially school-based secondary VTE, has been lacking. During the research for this dissertation, the author has come across two PhD theses that were completed in 1987 and 1996 respectively. The former is a case study based on a company-affiliated and job-directed secondary technical education, which looks at graduates' performance level and job-satisfaction after they entered the work force in the factory.³ The latter discusses the interaction between the socialist market economy and technical and vocational education and training.⁴ This dissertation differs from those two studies and focuses on the structure and problems of secondary VTE in urban China from 1978 to 2000. Not only it examines the educational and economic issues concerning the secondary VTE, but also discusses socio-political and socio-psychological impact on VTE students and parents. This

² Deng, Xiapoing (1978, 22 April), "Speech at the National Conference of Educational Work", republished in *Comrade Deng Xiaoping on Education*, Beijing: People's Education Press, 1990, pp.58-66, (p.64).

³ See Min, Weifang (1987), *The Impact of Vocational Education on Productivity in the Specific Institutional Context of China: A case study*, (PhD thesis, Stanford University), published by UMI, Ann Arbor, Michigan.

⁴ See Yang, Jin (1996), *The Interaction between the Socialist Market Economy and Technical and Vocational Education and Training in the People's Republic of China*, (PhD thesis) The University of Manchester.

research is conducted in proper historical, political, social and economic context in China.

“Vocational and technical education” (VTE) is a general term. It includes various types of education that enable the receivers to obtain certain skills needed to carry out certain kinds of work. In 1974, the UNESCO defined VTE as follows:

“Technical and vocational education” is used as a comprehensive term referring to those aspects of the education process involving, in addition to general education, the study of technologies and related sciences and the acquisition of practical skills, attitudes, understanding and knowledge relating to occupations in various sectors of economic and social life. Technical and vocational education is further understood to be:

- a) an integral part of general education;*
- b) a means of preparing for an occupational field;*
- c) an aspect of continuing education.⁵*

In the Chinese context, the term “vocational and technical education” is similar to the term “technical and vocational education” defined by the UNESCO. Josie Misko, Yufeng Liu, et.al. interpret “vocational and technical education” in China as follows:

In contrast to general education, the aim of “vocational and technical education” is to enable students to undertake studies of technology and related disciplines and to acquire practical skills as well as knowledge related to the occupation (profession). The broad education goal of “vocational and technical education” differs from that of “vocational training” which aims to provide training in skills and related knowledge for a specific occupation or occupation group. In terms of preparing individuals for jobs, China’s vocational education includes before-job (commencement) education, after-job (commencement) education and change-of-job education. It also includes academic credentials education and non-academic credentials education. Vocational education is provided at elementary, secondary and tertiary levels of education.⁶

In order to give readers some background knowledge, Chapter Two provides a

⁵ UNESCO (1974, 19 November), *Revised Recommendation Concerning Technical and Vocational Education*, Paris: UNESCO, p.1.

general review of the history of VTE in China. Modern VTE in China began in the mid 19th Century when China was influenced by the Western industrialization. However, it was the CCP government who paid more attention to the VTE sector from the 1950s and developed it to a substantial scale by the mid 1960s, but the system was totally destroyed during the “Cultural Revolution”⁷. In 1978, the CCP re-emphasized the importance of education for its new task of economic reform and “Four Modernizations” program [*si ge xian dai hua*]⁸. Therefore, Chapter Three gives a general picture of the reform in the entire education system in the 1980s.

The following chapters concentrate on the examination of structure and problems of secondary VTE and its social perspective in urban China. Chapter Four describes the government’s plan of VTE development from 1980, and it introduces the whole Chinese VTE system. Chapter Five examines fundamental problems in funding and VTE structure. It brings in scholars’ debates on pro and against school-based secondary VTE. Chapter Six examines the crucial issues of teacher development. The Chinese government pushed a rapid development of secondary VTE in the 1980s. From 1978 to 1990, secondary VTE enrolments increased by 2.5 times, and the number of full-time VTE teachers increased by 3.5 times. The quality of VTE development depends on a competent teaching force. This chapter investigates some serious problems in this area. Chapter Seven discusses issues and problems in curriculum development. It analyses government’s policies and regulations, reviews some newly developed curriculum models, and scrutinizes the problems. Chapter Eight covers important issues of students’, parental and social perspectives. It firstly explores into students’ socio-economic background and their attitudes towards VTE. Secondly, it examines parental perceptions and their expectations on children’s education and career, and thirdly it discusses employment opportunities of VTE graduates, and their image and status in the society.

⁶ Misko, Josie, Yufeng Liu et. al. (2002), *Linkages between Secondary and Post-secondary Vocational Education and Training in China and Australia*, Adelaide: NCVER, p.15

⁷ About “Cultural Revolution” see Footnote 48 in Chapter 2.

⁸ The modernizations of industry, agriculture, national defence, and science and technology. It was first raised by Premier Zhou Enlai in the mid 1970s, and in 1978 it was put forward again by the CCP government to be the focussed task of the Party and the nation.

CHAPTER TWO

A BRIEF REVIEW OF VTE IN CONTEMPORARY CHINA

Vocational and technical education (VTE) in China can be traced back centuries ago¹, but the modern VTE system in China began in the mid 19th Century after China was forced open by the West. At that time, military and civil industries were growing, and skilled workers were demanded by the growing industries. This was regarded as the beginning of the development of modern school-based VTE. A number of technical schools were established, such as ship-building and sailor-training school (1866), firearms technical school (1867), electrical school (1876), telegraph school (1879), railway technical school (1885), mining school (1892), silk-reeling school (1896), and agriculture school (1901). The overthrow of the Manchu government in early 1912 saw the development of modern industries, which gave a boost to the growth of modern vocational and technical education.² However, scholars argued that VTE during the 100 years from the mid 19th Century to the mid 20th Century developed slowly due to political, economic and social reasons, and it was only after the Chinese Communist Party (CCP) came to power in 1949 that Chinese VTE began to develop rapidly.³

2.1 Developing VTE to Meet the Needs of China's Socialist Construction

In 1949, the Chinese Communist Party (CCP) established the People's Republic of China (PRC). The Party's educational policy was to combine education with production. Under this guiding principle, the Chinese government made a great effort to develop VTE. In 1949, there were altogether 3 skilled worker schools with a total enrolment of 2,700 students, and 561 secondary technical schools (not including

¹ See Mao, Lirui (ed.), *A Brief History of Chinese Education* [Zhongguo jiaoyu shi jianbian], Beijing: Educational Science Press, pp.316-365; Lee, Thomas H.C. (2000), *Education in Traditional China, a History*, Leiden, the Netherlands: Brill, pp.512-541.

² Wang, Runde (1990), "A Brief Review of the Development of Vocational & Technical Education in Our Country" [Wo guo zhiye jishu jiaoyu fazhan gaishu], in Fuyuan Qiao (ed.), *Vocational & technical education in Tianjin* [Tianjin zhiye jishu jiaoyu], Tianjin: Tianjin Social Science Press, pp. 1-28.

teacher training schools) with a total enrolment of 77,095 students. Scarcely any vocational schools ever existed in the rural areas. There were not many training programs in engineering fields. The Chinese government realised that this training system was unable to provide adequate skilled personnel for China's economic development, which was the priority agenda in the CCP's policy.

In December 1949, in view of the urgent need of national rehabilitation and reconstruction, the CCP government called the first national education conference. It resolved that the immediate task for education in the few years to come was to focus on the development of specialized secondary schools, which were aimed at training intermediate level political/managerial and technical personnel for the construction of the country.

The first step taken by the government over the training of technical personnel was to rectify the existing technical schools set up under the Kuomintang (KMT) regime, both public and private. Major problems of these schools were: too many fields of training offered in one school, the lack of specific aims of training, small scale, poor facilities and staffing. There was no coordination of the operation of school programs, and as a result, many fields of training needed by the industrial development of the country were not available in schools. A guideline was thus produced for technical education:

- ◆ Aiming at developing secondary technical education, and giving attention to primary technical education for the time being.
- ◆ Trying to narrow down the fields of training in each particular school. Gradually moving to specialized and single field of training in each school. Priority should be given to heavy industries, national defence industries, and schools should be set up close to the production bases and areas accessible to transportation.
- ◆ In addition to formal technical education, various forms of short-term training programs and spare-time courses of technical training should be offered.

³ Fei, Chongyang (1997), "Chinese Vocational Education" [Zhongguo de zhiye jiaoyu], in Zhen Wang & Xiancheng Wang (eds.), *Comparative Studies of Vocational Education in China and Other Countries* [Zhongwai zhiye jiaoyu bijiao], Tianjin: Tianjin Science and Technology Press, pp.284-314.

- ◆ Technical schools to be operated under the cooperation and coordination between the education department and other specific departments of industries.⁴

In 1951, the national secondary education conference reiterated the importance of developing technical schools by reforming the existing ones and by setting up more new schools and short-term training programs, as well as converting some general secondary schools into technical secondary schools. In October 1951, the central government issued “Decision on the Educational Structure Reform”, in which Ma Xulun, the Minister of Education, spelled out that the reform was focused on education of worker/peasant cadres, technical education and elementary education.⁵ The “Decision” identified three major types of secondary VTE, which would receive major funding. They were:

- ◆ Technical schools (industrial, agricultural, communication and transportation) (2-4 years of training)
- ◆ Medical and other service-based specialized schools (trade, banking, arts, etc.) (2-4 Years of training)
- ◆ Teacher training schools (3 years of training)⁶

All of them recruited graduates from junior secondary schools, or individuals with equivalent education backgrounds, and were placed at senior secondary education level. At the same time, the first two types of schools could recruit graduates from primary schools. The courses enrolling primary school graduates were defined as junior secondary education level. It was also decided that all technical schools should set up apprenticeship programs, skilled workers training programs or short-term technical training programs, in accordance with the need of the country and based on the specialized fields of training in the schools. This policy was later published by the Ministry of Education (MOE) in 1952.⁷

⁴ Li, Lintian & Wang, Ping (eds.) (1994), *A Brief History of Vocational and Technical Education in China* [Zhongguo zhiye jishu jiaoyu jianshi], Beijing: Beijing Normal University Press, pp.83-84.

⁵ *China Education Yearbook 1949-1981*, p.930.

⁶ Later, the first two types of schools were all classified as technical schools, and secondary technical schools and teacher training schools were both classified as secondary specialized schools.

By 1953 the readjustment was completed. As a result of this, those poorly equipped schools and technical classes attached to general secondary schools were closed; all the private vocational schools were converted into government schools; schools offering similar fields of training were amalgamated; and schools offering excessive courses were combined and re-organised into several schools with fewer or single fields of training. A system of secondary VTE was set up in accordance with the requirements of the country's economic development. The percentage of manufacturing and heavy industry-based engineering schools increased. Ministry of Heavy Industries, of Fuel Industries, of Machinery Industries, and of Railway Industries were developed at the fastest speed.⁸ All the ministries of the central government were responsible to run secondary technical schools such as finance and economics, medicine and public health, engineering, and so on. By 1952, the number of secondary technical schools and teacher training schools increased from 561 and 610 in 1949 to 794 and 916 respectively, and student enrolments increased from 77,095 and 151,750 in 1949 to 290,446 and 345,163 in 1952 respectively. (See Table 2.1 and Table 2.2.)

Table 2.1
Secondary Specialized Schools (1949-1952)

	Pre-1949	1949	1950	1951	1952
Secondary Technical Schools	724	561	500	669	794
--Engineering	169	--	90	113	188
--Agriculture	273	--	103	125	160
--Forestry	--	--	4	8	12
--Public health	124	--	181	308	320
--Finance & economics	121	--	68	97	112
--Fine arts	--	--	2	2	2
--Others	37	--	52	16	--
Teacher Training Schools	902	610	586	744	916

Note: the pre-1949 figure represents the highest statistical year's figure. "--" means the statistics were not available.

SOURCE: China Education Yearbook 1949-1981, p.981.

⁷ China Education Yearbook 1949-1981, p.766.

⁸ Li, Lintian & Wang, Ping (eds.) (1994), op.cit., p.84.

Table 2.2
Enrolments in Secondary Specialized Schools (1949-1952)

	Pre-1949	1949	1950	1951	1952
Secondary Technical Schools	137,040	77,095	97,823	162,940	290,446
--Engineering	41,911	21,398	28,986	52,636	111,413
--Agriculture	47,540	20,394	20,326	30,480	58,446
--Forestry	2,502	2,502	1,530	3,737	8,1762
--Public health	10,440	15,387	19,946	38,758	59,407
--Fiance & economics	29,125	14,793	19,886	36,430	52,277
--Fine arts	--	--	198	418	589
--Others	5,522	3,821	6,951	481	138
Teacher Training Schools	245,609	151,750	159,363	219,787	345,163

Note: the pre-1949 figure represents the highest statistical year's figure. "--" mean the statistics were not available.

SOURCE: *China Education Yearbook 1949-1981*, p.982.

Another achievement during this transitional period was the training of skilled workers for the national economy. In 1949, there were only 3 skilled worker schools with a total enrolment of 2,700. In addition there were only a few industry-related low-level vocational schools. Education system did not play an important role in training skilled workers. The major avenue for training skilled workers was through the traditional apprenticeship in factories or trades. A number of factories and vocational schools run short-term skill training programs, but there was no standardised and systematic mechanism for such training. During the 3 years between 1949 and 1952, the period for the Chinese government to rectify the situations of all areas left behind by the KMT government, 96 secondary technical schools set up short-term skills training programs with the total enrolment of 29,390 students.⁹ Some ministries and departments of industries, both at central and local government levels, set up skilled worker schools. By 1952, there were 22 skilled worker schools with the total enrolment of 15,000 students. In addition, there were also spare-time [ye yu after-hour] technical training classes run in parallel with formal courses and short-term training programs. All these efforts played an important role in getting more than 4 million unemployed individuals into employment during the first three years of the new CCP government.¹⁰ A system of VTE had been basically set up and got on track.

2.2 Learning from the Russians and Setting up VTE System

From the beginning of the 1950s, China's education increasingly fell under the

⁹ Li, Lintian & Wang, Ping (eds.) (1994), op.cit., p.84.

¹⁰ Ibid., p.93.

influence of the Soviet Union. The Soviet Union had been a long time friend with the CCP, and both had been cooperating and supporting each other in many areas since the 1920s. The Soviet Union provided the CCP with advice and assistance during the Anti-Japanese War and the Civil War before the CCP came to power in China in 1949. It immediately recognised the People's Republic of China when the CCP proclaimed its establishment in 1949. The Chinese government perceived the Soviet Union as its firm ally and the "elder brother" whom China could learn from. When the CCP established its government in 1949, it was faced with the arduous task of consolidating its political position and rehabilitating China's economy. As many Western governments were isolating China as part of the cold war strategy, the Soviet Union and her East European allies gave China support and access to modern technology. China had no alternatives but to learn from the Russian experience in political, ideological and economic development. Starting from 1950, China began to invite the Russian experts and specialists into China to supervise in all areas of work.

In 1953, China's first "Five-Year Plan" (1953-57) was started. The primary task for China during this period was the economic construction. China mounted a number of construction projects, many of which were aided by the Soviet Union. China was badly in need of technical and management personnel and skilled workers for all these projects. One of the strategies of the CCP government to achieve this goal was to reform its education system. It adopted the strategy of importing the Russian model by inviting Russian academics and specialists to be advisors, copying Russian school curriculums and importing massive quantity of Russian textbooks. One of the fundamental changes made under the Russian influence was to shift the focus of training from humanities to applied sciences at tertiary level. The Russians advised that "Chinese universities should turn out not abstract scholars but practical specialists."¹¹ This guideline not only affected the higher education but also influenced other sectors of education.

In its rush to learn from Russian experience, China adopted Russian model in its VTE. At that time, the Russian VTE mainly consisted of two types and was placed in the secondary education system. The first type was technical schools, teacher

¹¹ Cleverley, John (1985), *The Schooling of China*, Sydney: George Allen & Unwin, p.129.

training schools and medical schools of 3-4 years of training, and the second type was apprenticeship schools of different lengths of training (ranging from 4 months to 3 years). The Chinese government took the first type as the major model to follow, which was to establish a system of secondary specialized and technical education that recruited junior or senior secondary school graduates. To do this, the government readjusted the existing secondary technical schools by closing down those poorly staffed and equipped schools, converting the majority of private technical schools into public schools, changing the original multi-disciplinary schools to single disciplinary schools, and establishing a central controlling system. All the schools were under the control of the central government. In 1954, the Ministry of Higher Education issued a document entitled 'Regulations on Secondary Specialized Schools' [*Zhongdeng zhuanye xuexiao zhangcheng*], stating that both secondary technical schools and secondary specialized schools were to be grouped under one name of secondary specialized schools, and they were to produce intermediate level cadres, who would work as middle-level managerial and technical personnel in government institutions and state-run enterprises. The document emphasized that graduates of these schools were to be assigned jobs according to the central planning of the government.¹²

At the same time, the Ministry of Labour was commissioned to follow the USSR's second model and set up skilled worker schools by importing the Russian school operation rules and policies, curriculums and teaching methodologies. The skilled worker schools recruited junior secondary school graduates and aimed at training intermediate level skilled workers. The running of these schools was in the hands of various labour departments. In 1954, the Ministry of Labour established a department of skilled workers training to take charge of all the works of skilled workers training across the country. It regulated that skilled worker schools were to offer 2-year training courses to primary school (5-6 years of schooling) graduates or the equivalent at the age of 16 to 23. In 1956, in line with the Russian model it stipulated that the number of students in each skilled worker school should be between 200 and 800, and each school should offer 4 to 7 fields of training (depending on the number of students). The standard of skills to be achieved by students should be the fourth and fifth skill worker levels, which were in the middle

¹² Wang, Runde (1990), op.cit., p.14.

range of the total eight skill worker levels defined by the government.¹³

During the first “Five-Year Plan”, a formal secondary VTE system with Russian characteristic was established in China. By 1957, there were 1320 secondary VTE schools (728 secondary specialized (technical) schools, 592 teacher training schools, and 144 skilled worker schools respectively). These schools together had a total enrolment of 844,522 students. The figure was not far away from the total enrolments in general senior secondary schools. (See Table 2.3.)

Table 2.3
Number of Students at Different Levels and Types of Education (1957)

	Schools	Entrants	Enrolments	Graduates
Elementary Schools	--	--	--	4,980,000
General Junior High School	8,912	2,170,000	5,377,000	1,112,000
General Senior High School	2,184*	323,000	904,300	187,000
Skilled worker School	144		66,583	--
Secondary Specialized (Technical) School	728	59,926	482,155	95,707
Teacher Training Secondary School	592	63,229	295,784	50,393
University & College	229	106,000	44,118	--

Note: “Enrolments” means continuing students.

*The figure includes senior secondary schools and complete secondary schools.

SOURCES: Suzanne Pepper (1996), *Radicalism and Education Reform in 20th-Century China: the Search for an Ideal Development Model*, UK: Cambridge University Press, p.304 for graduates of elementary schools; Suzanne Pepper (1984), *China's Universities*, The University of Michigan, p.128 for entrants of universities & colleges; Du Ruiqing (1992), p.11 for the number and enrolments of universities & colleges; *China Education Yearbook 1949-1981*, p.981-984 for secondary technical & teacher training schools, p.188 for skilled worker schools, pp.1000-1001 for general high schools.

The Chinese government had centralised the operation of secondary specialized and technical education by unifying entrance examination and recruitment of new students at provincial and city levels. From 1952, secondary specialized schools and skilled worker schools started to offer living allowances [*zhu xue jin*] to students according to needs. Then from 1954, all the students of these schools received living allowances. After graduation, students were allocated to work posts with the same salary or wage level. Specialized school graduates were employed as cadres¹⁴ at salary scale of 25th level or the equivalent technical level (level 16) after

¹³ Li, Lintian & Wang, Ping (eds.) (1994), op.cit., p.105.

¹⁴ The term “cadre” [*ganbu*] is a unique terminology in contemporary Chinese usage. The explanation given in the *Cihai* [a Chinese dictionary] is:

“*Ganbu*”, originated from French “*cadre*”, literally translated into Japanese. In China, it usually refers to public servants, differentiated from worker, soldier, or odd-job man/service staff (such as in a government department or school). Sometimes it particularly refers to personnel holding office

six months probationary period. Skilled worker school graduates would go through probation at work post with skill worker level one wage scale in the first year of work. One year later they would be confirmed to be level two skilled workers.¹⁵ Although their training at school was aimed at fourth and fifth level, they were not confirmed as that level skill when they first started work in factories. Some stories told in Taijin, for example, may explain this situation. In 1956 skilled worker school graduates were given level 4 wage, but workers in the factories were not happy about this for various reasons. In consideration of the overall situation of the factory workers, the government decided that skilled worker school graduates after one year of probation in the factory would be employed as level 2 skilled workers, and they may later on go through promotion procedures following the regulations of the factory or enterprise.¹⁶

2.3 The Break from Russians and the “Great Leap Forward”

Due to political reasons, the relationship between China and Russia began to cool down from 1956, and eventually broke up in 1960, when the Soviet Union removed all its experts, projects and aids from China. This left the Chinese with a complete shock and the arduous tasks of completing their projects and repaying all loans.

Criticisms of the Russian influence on Chinese education started in open debate from 1956. Academics and teachers, especially those who were educated in the West and Japan, criticised the Russian way of education and complained about those who transplanting Russian ideas mechanically. Chairman Mao Zedong encouraged

of a headship, including village head, Young Pioneer team leader, workshop supervisor, etc.-- Cihai [Chinese Dictionary], reduced format edition, Shanghai, Shanghai Dictionary Press, 1989, p.573.

Cadres are differentiated from “blue-collar” or industrial production workers in the Chinese occupation classification system. All people who were in the pay role were classified under one of these two systems – “cadre” or “worker”. For example, a teacher is a cadre, so is an engineer, a doctor, a dancer/singer, etc. while a factory worker is a worker, so is a chef, a shop assistant, a cleaner, etc. Some occupations could have both categories, such as a typist/office clerk. It depends on training background or educational qualification of the jobholder. The two systems have different salary/wage scales and welfare systems. The “worker” system had 8 levels of wage scales, and the “cadre system” had 25 levels of salary scales. A “worker” categorised personnel usually could not be promoted into a managerial position, while “cadre” categorised personnel could be promoted to upper level managerial positions such as headship (a director of a department, a school, a hospital, and so on, or even higher level of government leader). The salary scales of “cadres” were higher than wage scales of “workers”.

¹⁵ Li, Lintian & Wang, Ping (eds.) (1994), op.cit., p.114.

¹⁶ *Historical Data of Adult Education and Vocational and Technical Education in Tianjin* [Tianjin chengren jiaoyu, zhiye jishu jiaoyu shizhi ziliao] (Tianjin No.2 Education Bureau), Vol.2, September 1987, p.35.

such debates in open. Cleverley gives a detailed description of the situation at that time:

There were charges that what the Soviet school had, that the Chinese school did not have, were added, and what the Soviet schools did not have and the Chinese schools had been eliminated. So overwhelming had been the Soviet influence that Mao himself remarked: "Some comrades feel dismayed when they do not borrow." The Chairman also jibed at Liu Shaoqi, who had control of the Ministry of Education: "You are in charge of the Ministry of Education. Is this a Soviet Ministry of Education or a Chinese one?" Liu was one of those accused of "mechanically transplanting without analysis".¹⁷

By the end of the first "Five-Year Plan" in 1957, China's education system was still not able to cope with the demands of the national economic construction. In 1958, the Chinese tried to break away from the Russian influence and to establish an education system of its own. In September of that year, the Central Committee of the CCP and the State Council issued "Instructions on Education Work" [*Guan yu jiao yu gong zuo de zhi shi*], that defined the education principle as to "serve the proletarian politics and to combine education with productive labour". The aim of education was to "train workers with socialist consciousness and culture".¹⁸

In 1958, Chairman Mao Zedong initiated and launched a great campaign known as the Great Leap Forward. He put forward a famous slogan to encourage the whole nation to be actively involved in this great project: "Going all out, aiming high, and achieving greater, faster, better results at lower costs." This famous saying was adopted at the CCP's general meeting to be the general guideline for the Party and the whole country.¹⁹ For the education sectors, the major task was to develop higher education and secondary specialized education, and to give attention to the development of skilled worker schools,²⁰ because large numbers of all kinds of specialized and technical personnel were needed for China's economic construction. According to Chairman Mao, there were three major groups of people in a socialist

¹⁷ Cleverley, J. (1985), op.cit., p.136.

¹⁸ "Instructions of the CCP and the State Council on Education work" [Zhonggong Zhongyang, Guowuyuan guanyu jiaoyu gongzuo de zhishi] (19 September 1958), *China Education Yearbook 1949-1981*, pp.688-690.

¹⁹ See "Eighty Slogans in the History of the CCP"(38) [Zhong gong dangshi shang de 80 ju kouhao (38)], <http://www.people.com.cn/GB/shizheng/252/5303/5304/20010608/...>, accessed 08/03/2005.

²⁰ *China Education Yearbook 1949-1981*, p.91.

country: workers, peasants and intellectuals. Those individuals who received education, especially higher education, were intellectuals, and they must work for the cause of socialist construction in the new China. They must receive education in political ideology and through productive labour so that they could become intellectuals of the working class, who would serve the people and serve the workers and peasants.²¹ In line of this guiding principle, labour education was emphasized in all kinds of schools to prepare students for their good attitudes and work abilities and skills after leaving school.

Virtually all students at any level of education were involved in the “Great Leap Forward” movement at that time, where one of the most radical methods was to “*da lian gang tie*” [Every body was involved in producing iron and steel]. In March 1958, the Ministry of Education (MOE) stipulated that each primary school student should participate in physical labour for 14 to 28 days in each academic year, and secondary student should have 2 hour labour class each week.²² By early 1959, hours of productive labour were increased to 4 hours per week in primary school, 6 in junior high school, and 8 in senior high school. In rural areas, school children spent much more time on farming work than in their classroom. As Cleverley describes:

*Younger pupils and their teachers swept neighbourhood streets, weeded gardens, packed and graded rice and collected firewood, and older ones laboured in factories and fields often working through their vacations.*²³

For secondary specialized schools and skilled worker schools, the central government gave anatomy to provincial and local governments in terms of control and management of schools. This was to enhance the rapid development of vocational and technical education. From 1958, two types of schools in the VTE sector became popular. They were “part-work and part-study” school [*ban gong ban du*] and agricultural school. Chairman Mao Zedong in January 1958 emphasized that all the secondary technical schools and skilled worker schools should run a factory or farm,

²¹ Mao, Zedong (12 March 1957), “Speech at the National Conference on the CCP Propaganda Work” [Zai Zhongguo Gongchangdang quanguo xuanchuan gongzuo huiyi shang de jianghua], <http://www.ccy1.org.cn/theory/mxweb/html/mx07267/htm>, accessed 03/01/2005.

²² Wang, Runde (1990), op.cit., p.15.

²³ Cleverley, John (1985), op.cit., p.144.

to engage in production and be self-sufficient or semi-self-sufficient. Their students should opt for part-time work and part-time study.²⁴ In May of the same year, the Vice Chairman Liu Shaopqi addressed a CCP political bureau meeting to promote “two kinds of education system and two kinds of labour system”. He stated:

Our country should have two major education systems and two labour systems in factories and countryside. One is the current education system – primary school, secondary school and university of full-time study. And in factories and government offices people work full-time for eight hours each day... In addition to this, we could adopt another system, which would be coordinated with the current education and labour system, and which could become another major system. This is a kind of part-time study and part-time work education system and a kind of part-time work and part-time study labour system. ...Secondary technical schools may adopt the work-study system, and some universities may also do the same.²⁵

These two systems were regarded as mechanisms to popularize education and to increase employment within a short period of time. This was also in line with the CCP's education policy of fostering intellectuals of working class, and in the long run, it was able to gradually eliminate the differences between manual labour and mental labour, between cities and countryside, and between workers and peasants, and would enable China to build a wealthy Communist society. On 27th May 1958, the first “work-study” (or part-time work and part-time study) school was set up. This was Tianjin National Textile No. 1 Plant School, with 51 fourth skill level workers as students. They undertook 6 hours' work and 2 hours' study each day.²⁶ By October of that year, the number of “work-study” schools reached 74, with a total of 12,864 students attending the training programs.²⁷ Around the same time, similar schools were set up across the country. By 1960, 2.9 million students were enrolled into this kind of schools in China, a total of 27% of the junior high school enrolments in the

²⁴ See Mao, Zedong (1958, January), “Sixty Points of Work Methods (draft)” [Gongzuo fangfa shi liu tiao (cao'an)], <http://www.cycl.org.cn/theory/mxweb/html/mx07344.htm>, accessed 03/01/2005.

²⁵ See Duan, Feng (1987), “Historical Data on Pilot Projects of Running Part-time Study and Part-time Work Education in Tianjin” [Tianjin shi ban bangong bandu jiaoyu shiliao], *Historical Data of Adult Education and Vocational and Technical Education in Tianjin* [Tianjin cheng ren jiaoyu zhiye jishu jiaoyu shizhi ziliao], Vol. 2, September, pp.37-53 (p.40).

²⁶ *Ibid.*, (p.39).

²⁷ Tian, Yongquan; Huang, Zhi'an; and Qi, Yumin (1987), “Vocational and Technical Education in Tianjin After the Liberation” [Tianjin jiefang hou de zhiye jishu jiaoyu], *Historical Data of Adult Education and Vocational and Technical Education in Tianjin* [Tianjin chengren jiaoyu zhiye jishu jiaoyu shizhi ziliao], Vol. 1, February, pp.25-33 (p.29).

country.²⁸

This model was regarded as a role model for education throughout the country. In March 1958, the Ministry of Labour held a national conference on skilled workers education work. At the conference, it was put forward that education and productive work should be combined at skilled worker schools, which were also operated as factories; and the students were both studying and working. The conference confirmed the value of the work-study program that was later promoted within the secondary VTE system.

In the rural regions of China, education had been underdeveloped. This was a negative factor for the Chinese economic development. In 1957, there were 4,980,000 students graduating from primary schools, but 2,810,000 graduates were not able to go into secondary schools because of lack of space in secondary education. Most of these graduates who missed the chance of further education were from rural areas. It has been a tradition that the Chinese government only supports the urban schools and leaves the education of rural children in the hands of local communities.²⁹ This is because educational resources are limited in this large country. It is also because that China has about 1,400-year-long history of examination system designed to select bureaucrats from among the intellectuals to serve the government. In imperial China, rich and well-to-do families in the countryside hired private tutors to teach their male children aiming at excelling in the imperial examinations. Successful candidates in the examinations were rewarded with titles and power that brought not only prestige and status but also lands, beautiful wives, and prosperity.³⁰ For centuries, thousands of people spent years reading, writing and memorising articles in order to pass the examinations. It was the individuals' initiatives and responsibility to do so. People, especially in the countryside, if not successful making to the bureaucrat position, would remain in the rural life for good, and were left to survive by being self-sufficient. This traditional governance still dominated the mentality of policy-makers of the Chinese CCP government in the 1950s, and to some extent it still exists at present.

²⁸ Unger, Jonathan (1982), *Education Under Mao*, New York: Columbia University Press, p.51.

²⁹ See Lo, Billie L.C. (1984), "Primary Education in China: A Two-Track System for Dual Tasks", in Ruth Hayhoe (ed.), *Contemporary Chinese Education*, Armonk, N.Y.: M.E. Sharpe, pp.47-64.

In fact, many rural primary schools were not run by the government, but were run by local people. This kind of schools was called people-run schools, while schools in cities were usually run by government. One can imagine that government-run schools had better access to funding, facilities, teachers and other resources than rural schools, and that is why so many rural children could not continue to study at secondary education after having finished primary education. However, these children, at the age of around 12 years old, were too young to go into full-time farming in the fields as adult peasants, and they were also not equipped with proper skills for rural life and work.

In March 1958, the CCP government of Jiangsu Province held a forum to promote people-run [*min ban*]³¹ agricultural high school model. Government officials from other provinces were invited to attend. Lu Dingyi, Director of the Propaganda Department of the CCP Central Committee, addressed the forum:

*Make use of the mass forces to run various kinds of vocational schools, especially agricultural schools, so as to enable all primary school students to move on to secondary education. This was a very good method. Setting up people-run agricultural schools not only was advantageous to the Great Leap Forward in education undertaking, but also was beneficial to the great leap forward in agricultural production.*³²

On 21 April, the People's Daily, which is the CCP's mouthpiece, published an editorial to call on the nation to learn from this model. Provinces like Zhejiang, Henan, Fujian and Liaoning immediately took action and other provinces and cities followed suit. Agricultural schools began to appear like mushrooms aiming at turning a great mass of primary school graduates into specialist personnel equipped with agricultural production knowledge and basic skills. By 1960 there were 22,597

³⁰ Lin, Jing (1993), *Education in Post-Mao China*, Westport: Praeger, p.50.

³¹ "People-run" is a type of administration and funding system in China, which is contrasted to the public funding system. In China, there are "people-run" schools and factories. These schools and factories are run by local people as an entity. They do not get funding from the government. Sometimes they get a small amount of subsidies from the government. The "people-run" is also different from the 'private-run' system. From 1953 to the early 1980s there was no private-run system. Only after the opening up of the economic system after the mid 1980s did China begin to have private enterprises and schools, which are run by individual persons or business companies.

³² *China Education Yearbook 1949-1981*, p.180.

agricultural schools with 2,302,000 enrolments in the country.³³

Educational development during this period was under the impact of the “Great Leap Forward” and was out of control. In all the education sectors, there existed a problem of focusing on quantity at the expense of quality. The government had set a radical goal that within 15 years all the youths who were willing to go to university would be admitted. Thus a university boom followed. Many non-traditional universities were set up, such as red and expert universities, labour universities, and so on.³⁴ For example, agricultural co-operatives in Kaifeng, Henan Province, opened 256 colleges and 695 research institutes attended by 201,700 students in the period of two weeks between 1 to 14 July 1958.³⁵ These kinds of higher education institutions had neither campuses nor fixed hours of teaching and well-planned courses. They lacked qualified teachers to teach, and students’ foundation of knowledge was weak. Cleverley’s recount of the situation in the Communist Labour University in Jiangxi below is a good example:

*Staff was drawn from university and middle school graduates, cadres, discharged soldiers, and workers and peasants, and they worked alongside their students in building classrooms and dormitories, in clearing wasteland, and in the fields. Courses ranged from two years part time to a four-year full time undergraduate programme, and all had a heavy productive work component. By 1961 the university with its branches held over 50,000 students, most of who had only elementary education.*³⁶

Under the general principle that learning must be combined with productive labour, and that schools should run factories and factories were schools, many regular tertiary institutions had soon set up their own factories. Students spent a great deal of time working in the factories. And students from specialized courses were released from school and sent to the communes or work units/plants to work. For example, architecture students helped to construct buildings, engineering students were involved in ironworks to produce iron and steel. What students did most of the time was working/farming and studying political issues, such as “class struggle”.

³³ *China Education Yearbook 1949-1981*, p.182.

³⁴ Wang Runde (1990), *op.cit.*, p.17.

³⁵ See Cleverley, J. (1985), *op.cit.*, p.146.

³⁶ *Ibid.*, p.146.

Academic studies were kept to the minimum.

In the secondary VTE sectors during the period of 1957-1960, the major problem was that the system was expanding too rapidly, to the stage that it was out of control. This was mainly due to two reasons. One is that the central government had handed the power of school management to the provincial and local governments, and the other was the central government's unrealistic expectations and requirements on the development of secondary VTE. As a result of this, the system began to incur massive expansion with no clear overall planning and coordination (see Table 2.4). This problem was not an isolated one at that time, but rather it was a part of the overall problem that China was in a state of hasty expansion of national economy without any logical planning and management. This resulted in a total disaster of the national economy in 1960. As for secondary VTE, expansion was too fast, too large scaled, exceeding the economic capacity of the nation, and it caused strain on the existing resources. Although some achievements were made in some areas, the overall situation was that quality of education was at stake. The result of such expansion was negative.

Table 2.4
Secondary VTE System (1957-1960)

	Secondary specialized school		Teacher training school		Agricultural and other vocational school		Skilled worker school	
	Schools	Students	Schools	Students	Schools	Students	Schools	Students
1957	728	482,155	592	295,784	--	--	144	66,583
1958	2,085	1,803,538	1,028	386,274	20,023	1,999,900	--	--
1959	2,341	954,538	1,365	540,075	22,302	2,189,900	744	280,000
1960	4,261	1,377,389	1,964	838,480	22,597	2,302,000	2,179	516,819

SOURCES: Secondary specialized schools, teacher training schools are from *China Education Yearbook* [Zhongguo Jiaoyu Nianjian] 1949-1981, p.981-982; Agricultural and other vocational schools are from Li Lintian & Wang Ping, p.122; Skilled worker schools are from *China Education Yearbook* [Zhongguo Jiaoyu Nianjian] 1949-1981, p.188.

2.4 Readjustment

As the "Great Leap Forward" movement fell through in 1959, all areas in China started to reflect upon the problems that had been caused during 1958-59. Rectification of the problems started in earnest. In the education system, the policy of blind expansion was abandoned. The central government leaders recognised that "the

pace of growth was too fast and too much power was delegated to the lower echelons; there was too much labour and too few classes; ...the standard has been lowered; chaos prevailed and it has greatly hurt the schools.”³⁷ In November 1960, the central government held a national educational work conference, which produced a report. The report emphasized that “(t)he cultural and education work for the time being must follow the principle of ‘readjusting, consolidating, strengthening, and improving’.”³⁸ From 1961-1963, the government adjusted the strategy by slowing down, reducing scale, proper planning and improving quality. Central authority’s control over education was reasserted.

For the secondary VTE, the readjustment was conducted in a number of areas. The first area was the control of enrolment of new students. The general principle was to keep the same number of enrolments at schools between 1961-63. The number of new enrolments matched the number of graduating students in the same year. The number of schools was also reduced substantially, with concomitant reduction of both administrative and academic staff. To guarantee quality of teaching, good teachers from closed-down schools were moved to the remaining schools to replace unqualified teachers. Facilities, equipments, library books were also reallocated to those remaining schools. As a result, secondary VTE sector was reduced in size by 65 to 81%. (See Table 2.5.) Some academics question the validity of such large scale cut-down.³⁹

Table 2.5
Secondary VTE Schools (1960 & 63)

Year	1960	1963	Reduction Rate
Schools*	31,001	5,878	81.0%
Enrolments	5,035,000	837,800	83.4%
Staff	513,800	181,900	64.6%

*The schools include secondary specialized schools, teacher training (secondary) schools, agricultural/vocational schools and skilled worker schools.

SOURCE: Li, Lintian & Wang, Ping (eds.) (1994), *A Brief History of Vocational & Technical Education in China*, Beijing: Beijing Normal University Press, p. 124.

The second area was the control over the length of courses. The government from 1959 began to tighten its control over the length of courses offered in schools.

³⁷ Cleverley, J. (1985), op.cit., p.149.

³⁸ *China Education Yearbook 1949-1981*, p.942.

³⁹ Li, Lintian and Wang, Ping (eds.) (1994), op.cit., p.124.

Individual schools were not allowed to change their courses without government's approval. The State Council issued regulations on the number of hours of teaching, working and holidays for schools. Full-time secondary technical schools of industrial and agricultural fields must have 7-8 months of teaching, 2-3 months of working and 1 and a half months of holidays. Schools of other fields of training should follow the guidelines for general senior high schools, which means less hours of working and more hours of learning.

In 1963, the Ministry of Education (MOE) issued "Regulations on Planning of Teaching for Secondary Specialized Schools". The document regulated the types and hours of courses to be offered in each field of training (see Table 2.6 and 2.7.). It regulated that all the training courses must include four types of subjects: political studies [*zheng zhi ke*], general knowledge [*pu tong ke*], introduction to specialized knowledge [*zhuan ye ji chu ke*], and specialized subjects [*zhuan ye ke*]. The government also regulated hours of specialized learning for each type of courses. For industrial, agricultural and forestry fields of training, there should be 31-34 weeks of specialized classes, and 40-41 weeks for students of medical, finance and accounting, and sports each year. Students of industrial fields of training should spend 10-13 weeks each year in productive labour and field practice, 12 weeks for agricultural students, and 4 weeks for medical, finance and accounting, and sports. For skilled worker school students, the Ministry of Labour regulated that the training programs should contain four major courses – political studies [*zheng zhi ke*], cultural subjects [*wen hua ke*], skill theory [*jishu lilun*], and production practice [*sheng chan shi xi*]. Theoretical studies and practical training should be 1:1 in proportion.⁴⁰

Table 2.6
Time Allocation for Full-Time Secondary Specialized School Courses (in week)

Fields of Training	Industrial fields/ engineering		Agriculture & Forestry	Medical & health care		Finance & economics	Sports
	3 yrs	4 yrs		3 yrs	4 yrs		
Length of Training	3 yrs	4 yrs	3 yrs	3 yrs	4 yrs	3 yrs	3 yrs
Total weeks	150-151	202-203	151-151	150-154	202-206	150-151	150-151
Theory	80-88	100-116	83-84	81-93	107-114	95-98	100-103
Productive labour and field practice*	30-36	40-52	36	10-12	14-16	10-12	10-12

⁴⁰ Li, Lintian & Wang, Ping (eds.) (1994), op.cit., pp.125-126; *China Education Yearbook 1949-1981*, p.188.

Field practice				18-28	35-45	12	7
Exams	7-9	12-14	7-9	7-9	9-12	7-9	7-9
Graduation designing project or graduation exams**	6	7-9	3-4	3-4	3-4	3-4	3-4
Graduation evaluation	1	1	1	1	1	1	1
Holidays	18-19	26-27	18-19	18-19	36-27	18-19	18-19
Total hours of theoretical studies	2,600-2,700	3,200-3,600	2,600-2,900	2,600-3,000	3,300-3,700	2,700-3,000	2,600-2,900

* Field practice was not included for medical, finance & economics, and sports.

** For those students of industrial fields who did not have graduation designing projects, there were 3-4 weeks of graduation exams. Other times could be allocated for theoretical studies, productive labour or field practice.

SOURCE: *China Education Yearbook 1949-1981*, p.218.

Table 2.7
Breakdown of Class Hours for Secondary Specialized Schools

	Subjects	For Programs of specialized fields	3-year program	4-year program	Notes	
1	Political studies	All fields (excluding finance & economics)	General knowledge of political theory	160	160	
			Political & ideological education reports	80-100	100-120	
		Finance & economics	General knowledge of politics theory	100		
			Political & ideological reports	95-100		
2	Chinese language	Finance & economics	400-550			
		All other specialized fields	300	300-360		
3	Physical education	All (non sports major)	130-160	150-180	2 hrs/week, non for last year of school	
4	Foreign language	All		180-200	Not available for 3-year programs except for otherwise special arrangements	
5	Mathematics	Industrial fields	350	380-400		
		Industrial fields not offering higher maths	250	280		
		Agriculture & forestry	230			
		Medical & health care	150-190	150-190		
		Finance & economics	250-300			
		Sports	170			
6	Physics	Industrial	180	210		
		Medical	100-120	100-120		

		Agriculture, forestry, finance & economics, sports	150		
7	Chemistry	Industrial (excluding chemical engineering), finance & economics	90	90	
		Agriculture, forestry	230		
		Medical & health	100-130	100-130	
		Sports	110		
8	Drafting	Machinery & civil engineering	180-220		
		Mining & chemical engineering	160	180	
		Geology & Telecommunication	100	130	
9	Electrical engineering	Machinery & mining	130	150	
		Civil engineering, Chemical engineering & geology	100	120	
10	Engineering mechanics	Machinery	290	360	
		Mining	200	260	
		Civil engineering	265	285	
		Chemical engineering, geology & telecommunication	130	160	
11	Metal technology	Machinery	75-130	120-155	
		Mining	50	70	
		Chemical engineering & telecommunication	30	40	

Note: 5% of increase and decrease of the standard hours is allowed. If special arrangements have to be made for the purpose of any particular specialized field training, approval must be granted by the central government.

SOURCE: *China Education Yearbook 1949-1981*, pp.218-219.

The third and the most important area of this readjustment was the issuance of the catalogue of study fields [*zhuan ye mu lu*] for secondary specialized schools in 1963. The Ministry of Education (MOE) in June released this document that included 348 specialized fields of studies or training (see Table 2.8). The list did not include training courses for the national defence industry. The catalogue functioned as a standard for course development in schools, and it defined who should be responsible for offering the training programs. For example, heavy machinery manufacturing should be offered in the schools run by the Ministry or Department of Heavy Machinery Industry at central or provincial/city government level; finance and accounting should be run by a list of ministries or departments such as communication and transportation, food, light industries, geology, telecommunication, chemical industry, metallurgical industry, machinery industries, commerce, foreign trade, and so on. This document played an important role in reasserting the central government's

control over the specialized training programs throughout China.

Table 2.8
Catalogue of Study Fields for Secondary Specialized Schools (1963)

Major or specialized field of training	Sub-division of majors	Number of training fields (programmes)
Engineering	Geology	11
	Mining	11
	Power/Kinetics	11
	Metallurgy	16
	Machinery	64
	Electrical machinery & electrical instrument	11
	Radio technology	8
	Chemical engineering	23
	Food	10
	Light industries	20
	Mapping, hydrology & meteorology	10
	Civil engineering	18
	Transport	16
	Telecommunication	13
Agriculture		25
Forestry		11
Medical and health care		12
Teacher training		2
Finance & economics		35
Sports		1
Arts		20

SOURCE: *China Education Yearbook 1949-1981*, pp.214-217.

In addition, the central government organised and coordinated the development of unified course materials for each training field in the country. The Ministry of Education (MOE) was responsible for organising and publishing teaching materials for political studies, Chinese language and literature, foreign languages, maths, physics and chemistry targeted to students in industrial fields of training. Learning and teaching materials for specialized courses were to be organised by the corresponding ministries. For example, the Ministry of Agriculture was responsible for organising textbooks for training programs in agricultural fields, and Ministry of Public Health was in charge of textbooks for medical and pharmaceutical training. 300 fields of training of the total 348 began to work on their own textbook development in 1961. By 1963, a rather complete set of teaching and learning materials for almost each of the courses was taking shape.⁴¹ Textbooks for skilled worker schools were organised and compiled by schools under the supervision and

coordination of the corresponding ministries or departments of the industries. By 1962, textbooks for specific areas of training were produced mainly for theoretical subjects of those highly technical fields, such as lathe operation, welding, benchwork, milling, planing, etc. and general knowledge subjects, such as mathematics and physics.

2.5 Back on Track and Further Development

During the 3 years of readjustment from 1961 to 1963, secondary VTE schools were reduced in number, while at the same time general junior secondary schools developed more quickly. Many graduates from urban junior high schools were not able to move onto senior high school due to the limited quota of admission, but they were not prepared for entering workforce straight after junior school, both psychologically and in skill preparation. In addition, job opportunities were slim for the youths, as many work units including factories, restaurants, etc. were overstaffed. It was very competitive for young people to get into employment in cities. The government tried to solve the problem by encouraging school graduates to go to the countryside and join in farming. However, most unemployed young people were not prepared to do so. This was because all urban dwellers held residential cards that entitled them to live in the city legally. Once they moved to the countryside, it would mean that they would have to give up their urban residential cards and remain in the countryside for life. In China, cities received more attention and care from the central government in terms of budget and supply than the rural areas, as it was understood that rural people were able to be self-sufficient. Nevertheless, country life was always harder and poorer than city life in China. Realising that general education could only provide a small number of top-achievers with university education, which would later lead to secure jobs, most of the junior high school students attempted to shift away from the general education system onto the vocational training. At that time, entering VTE schools meant getting into employment, because students from these schools were assigned jobs upon graduation. Unger observes:

In earlier years, the less prestigious types of vocational training had appealed almost exclusively to youths of working-class background.

⁴¹ Li, Lintian & Wang, ping (eds.) (1994), op.cit., p.126.

*But now, having sometimes spent months unsuccessfully seeking jobs, teenagers of all class backgrounds sought entry in 1964-65 even to the crude new half-work/half-study technical worker schools...So eager were youths for jobs that even the despised trades such as the "sanitation" trade found applicants for several work/study schools.*⁴²

Given this situation, the central government adopted a policy of "walking on two legs" [*liang tiao tui zou lu*], which is the co-existence of general education and VTE. The government planned to set up vocational schools of various kinds in cities,⁴³ and to provide short-term vocational training for the graduates of junior and senior high schools in both cities and rural areas, who failed to enter the upper level of educational institutions. Yang Xiufeng, the Minister of Education encouraged urban youths to go to vocational schools, and emphasized that the purpose of education was not merely for getting into university.⁴⁴ Premier Zhou Enlai also urged education department at all levels and industrial sectors to set up and develop vocational schools.⁴⁵ Under the central government's instruction, several ways were adopted in setting up vocational schools. One was the conversion of some existing junior high schools into vocational schools, and the other was the encouragement given to various economic sectors and institutions to set up vocational schools of their own specialties. The government also set up a good number of vocational schools. Between 1963 and 1965, vocational schools grew by leaps and bounds. (See Table 2.9.)

Table 2.9
Vocational Schools in Urban China (1963-1965)

	Schools	New Entrants	Graduates	Students at School	Full-time teachers	Admin & other Staff
1963	546	33,500	3,700	62,100	3,300	2,500
1964	2,112	227,700	20,200	273,700	12,700	10,600
1965*	7,294	813,700	54,300	1,266,500	71,600	80,200

*Including "work-study" schools.

SOURCE: *China Education Yearbook 1949-1981*, p.181.

⁴² Unger, J. (1982), *Education Under Mao*, New York: Columbia University press, p.40.

⁴³ The vocational schools included agricultural schools, vocational schools and other technical training schools, which were classified as secondary education schools. These schools offered both general education and technical training to students. They were similar to secondary specialized and technical schools, but the courses were shorter and the training level was lower. The training fields were usually those in industrial labour and crafts and trades, as well as farming work.

⁴⁴ See *China Education Yearbook 1949-1981*, p.180.

⁴⁵ Tianjin, No.2 Education Bureau (1987) "Chronicle Record of Adult Education and Vocational and Technical Education in tianjin (1949-1985, draft) [Tianjin chengren jiaoyu, zhiye jishu jiaoyu ji shi], *Historical Data of Adult Education and Vocational and Technical Education in Tianjin* [Tianjin

In the meanwhile, the government restored the Dual-Track education system (“full-time schools” and “half-work and half-study schools”), which went astray during the “Great Leap Forward” time. In 1964, Chairman Liu Shaoqi repeated the importance of this system, and at the same time put forward a planning of “5 years of experimenting and 10 years of expanding”. Under his leadership, provincial governments started to draw development plans. The principle for the development was to focus on rural areas, to experiment in cities, and to involve all sectors of industries, trades and services, and government institutions in setting up “work-study” programs.⁴⁶ The government adopted a policy this time that there should be no further expansion of full-time academic schools, and that the existing VTE schools of all kinds must gradually be converted into “work-study” system. The curriculum content was also clearly specified that half of the time be spent on cultural and theoretical studies, and the other half of the time on working or farming. The Ministry of Education (MOE) also regulated that students of working class background should be given priority of entering VTE system.⁴⁷

In response to the central government’s instruction on further and fully developing “work-study” education, local governments and enterprises established “work-study” schools of various forms and models. Both VTE sectors and general education sectors adopted “work-study” models. Full-time secondary specialized schools and skilled worker schools were converted into “work-study” models. “Work-study” junior high schools were set up for primary school graduates. Enterprises set up “work-study” secondary technical schools that recruited junior high school graduates, and factories set up “work-study” programs that offered part-time studies for all of their workers and staff. A small number of plants experimented the model of “combining plant with school” [*chang xiao he yi*] by merging school into the factory.⁴⁸ The “work-study” schools grew rapidly. By 1965 there were 7,294 schools at various levels of education with a total enrolment of 1,266,465 students. (See Table 2.10 for more details.)

chengren jiaoyu, zhiye jishu jiaoyu shizhi ziliao], Vol. 3, October, pp.4-29 (p.17); Li, Lintian & Wang, Ping, (eds.) (1994), *A Brief History of Vocational & Technical Education in China*, p.143.

⁴⁶ Li, Lintian & Wang, Ping (eds.) (1994), op.cit., p.128.

⁴⁷ Ibid., p.133.

⁴⁸ Ibid., p.129.

Table 2.10
“Work (or Farming) - Study” Schools in 1965

	Schools	Classes	Students	Staff		
				Total	Full-time Teachers	Admin and other Staff
Total	7,294	28,962	1,266,465	151,785	71,594	80,191
Secondary level	4,683	17,707	726,175	121,665	50,860	70,805
--Run by Education Dept	717	2,864	138,413	15,409	7,863	7,546
--Run by other Depts	3,726	14,183	562,268	104,260	41,902	62,358
--Run by Non-government	240	660	25,494	1,996	1,095	901
Primary level	2,611	11,255	540,290	30,120	20,734	9,386
--Run by Education Dept	1,024	5,198	246,699	16,319	10,500	5,819
--Run by other Depts	820	2,401	104,697	5,052	3,594	1,458
--Run by Non-government	767	3,656	188,894	8,749	6,640	2,109

SOURCE: *China Education Yearbook 1949-1981*, p.181.

Having been through the ups and downs in the development since 1949, all sectors of the secondary VTE system had developed to a commendable standard. (See Table 2.11) In 1965, the number of students in the VTE track was about 35% of the total student number in the entire secondary education system. There were 5,103,847 students enrolled in secondary VTE schools, which included secondary specialized schools (technical schools and teacher training schools), skilled worker schools, vocational schools, and agricultural schools. In the same year, there were 9,337,900 students at general secondary schools (1,308,200 of senior secondary students and 8,029,700 of junior secondary students). (See Table 2.12.) In fact, the number of new student entrants in VTE system equalled that in the general secondary education system. If one only looks at general secondary education at the senior high school level, the numbers of schools and students were much lower than VTE schools. One should also bear in mind that many junior secondary school students would move into secondary VTE schools after graduation. Thus, one can argue that by the end of 1965, the vocational and technical track of education in China was much stronger in number and extent than the general education track. VTE could be regarded as the mass education at secondary education level, while general secondary education was for training the small number of future cream of Chinese society, because the purpose of general senior high school education was to lead students into university, where higher-level professional, technical and management personnel were trained for the country. Statistics of tertiary education during that time can be used to prove this point. In 1965, there were 434 universities and colleges of all types, with a total student number of 674,436 in the whole country. New recruitment number for 1965

was 164,212, and graduating students from general senior high schools were 360,000. In the same year, 1,738,000 students graduated from junior high schools and only 459,000 of them were admitted into general senior high schools. The promotion rate was 26.41%. The rest of them were admitted into VTE schools or apprenticeships, or entered employment.

Table 2.11
Secondary VTE in China (1949-1965)

	Secondary Technical School		Skilled Worker School		Vocational & Agricultural School		Teacher Training School	
	Schools	Students at school	Schools	Students at school	Schools	Students at school	Schools	Students at school
1949	561	77,095	3	2,700			610	151,750
1950	500	97,823	--	--			586	159,363
1951	669	162,940	--	--			744	219,787
1952	794	290,446	22	15,000			916	345,163
1953	650	299,389	--	--			788	369,029
1954	557	300,023	76	43,919			632	308,014
1955	512	318,099	78	45,095			515	218,991
1956	755	538,538	212	130,000			598	273,417
1957	728	482,155	144	66,583			592	295,784
1958	2,085	1,083,538	--	--	20,000	1,999,900	1,028	386,274
1959	2,341	954,538	744	280,000	22,302	2,189,900	1,365	540,075
1960	4,261	1,377,389	2,179	516,819	22,597	2,302,000	1,964	838,480
1961	1,771	740,949	1,507	400,000	7,260	617,700	1,072	462,068
1962	956	352,692	155	59,594	3,715	266,600	558	182,219
1963	865	320,699	220	78,119	4,303	307,800	490	130,661
1964	1,125	397,259	334	123,476	15,108	1,123,400	486	134,298
1965	871	392,443	400	123,000	61,626	4,433,400	394	155,004

Note: 1958-1962 only agricultural schools figure.

SOURCE: *China Education Yearbook 1949-1981*, pp.981-982, 188, 182, 994-997, except 1965 skilled worker school figures from Li, Lintian & Wang, Ping (eds.) (1994), *A Brief History of Vocational & Technical Education in China*, p.148.

Table 2.12
All Levels of Education (1965)

	Number	Entrants	Enrolments	Graduates
Elementary Schools	--	--	--	6,676,000
General (<i>putong</i>) Junior High School	13,990	2,998,000	8,029,700	1,738,000
General (<i>putong</i>) Senior High School	4,112	459,000	1,308,200	360,000
Vocational school	7,294	813,700	1,266,500	54,300
Agricultural School	54,332	2,251,000	3,266,900	81,700
Skilled worker School	400	107,000	123,000	--
Secondary Technical School	871	146,370	392,443	73,359
Secondary (<i>zhongdeng</i>) Teacher Training School	394	62,106	155,004	18,029
University & College	434	164,212	674,000	--

SOURCES: Suzanne Pepper (1996), *Radicalism and Education Reform in 20th-century China: the Search for an Ideal Development Model*, UK: Cambridge University Press, p.304 & 487 for elementary schools, and universities & colleges; Li, Lintian & Wang, Ping (eds.) (1994), *A Brief History of Vocational & Technical Education in China*, Beijing: Beijing Normal University Press, p.148 for skilled worker schools; *China Education Yearbook 1949-1981*, p.180, 181 & 1018 for agricultural schools and vocational schools, p.983-984 for secondary technical & teacher training schools, p.1001 for general high schools.

2.6 Great Setbacks during the “Cultural Revolution” Decade (1966-76)

The ten years from 1966 to 1976 was a period of turmoil and chaos in China. It is classified as the “Cultural Revolution” decade.⁴⁹ During these ten years, the Chinese people experienced political uncertainty, social disorder, psychological frustration, ideological bewilderment, and physical suffering; ... In short, it was chaotic in all facets of Chinese society. Education system, as a part of the most important national infrastructures, was hit heavily in this political turmoil. Many writers, such as John Cleverley (1985, pp.162-179), Jonathan Unger (1982, pp.110-136), Du Ruiqing (1992, pp.13-16), Suzanne Pepper (1996, pp.352-490), Ronald F. Price (1979), Ruth Hayhoe (1989, pp.21-27) have given detailed description and analysis about educational issues during the “Cultural Revolution” decade from various perspectives. As Du Ruiqing argues:

If the educational reform during the Great Leap Forward was a reaction to the Sovietization in the early 1950s, the revolution in education, which was a major component part of the Cultural Revolution, was directed against all foreign educational patterns, and practices that had been introduced to or imposed on China and all previous educational systems indigenously Chinese except the experience of the Communist-run education during the 1930s and 1940s.⁵⁰

Mao Zedong encouraged students of revolutionary background to become “red

⁴⁹ Mao Zedong launched the Great Proletarian Cultural Revolution in 1966, and it officially ended in 1968, when worker and PLA groups occupied the leading positions of all work institutions of the country and primary and secondary school students returned to school after 2 years’ no-class period from 1966. (See S. Pepper, 1996; J. Cleverley 1985; J. Unger, 1982) However, turmoil in political, social, economic, and in fact all aspects of China’s society continued and class struggles did not end until 1976, when the Gang of Four was denounced after the death of Mao Zedong in that year. Since then, political and social order began to resume, and soon after than Deng Xiaoping was reinstated as the leader of the CCP and the country, who launched China’s economic reform. Therefore, Chinese officials and academic researchers often refer the ten years from 1966 to 1976 as the “Cultural Revolution”.

guards” [*hong wei bing*] and make revolution against the feudalists, capitalists and revisionists. The red guards travelled around the countries “disseminating Mao Zedong thought, mobilizing worker-peasant masses and later involving themselves in factional fighting – physical as well as verbal. ...Instead of engaging in academic studies, they took class struggle as their main course of study, denouncing bourgeois intellectuals, repudiating the capitalist-roads in power and struggling to prevent China from changing its socialist orientation.”⁵¹ Mao Zedong, due to his political views, ambition for supreme power in the Party and the country, personal jealousy against Liu Shaoqi and some other high ranking leaders such as Deng Xiaoping, denounced the economic and educational achievements under the leadership of Liu Shaoqi. Mao made use of young students (“Red Guards”) and encouraged them to actively take part in the Cultural Revolution and to criticise the bourgeoisie. Education system was severely criticised for failing to look after the students of working class background, who complained that entrance examinations were too hard. They claimed that more education opportunities were given to the children of former exploiting class.⁵² The tracking system of education and the tertiary entrance examination system were therefore abolished, and schools were closed. In 1967, the CCP Central Committee called on all students to return to school and make revolution. It was barely any academic studies in school. What students were doing mainly was studying Mao Zedong’s works, carrying out revolution and participating in various types of labour, such as working in factories or countryside.

From 1966-1971, secondary VTE system, which had gone through so many reforms, adjustments and development during the 17 years from 1949-1966, suffered a massive destruction. The great majority of schools were destroyed or transformed into factories or farms; teachers were re-allocated to other work units; school buildings were occupied for other uses; school facilities, library holdings and equipments were destroyed. All the “work-study” schools and vocational schools were closed as soon as the Cultural Revolution started, and none of them were resumed until 1976, not even during the second half of the Cultural Revolution when other schools started to reopen. Skilled worker schools were closed or converted into

⁵⁰ Du, Ruiqing (1992), *Chinese Higher Education*, New York: St Martin’s Press, p.13.

⁵¹ *Ibid.*, p.14.

⁵² See Cleverley, John (1985), *The Schooling of China*, Sydney: George Allen & Unwin, pp.165-168.

factories during the early period of the movement, and later from 1971 some of them began to resume. Secondary specialized schools, both technical and teacher training, were also affected. In 1965, there were 392,443 students at secondary technical schools, and in 1969 the number reduced to 23,237. New enrolments in the schools dropped to 13,524 in 1969 from 208,476 in 1965.⁵³ Many industries such as foreign trade, telecommunication, and machinery industries had all or nearly all of their specialized schools shut down or transformed into factories.⁵⁴ In Beijing, only one secondary technical school remained in 1971, while in 1965 there were 20. Shanghai lost 42 from the original 46. Guangdong Province lost 35 out of the total 43.⁵⁵ Just to name a few.

In 1970, the Chinese government launched the fourth “Five-Year Plan”, which prompted the resumption of schools. Tertiary educational institutions started to recruit students of workers’, peasants’ and soldiers’ backgrounds, who were recommended by factories, communes and army units based on their political performance. In 1971, the national education conference was held in Beijing attended by representatives from industrial departments and local governments, who strongly urged the government to resume secondary VTE schools and increase new enrolments in secondary specialized schools and skilled worker schools. The conference produced a report that analysed the current situations and status of secondary specialized schools. They were in one of the three kinds of status: trying out, waiting for further decision, and closed or converted into factories. The report suggested that secondary specialized schools should be resumed as many as possible.⁵⁶

In 1973, the State Council issued a document on the issues of secondary specialized schools and skilled worker schools. It defined the general principles of training and specific regulations on goals of training, admission of new students, job allocation of graduates, administration of students and schools, etc. However, due to the general political situation during 1971 to 1976, there were very often left-wing influence or interruptions affecting a smooth development. Although secondary specialized education was resumed, it was still in a small scale compared with the

⁵³ *China Education Yearbook 1949-1981*, p. 982 & 983.

⁵⁴ Li, Lintian & Wang Ping (eds.) (1994), *op.cit.*, pp.145-146.

⁵⁵ *Ibid.*, p.144.

whole secondary education system in China. Vocational schools and agricultural schools remained closed until after 1980. It was estimated that China lost 6 million potential secondary VTE students during the 10 years of the Cultural Revolution.⁵⁷ The consequence of this was that not only China had lost a strong army of potential skilled workers and middle-level technical personnel, and thus the national economic development was negatively affected; but also that the whole secondary VTE system was severely undermined, and it would take years of recovering. Even though the number of schools by the end of the Cultural Revolution in 1976 had doubled or more than the numbers in 1965, it still fell short of normal level. Quality of students, teaching and training outcomes were also far behind of pre-Cultural Revolution years. In the whole secondary education system, secondary VTE students only accounted for 5.78% of the total senior secondary level school students (see Table 2.13)⁵⁸, compared with 52.6% in 1965.⁵⁹

Table 2.13
Secondary Education System (1971-76)

	1971	1972	1973	1974	1975	1976
Technical	955	735	1,058	1,234	1,326	1,461
--students at school	97,980	147,094	264,321	348,896	405,030	385,521
--new entrants	100,250	114,341	164,644	178,443	184,263	193,112
--full-time teachers	23,720	26,586	35,970	42,717	47,828	51,926
Teacher Training	636	645	737	725	887	982
--students at school	119,590	195,409	218,160	285,388	302,288	304,356
--new entrants	113,100	153,559	129,661	148,541	159,591	155,013
--full-time teachers	18,810	19,420	20,905	23,475	24,618	28,264
Skilled Workers	39	236	653	905	1,151	1,267
--students at school	8,550	36,942	94,923	136,278	192,386	221,499
--new entrants	6,900	--	--	58,000	--	120,000
--full-time teachers	--	--	--	--	--	--
General Senior High	*	28,029	29,365	31,589	39,120	60,535
--students at school	5,586,900	8,580,300	9,232,800	10,027,400	11,636,800	14,836,400
--new entrants	3,213,000	4,790,000	4,520,000	5,411,000	6,331,000	8,611,000
--full-time teachers	292,000	393,000	422,000	458,000	530,000	694,000
General Junior high	*	64,937	67,959	69,032	84,385	131,617
--students at school	25,689,200	27,244,100	25,231,500	26,476,200	33,024,300	43,529,400
--new entrants	12,349,000	12,471,000	11,390,000	13,451,000	18,105,000	23,443,000
--full-time teachers	1,035,000	1,264,000	1,274,000	1,324,000	1,562,000	2,035,000

*Note: There were 94,765 general high schools (including both senior and junior levels) in 1971.
SOURCES: *China Education Yearbook 1949-1981*, pp. 983,989-999 for technical and teacher training schools; pp.1000-1002 for general high schools; p188 and Li, Lintian & Wang, Ping (eds.) (1994), *A Brief History of Vocational and Technical Education in China* p.148 for skilled worker schools.

⁵⁶ Li, Lintian & Wang Ping (eds.) (1994), op.cit., p.147.

⁵⁷ Ibid., p.151.

⁵⁸ At that time, almost all the secondary specialized schools and skilled worker schools were operated at senior secondary education level.

⁵⁹ Li, Lintian & Wang, Ping (eds.) (1994), op.cit., p.151.

2.7 Returning to the Old Order (1977-1980)

With the death of Mao Zedong in 1976 and the overthrow of the “Gang of Four”, China began to return to the old order in political, ideological, social and educational systems. Many state leaders, labelled by Mao as “capitalist-roaders” and deprived of their political and administrative positions in the Party and the government, had their names cleared and returned to office. Liu Shaoqi and many other leaders had been tortured to death, but still a number of them survived and rehabilitated. One of them was Deng Xiaoping, who later led China through the opening door policy and the economic reforms in the 1980s and 1990s. When Deng Xiaoping returned to office in the late 1970s, he was specifically in charge of science, technology and education work, because these were crucial to his reforms. On 22 April 1978, he addressed the national education conference and laid down four important guidelines for education: improving quality of teaching and focussing on learning in science and culture for the country’s socialist construction; emphasizing ideological education and developing social spirit; developing education in response to the need of national economic development; and respecting teachers and improving quality of teaching staff.⁶⁰ In the following year, the CCP Central Committee confirmed the legitimacy and correctness of the “two kinds of labour system and two kinds of education system” developed and promoted by Liu Shaoqi, and in 1980 it also issued documents to instruct gradual reforms on the current education system and to encourage development of various forms of education. Secondary VTE started to be rehabilitated. (See Table 2.14.) However, Jonathan Unger argues:

But the new school system was not quite a replica of pre-Cultural Revolution education. Instead, with the momentum of a pendulum swinging back past its original resting place, the programs of 1977-1980 were more elitist and more “talent” oriented than any that existed in the fifties and sixties. Because the authorities were so preoccupied with modernizing China’s stagnating economy, they made no efforts to sustain a balance between the “quality” education they wanted and the revolution’s putative egalitarian objectives.⁶¹

⁶⁰ Deng Xiaoping (1978, 22 April), “Speech at the National Conference on Educational Work” [Zai quan guo jiaoyu gongzuo huiyi shang de jianghua], *Comrage Deng Xiaoping on Education* [Deng Xiaoping tongzhi lun jiaoyu], Beijing: People’s Education Press, 1990, pp.58-66.

⁶¹ Unger, J. (1982), op.cit., p.207.

In 1977, tertiary entrance examination system was restored, and the first batch of 278,000 new students out of 5,700,000 candidates was admitted into universities and colleges in February 1978.⁶² After 10 years interruption in the normal avenue for higher education, students and parents were very excited and enthusiastic about getting into university or college. General secondary education, which was considered to be a major or only path leading to higher education, was their preferred choice; so was the government that paid more attention to the general secondary education stream. Some government leaders later admitted that secondary VTE was not given enough attention and funds for development. One of the supporting evidence for this claim is that agricultural high schools and vocational schools did not make a comeback until 1980. The number of general secondary school entrants was overwhelmingly higher than the number of VTE school entrants (see Table 2.15). The highest year of entrants into VTE schools (not including skilled worker schools) was 1979. Compared with general senior high school entrants in the same year, the number of VTE school entrants was only 7.41% of the total senior secondary school level entrants, compared to 41% in 1965. If one looks at the enrolment figures from 1976 to 1980, the VTE schools still accounted for a small percentage (see Table 2.16).

Table 2.14
Secondary VTE from 1977-1980

	Secondary Specialized Schools		Skilled Worker Schools	
	Schools	Students	Schools	Students
1965	871	392,443	400	123,000
1976	1,461	385,521	1,267	221,499
1977	1,457	391,320	1,333	243,072
1978	1,714	529,289	2,013	381,977
1979	1,980	714,182	2,933	639,999
1980	2,052	761,280	3,305	700,376

Note: Secondary specialized schools in this table do not include teacher training schools. According to *China Education Year Book 1949-1981* (p.1017), there were 3,314 agricultural and other vocational schools in 1980, but there was no school recorded in the previous years from 1966.

SOURCE: *China Education Year Book 1949-1981*, pp.989, 991,188.

⁶² Pepper, Suzanne (1984), *China's Universities*, The University of Michigan, p.125. This batch of students was recorded as the year of 1977 entrants.

Table 2.15
Ratio between General Senior High School Entrants and Secondary VTE School Entrants (1976-1980)

	Secondary VTE Schools				General Senior High Schools	Ratio
	Total	Technical	Teacher Training	Skilled Worker		
1965	315,476	146,370	62,106	107,000	459,000	1: 1.5
1976	468,125	193,112	155,013	120,000	8,611,000	1:18.4
1977	366,312	208,764	157,548	--	9,931,000	1:27.1
1978	447,039	267,953	179,086	--	6,929,000	1:15.5
1979	491,551	265,386	226,165	--	6,141,000	1:12.5
1980	467,624	252,900	214,724	--	3,834,000	1: 8.2

Note: 1977-1980 VTE student number does not include skilled worker school.

SOURCES: *China Education Yearbook 1949-1981*, p.983 for secondary technical, teacher training and p.1001 for general school; Li, Lintian & Wang, Ping (eds.) (1994), *A Brief History of Vocational & Technical Education in China*, p.148 for skilled worker school.

Table 2.16
VTE School Enrolments vs. General Senior High School Enrolments (1976-1980)

	Secondary VTE Schools				General Senior High	Ratio
	Total	Technical	Teacher Training	Skilled Worker		
1965	670,447	392,443	155,004	123,000	1,308,200	1: 2
1976	911,376	385,521	304,356	221,499	14,836,400	1:16.3
1977	932,274	391,320	297,882	243,072	18,000,100	1:19.3
1978	1,271,186	529,289	359,920	381,977	15,530,800	1:12.2
1979	1,838,675	714,182	484,494	639,999	12,919,700	1: 7
1980	1,943,764	761,280	482,108	700,376	9,697,900	1: 5

SOURCES: *China Education year Book 1949-1981*, p.1001 for general senior high school; p.982 for technical and p.983 for teacher training schools; p.188 for skilled worker school for 1976-1980 figures, Li, Lintian & Wang, Ping (eds.) (1994), *A Brief History of Vocational and Technical Education in China*, p.148 for 1965 figures.

CHAPTER THREE

EDUCATIONAL REFPORM IN POST-MAO PERIOD

The “Cultural Revolution” decade from 1966-1976 brought the country to a disaster in every respect: a high level of uncertainty and demoralisation among people and decision-makers; a fall of living standards among the populace, and the economy was on the brink of collapse. In December 1978, the Third Plenary Session of the Eleventh Central Committee of the CCP was held in Beijing. The Plenum adopted a resolution that the focus of the CCP and the whole country was to be shifted from “class struggle” to the socialist modernization. It emphasized that it was important to strengthen scientific and educational work to meet the needs of modernization.¹ From that time on, the CCP government repeatedly addressed that education was vital in the national cause of achieving the “Four Modernizations” [*si ge xian dai hua*], and Chinese education system underwent tremendous changes.

3.1 Educational Reform and “Four Modernizations”

China’s education system was completely crushed by the anarchic forces of the Cultural Revolution. During this time, the guiding principle of the CCP was to consolidate the dictatorship of the proletariat, to prevent capitalist restoration and to build socialism.² The national education policy was to serve the proletarian politics and to integrate education with production and labour. Educational work from 1949 to 1966 was repudiated. Intellectuals were vilified as the “Stinky Number Nine” [*chou lao jiu*]³. Revolution committees of three-in-one combinations of workers/peasants/solders, members of Mao Zedong thought propaganda team, and cadres were given the power to run schools.⁴ University students were selected from

¹ *People’s Daily*, 24 December 1978, pp.1-2.

² See “The Tenth National Congress of the Communist Party of China” (documents), Special Supplement to *China Reconstructs*, *China Reconstructs*, Vol. 22, No.11, November 1973.

³ During the Cultural Revolution, the Gang of Four slandered the intellectuals as the “Stinky Number Nine” - the ninth category after landlords, rich peasants, counter-revolutionaries, bad elements, Rightist, renegades, enemy agents and 'capitalist roaders', who were the targets of the revolution.

⁴ At the beginning of the Cultural Revolution, almost all cadres became the targets of the revolution. Later in 1967, Mao Zedong made a few statements about the importance of uniting a large number of

workers, peasants and soldiers. Inside the schools, political activities were emphasized and teaching content was highly politicised.⁵

With the downfall of the “Gang of Four” in 1976, there began discussions on educational development. In August 1977, a forum on science and education work was held in Beijing. Deng Xiaoping,⁶ who was in charge of educational work, addressed the forum. He placed scientific research and education at the first priority in China's scheme to catch up with the most advanced countries in the world.⁷ In his speech, Deng Xiaoping discussed the importance of knowledge and skills. He emphasized that mental labour of intellectuals is of the same importance as physical labour of manual workers. He stressed that China needed to catch up in science and technology with the advanced countries in the world. Developing scientific research would rely on scientists, and producing scientists would rely on education. He confirmed the important roles of intellectuals, and re-evaluated China's educational work in the first 17 years (1949-1966) favourably.

In September 1977, Deng Xiaoping made critical remarks on China's education at a talk to the principal leading personnel of the Ministry of Education (MOE). He reaffirmed the success of China's educational work before the Cultural Revolution and criticised the Gang of Four's “Two Appraisals” [*liang ge guji*]. The Two Appraisals were mentioned in the “Summary of the National Conference on Education” in 1971. This summary was revised by Yao Wenyuan and finalized by

cadres in the revolutionary committee. He said: “The majority of the cadres are good, and only a small minority of them are bad.” “We must unite the majority of cadres.” “We must emancipate a number of cadres and let them stand up.” Mao also emphasized the importance of including cadres into the three-in-one combination of revolutionary committees. From then on, a small number of cadres were included into the leading committees, but still a great many of them were not allowed to return to their work and positions.

⁵ See Cleverley, John (1984), “Ideology and Practice: a Decade of Change and Continuity in Contemporary Chinese Education”, *Comparative Education*, Vol. 20, No. 1, pp.107-116 (p.108).

⁶ Deng Xiaoping won enormous reputation and support in the CCP and among the Chinese people for his valuable contributions during the long revolutionary years, especially having waged a resolute struggle against the Gang of Four and his efforts in the success of restoring order of the CCP and the country. In July 1977, at the Third Plenary Session of the Tenth Central Committee of CCP, Deng Xiaoping was elected as Vice-Chairman of the CCP Central Committee, Vice-Premier of the State Council, Vice-Chairman of the Military Commission and Chief of the General Staff of the People's Liberation Army. See “The Life of Deng Xiaoping”, <http://www.cbw.com/asm/xpdeng/life.html>, accessed on 15/09/2004.

⁷ Deng Xiaoping (1977, 8 August), “Some Comments on Work in Science and Education” [Guanyu kexue he jiaoyu gongzuo de ji dian yijian], *Comrade Deng Xiaoping on Education*, Beijing: People's Education Press, pp.27-39.

Zhang Chunqiao, the two members of the Gang of Four. The first “appraisal” was that during the 17 years prior to the Cultural Revolution the bourgeoisie exercised dictatorship over the proletariat in the educational sphere, which means that there was “dictatorship by the proponents of a sinister line”. The second “appraisal” was that the world outlook of the vast majority of intellectuals was basically bourgeois, that is, they were bourgeois intellectuals.⁸ Deng Xiaoping re-appraised the “two appraisals” in the following words:

The “two appraisals” do not accord with reality. How can we dismiss nearly 10 million China's intellectuals at one stroke? Weren't most of the professionals now at work trained in the first 17 years after 1949? China's first atomic bomb was successfully tested in 1964, and its first hydrogen bomb was explored in 1967, but these things were not achieved overnight...You people in charge of educational work have yet to emancipate your minds. Burdened with the weight of the “two appraisals”, you don't speak out in defence of the masses of intellectuals, and you are likely to stumble in your work.⁹

Following this comment by Deng Xiaoping, the Ministry of Education (MOE), in the name of a criticism group, published an article in November entitled “A Great Debate on the Educational Front”, in which the Gang of Four's “two appraisals” were repudiated.¹⁰ These discussions confirmed the status of intellectuals and so the importance of knowledge and skills for China's construction. Deng called on the government to bend all efforts to educational work over the following eight or ten years and continue on.¹¹ In April 1978, a national conference on education was held in Beijing. The theme of the conference was to rebuild China's educational system. Deng Xiaoping delivered a speech at the meeting, in which he emphasized four points as follows:

⁸ See Deng Xiaoping (1977, 19 September), “Setting Things Right in Education” [Jiaoyu zhanxian de boluan fanzheng de wemti], *Comrade Deng Xiaoping on Education*, pp.48-53 (p.48).

“Dictatorship by the proponents of a sinister line” was a term launched by Lin Biao, Jiang Qing and their followers to vilify literary and artwork in the first 17 years of the People's Republic of China in 1966. . They extended this theory later to the fields of education, publishing, physical culture, public health, public security, Party's organizational, propaganda and united front work, and other fields of Party and government work. This absurd assessment constituted one of the major arguments in favour of the Cultural Revolution and brought disastrous consequences to various spheres in China.

⁹ Deng Xiaoping (1977, 19 September), *Ibid.*, p.49.

¹⁰ *China Educational Yearbook 1949-1981*, p.952.

¹¹ Deng Xiaoping (1977, 19 September), *op.cit.*, p.53.

- ◆ The first was to improve the quality of education and to raise the level of teaching in sciences, social sciences and humanities. He encouraged students to work hard in academic studies.
- ◆ The second point was to restore order and discipline in schools. He argued that the Gang of Four not only caused an alarming decline in the quality of scientific and cultural education, but also damaged ideological and political education in schools. Deng Xiaoping said: “We should strive to inculcate in our young people the revolutionary style of diligent study, observance of discipline, love of labour, pleasure in helping others, defiance of hardships and courage in the face of the enemy.”
- ◆ The third point raised was that education must meet the requirements of China's economic development. Deng Xiaoping reaffirmed Mao Zedong's educational theory as the guiding principle, which stressed on combining education with productive labour. He called on the State Planning Commission, the Ministry of Education (MOE) and other organisations to collaborate in making education an integral component of the national economic plan. He particularly laid emphasis on planning to increase the number of agricultural secondary schools and vocational and technical secondary schools.
- ◆ The last point was about recognising and respecting the labour of teachers and improving their professional competence. Teachers' material welfare should be looked after although it was impossible to bring about a marked improvement immediately.¹²

In 1981, the then premier, Zhao Ziyang, reiterated the views of Deng in the Fifth National People's Congress. He said:

*We must train large numbers of specialists of all grades in all lines and large numbers of competent workers for our modernization program. This is of paramount importance. China is still rather backward in education and science, whose development thus lags behind that of the various sectors of the economy. Unless we solve this problem, we shall fail in our drive for modernization.*¹³

¹² Deng Xiaoping (1978, 22 April), “Speech at National Conference on Education”, *Comrade Deng Xiaoping on Education*, Beijing: People's Education Press, 1990, pp. 58-66.

¹³ Zhao Ziyang (1981), “The Present Economic Situation and the Principles for Future Economic Construction” (report on the work of the government at the 4th Session of the Fifth National People's Congress), *Beijing Review*, Vol. 24, No.51, 21 December, pp.6-36 (p.26).

For China, to rebuild a school system that had been thoroughly dismantled was an arduous task. As Leslie Lo argues, in the course of rebuilding a school system China faced a formidable task to “revive and retain a demoralised population of teachers, to counteract the pervasive influence of anti-intellectualism in society, and to instill a sense of hope and civility in a generation of frustrated and alienated young people, many of whom are (were) already in their thirties”.¹⁴ This was a tremendous scheme to carry out, especially in China's situation where education issues had always been used as decisive factors for every political movement or development program but political situations had gone through many changes within a short period of thirty years.

From the early 1980's, economic reforms embarked on a large-scaled development. In October 1984, the Third Plenum of the Twelfth Central Committee of CCP passed its resolution entitled “Decisions on Economic Structural Reform”. This decision set China on a further task of economic reforms and adopted an “Open Door” policy [*kai fang zheng ce*].¹⁵ With the “Open Door” policy being adopted, advanced science and technology were introduced from overseas. However, this advanced technology could not be implemented as expected. Workers lacked knowledge and skills about using high technology machines, and farmers did not have enough knowledge to apply new technology in farming. China had 220,000,000 illiterates and over 2 million new illiterates were added each year.¹⁶ For every 10,000 rural residents there were no more than four agro-technicians.¹⁷ To achieve the goal of the “four modernizations”, China needed a large contingent of skilled workers and personnel. The general education level of Chinese people needed to be improved. The Chinese government stressed the close relationship between education standard and economic growth. It was understood that a powerful country with advanced technology and high living standard was characterised by the high level of education

¹⁴ Lo, Leslie N.K. (1989), “Chinese Education in the 1980's: a Survey of Achievements and Problems”, in Joseph Y.S, Cheng (ed.), *China, Modernization in the 1980s*, Hong Kong: The Chinese University Press, pp.553-591 (p.557).

¹⁵ See *People's Daily*, 21 October 1984, pp.1-3.

¹⁶ Zhang, Ning (1992), “A Conflict of Interests: Current Problems in Educational Reform”, in Andrew Watson (ed.), *Economic Reform and Social Change in China*, London: Routledge, pp.144-170.

¹⁷ Lewin, Keith & Xu Hui (1989), “Rethinking Revolution, Reflections on China's 1985 Educational Reforms”, *Comparative Education*, Vol. 25, No. 1, pp. 7-17 (p.9).

of its people, and that it was not only the case in advanced Western countries like the USA, but also in Asian developed countries and regions.¹⁸

As China was fully engrossed in the economic reform, there was a reinforced view for an urgent task of national educational reform. In 1984 when the CCP undertook an economic structural reform, it emphasized the need to reform educational structure as well. The decision stated:

*Science, technology and education play extremely important parts in the development of the national economy. Along with the reforms of economic structures, reforms of science and technology structures and reforms of educational structures are becoming strategic tasks that need to be addressed urgently. The Central Committee will exclusively discuss issues in these areas and make relevant decisions.*¹⁹

In May 1985, the Central Committee of the CCP held a national conference on educational work. A resolution was adopted at the conference that the central task of education was to produce “skilled manpower” [*ren cai*] for the realization of the “four modernizations” program. At the conference Vice-Premier Wan Li pointed out:

*The skilled manpower we talk about not only refers to senior specialists, but includes those who are able to meet the requirements of the construction of modernization at all levels and in all walks of life. The most needed are thousands or millions of grass roots level managerial personnel and various kinds of technical personnel and skilled workers.*²⁰

Deng Xiaoping also addressed the conference and pointed out that China's overall strength, as well as its economic growth, increasingly depended on the competence/quality of its workers and the quantity and quality of its intellectuals.²¹

At the conference a decision was passed to reform the national education structure. This resolution was claimed to be the fruit of a massive effort of

¹⁸ *Guangming Daily*, 29 March 1989.

¹⁹ *People's Daily*, 21 October 1984, p.3.

²⁰ Wan Li (1985, 17 May), “Speech at the National Conference on Education”, *People's Daily*, 31 May 1985, p.1.

²¹ Deng Xiaoping (1985, 19 May), “The Party Committees at All Levels Must Pay Close Attention to Educational Work” [*Ge ji dang wei he zhengfu yao ba jiaoyu gongzuo renzhen zhua qilai*], *Comrade Deng Xiaoping on Education*, pp.148-150 (p.148).

consultation, involving as many as 10,000 experts.²² It outlined four major tasks: to universalise nine years compulsory education at 3 different stages according to economic conditions of each area or province; to reform secondary education system and to popularize secondary vocational and technical schools; to give autonomy to higher educational institutions in a range of areas both administrative and academic; and to reform curriculum and pedagogical practice.²³

The CCP's decision to reform the educational structure indicated that the leadership perceived educational reform as one of the determining factors in the modernization programs. As Burns and Rosen argues, "it visibly suggested that education ranks with industry and science and technology -- two of the Four Modernizations -- as top priorities, since these two policy arenas were previously granted similar widely publicised Central Committee decisions (industry in October 1984, and science and technology in March 1985)".²⁴ Another important observation one can have is that the Ministry of Education was abolished in June 1985 and replaced by the National Education Commission, which was headed directly by Li Peng, one of the four vice-premiers of the State Council. The National Education Commission (which is referred to as "MOE" in this dissertation) was more powerful than the Ministry of Education in decision-making. Education was raised to the same status with the National Economic Commission and the State Planning Commission. This upgrading gave education its authority in the making of educational policy in relation to other national ministries that administered many polytechnic and specialized institutions of higher learning. In this way, the National Education Commission had the supreme power of control over curriculums, enrolments, and finance matters.

During the following ten years, educational reforms were repeatedly addressed and various measures were adopted to foster the development. In 1986, the People's Congress passed the "Compulsory Education Law". In February 1993, the State Council issued the "Outlines of Chinese Educational Reform and Development"

²² Lo, Leslie N.K. (1989), *op.cit.*, p.554.

²³ Central Committee of the CCP (1985, 27 May), "Decisions on the Reform of Educational Structure by the Central Committee of the CCP", *People's Daily*, 29 May 1985, p.1 & 3.

²⁴ Burns, John P. & Rosen, Stanley (eds.) (1986), *Policy Conflicts in Post-Mao China, A Documentary Survey, with Analysis*, Armonk, N.Y.: M.E.Sharpe, p.283.

[*Zhongguo jiaoyu gaige he fazhan gangyao*], which contained six parts including fifty articles, after more than four years of preparation and over 20 draft versions.²⁵ This document outlined the targets, principles, and policy and enforcement measures for education in the remaining years of the 20th century. The document reinforced the reform of the educational system in China. Two years later, the People's Congress passed "The Education Law of the People's Republic of China" in March 1995, and the "Vocational Education Law of the People's Republic of China" in 1996.

3.2 Universalising Nine-Year Compulsory Education

Of the four major tasks of reform identified in the CCP's decision of 1985, the universalisation of nine-year compulsory education was regarded as the most important issue in the overall educational reform. This program divided the country into three areas based on their economic and educational conditions. Different timetables were set for each of them in achieving the goal. Cities, economically developed areas in coastal provinces and some inland areas, which cover one quarter of the country's population, were to achieve the goal by 1990. Economically semi-developed townships and villages, where about half of the country's population resided, were to achieve the goal by 1995. The remaining 25 per cent of the population resided in economically underdeveloped areas. The state government required these areas to popularize basic education according to their economic situations. The state government would do its best to assist these areas in the development. There was no deadline set for these areas to achieve the goal.

In 1986, the People's Congress passed "The Compulsory Education Law". Various projects, such as "Spark Plan" [*xing huo ji hua*], "Prairie Fire Plan" [*liao yuan ji hua*], and "Hope Project" [*xi wang gong cheng*], were carried out to help realise the goal, specifically in the rural and remote areas. Although some progress had been achieved - by 1993 elementary school education (6-year school education) had been made universal in localities where 91 percent of the population lived²⁶ - the

²⁵ Cui, Lili (1993), "New Target for Educational Reform", *Beijing Review*, Vol. 36, No.22, 31 May – 6 June, pp. 13-18 (p.13).

²⁶ See Central Committee of CCP and State Council (1993, 13 February), "Outlines of Chinese Educational Reforms and Development" [*Zhongguo jiaoyu gaige he fazhan gangyao*], reprinted in *Policies and Regulations on Vocational Education 1992-1996*, Beijing: Beijing Normal University,

target set by the 1985 Decision fell through. By 1996, only Beijing, Shanghai and Tianjin, the three municipal cities, had reached the goal of popularizing 9-year compulsory education.²⁷ This was due to many factors, but the basic reason was the shortage of funding. Although the central government had repeatedly addressed the importance of developing basic education, local governments and departments concerned might not have seen the urgency, or even though they did realise the importance, they were not able or willing to provide more funding for education. This problem was especially serious in remote rural areas, where there was a very low level of funding from the provincial and local governments. Farmers were trying to survive on limited income from farming, and they did not have anything left for children's education. Although compulsory education was supposed to be free, farmer parents did not see the importance and relevance of their children's education to their family's life and future. Unless their children could get into university and find a job in a city, their children would still be remaining in the village doing farm work after elementary or even secondary schooling, and their life would be still the same with or without education. Although schooling was supposed to equip children with knowledge and skills for their life and work in future, farmer parents often felt that school curriculums did not teach their kids what would be useful for them in real life. What made it worse was that some schools imposed all sorts of charges on students in order to generate more income. Parents complained that this was a big financial burden to them, and from their perspective, sending children to school was a waste of both money and time.²⁸

As there were many problems in local areas, that made it hard to carry out the project of universalising the nine-year compulsory education, the Chinese government had to readjust its goal. In 1994, the State Council was forced to postpone the deadline for reaching the goal till the year 2000. It was stated that by 2000, the 9-year compulsory education should be popularized in areas covering 85% of the national population, and that the national elementary school enrolment rate should be 99%,

pp.81-103 (p.82).

²⁷ Zhu, Kaixuan (1996), "A Summary Report at the 1996 National Educational Commission's Conference on Education Work" [Zai guojia jiao wei 1996 nian jiaoyu gongzuo huiyi shang de zongjie jianghua], *China Higher Education*, April, pp.4-7.

²⁸ Zhang, Ning (1992), "A Conflict of Interests: Current Problems in Educational Reform" in A. Watson (ed.) *Economic Reform and Social Changes in China*, London: Routledge, pp.144-170 (pp.154-155).

and 85% for junior secondary school enrolment rate.²⁹ It was claimed in the China Education Year 2000 Statistics Report that the plan had been fulfilled on time.³⁰

Table 3.1
Elementary and Junior Secondary School Students (1965-2000)
(Unit: 10,000 persons)

	Total No. of school-age children	Total No. of school-age children enrolled in prim schools	Ratio (%)	No. of graduating students from primary schools	No. of entrants into junior high schools of various types	Ratio (%)
(a)	(b)	(c)	(d)	(e)	(f)	(g)
1965	11,603.2	9,829.1	84.7	667.6	299.8	44.9
1980	12,219.6	11,478.2	93.0	2,043.3	1,550.9	75.9
1985	10,362.3	9,942.8	95.9	--	--	68.4
1990	9,740.7	9,529.7	97.8	1,863.11	1,389.22	74.6
1993	--	--	97.7	1,841.51	1,505.59	81.8
1999	12,991.4	12,872.8	99.1	2,313.74	2,183.44	94.4
2000	12,445.3	12,333.9	99.1	2,419.18	2,295.57	94.9

SOURCES: columns b, c & d are from Department of Development Planning of Ministry of Education, "Year 2000 Brief Statistical Report on China Education Development" [2000 nian zhongguo jiaoyu shiye fazhan tongji jian kuang], <http://www.edu.cn/20011219/3014655.shtml>, accessed 18/12/2002; Columns e, f & g, 1965-1985 figures are from Suzanne Pepper (1996), *Radicalism and Education Reform in 20th -century China: the Search for an Ideal Development Model*, UK: Cambridge University press, p.304 & 487 & *China Education Yearbook 1949-1981*, p. 1001; the rest are from Ministry of Education, *China Education Development Statistical Reports*, <http://www.edu.cn/20010912/3001369.shtml>; <http://www.edu.cn/20010912/3001372.shtml>; <http://www.edu.cn/20010912/3001374.shtml>; <http://www.edu.cn/20011219/3014655.shtml> accessed 13/10/2004.

3.3 Restructuring Secondary Education

The second task of the structural reform in education was to shift at least 50% of secondary students into VTE, especially at senior secondary level. The CCP's 1985 "Decision" stated:

The construction of socialist modernization not only requires senior science and technology experts, but also urgently needs millions of intermediate and junior level technical personnel, management personnel, and skilled workers who have received a good vocational and technical education. It also requires massive urban and rural labourers who have received good vocational training. Without such a

²⁹ The State Council of the PRC (1994, 3 July), "Suggestion on the Implementation of 'Outlines of Chinese Educational Reform and Development'", reprinted in *Policies and Regulations on Vocational Education 1992-1996*, Beijing: Beijing Normal University Press, pp.103-122.

³⁰ Ministry of Education (2000), "Year 2000 National Education Development Statistical Report" [2000 nian quanguo jiaoyu shiye fazhan tongji gongbao], <http://www.edu.cn/20011128/3012090.shtml>, accessed 18/12/2002.

*large skilled workforce, advanced technology and advanced equipment will not be turned into social productive force. However, vocational and technical education is the weakest sector in our entire education system. We must take all effective measures to change this situation and strive for the strong development of vocational and technical education.*³¹

The policy indicated that half of the secondary school students should enrol in VTE schools by 1990. This was to resolve the manpower shortage of skilled technicians and professional scientists and engineers at intermediate levels. It was hoped that the deeply rooted concept of belittling VTE be changed and that status of VTE schools be improved. By 1993 both annual enrolment of commencing students and the number of students at school in secondary VTE schools had exceeded 50 percent of the figures of senior secondary education. Statistically, the target had been achieved, but serious problems existed in the structure. These will be discussed in detail in later chapters.

3.4 System Reform in Higher Education

Higher educational reforms attracted interest of many scholars. Ruth Hayhoe (1989), Du Ruiqing (1992), Suzanne Pepper (1996) and some other researchers have given detailed discussions on the reforms and development during the 1980s. The 1985 “Decision” enabled the institutions of higher learning to free themselves from the rigid control of the national and provincial governments in school operation and management. This flexibility provided many opportunities for their development and they were able to function properly in the country's new economic system.³² In the economic development after 1978, it was argued that institutions of higher learning should bear three functions: teaching, research and economic activity, and that they were obliged to provide the community with advice and updated information on economic activities.³³

With the introduction of university autonomy, each university or college had control over human resources, funding, student enrolments, job allocation, capital

³¹ Central Committee of the CCP (27 May 1985), “Decisions on Reforms of Educational Structures”, *People's Daily*, 29 May 1985, p.1 & 3 (p.1).

³² Zhang, N. (1992), op.cit., p.159.

³³ Cleverley, John (1987), “‘The Concept of Enterprise’ and the Chinese University: A Cautionary Tale of Profit and Loss”, *Comparative Education*, Vol. 23, No. 3, pp.345-353 (p.346).

construction, and academic exchange with overseas institutions. This reform brought elements of market economy into higher education. Institutions of higher learning were encouraged to develop according to the needs of social and economic requirements, with a warning that they would not be able to survive without this change. For example, enrolments were no longer purely national or local government-planned. Instead, apart from the government-planned targets, university could enrol commissioned students [*dai pei sheng*] and fee-paying students [*zi fei sheng*]. “Commissioned students” were sponsored by work units [*dan wei*] who need graduates but could not get any through the government plan. “Fee-paying students” were admitted beyond the state planned enrolment quota. They paid tuition fees to the university but were not guaranteed employment, which means they were not assigned jobs by the government. Universities could also run correspondence and evening courses for thousands of people who could not enter universities. This practice enabled universities to solve part of their funding problems, and at the same time it was also to satisfy social demand and desire for receiving higher education.³⁴

With the further economic development, the national government initiated a plan to phase out free higher education and adopt fee-paying system. The CCP government’s plan to merge the two systems [*bing gui*] was written in the 1993 “Outlines of Chinese Educational Reform and Development”.³⁵ In fact, in Chinese “*bing gui*” means “to merge two tracks into one”, but the new policy of the government on admission of new students was to completely abolish the free education and charge tuition fees to all students, while providing scholarships to high achieving students and financially difficult students. By 1997, all new students in tertiary education were required to pay fees.³⁶ This was claimed to be the result of the development of socialist market economy in China. The system was also to resolve the problems in pedagogy and administration because of the two types of students coexisting in one institution.³⁷ With the abolishment of free tertiary education and the

³⁴ Xu, Dunhuang (1988), “On the Macro Control over Enrolment in Higher Education Institutions” [Tan gao deng xuexiao zhaosheng guimo de hongguan kongzhi], in Shouxin Li (ed.), *Studies on the Issues of China Education Development*, Beijing: China Planning Press, pp.58-64.

³⁵ In 1994 the State Council issued “Suggestions on the Implementation of the ‘Outlines’”, which required the majority of universities and colleges to start the new admission system from 1997.

³⁶ See *China Education News* [Zhongguo Jiaoyu Bao] online source, <http://www.jyb.com.cn/gb%5C2003%5C07%5C04%5Czy%5Cjyz...>, accessed 15/10/2004.

³⁷ Education Committee of Fujian Province (1996), “Speed up Reforms, Emphasize Focus, Enhance a Complete Merging of the Two systems of Admission in Higher Education” [Jia kuai gaige, tuchu

growth of labour market in the 1990s, university students were no longer assigned jobs upon graduation. Instead, a mechanism of two-way choice system was established. The system provided occasions for prospective employers and job seekers (university graduates) to meet, negotiate and choose each other.

The autonomy in the placement of graduates in employment had great significance. Since the liberation in 1949, graduates had been allocated to jobs under national plans. Individual graduates usually had no choice but to accept jobs allocated to them. As job markets started to appear in China in the late 1980s,³⁸ universities began to move towards competitive systems of job placement. The national government gave universities the autonomy to do so, and it endorsed such practice. The intention was to allow the development of a market place for graduates in which their job preference was taken into consideration and in which employment agencies would compete for the best graduates. This practice also forced universities to reform their teaching and curriculums, so that their graduates were trained well to meet the demands of the job market.

In order to catch up with the academic standard of the world, universities and colleges took initiatives to establish relationships with overseas academic institutions, with programs of exchanging students and scholars. For example, there were about 26,000 public sponsored Chinese students and scholars studying in American universities from 1979-1984.³⁹ Most of these students studied engineering and natural sciences. At this time, other advanced countries such as UK, Germany, France, Japan, and Australia also admitted Chinese students and scholars into their universities, but America ranked the top of having Chinese students and visiting scholars. Since then, the number of students and scholars going overseas increased by folds. Not only government-sponsored students increased, but also more and more self-funded students pursued studies overseas. They enrolled in all sorts of courses in overseas higher learning institutions. Chinese overseas students and scholars not only learned and brought back to China the advanced and up-dated knowledge and skills, but also

zhongdian, tuidong gaoxiao zhaosheng quanmian binggui], *China Higher Education* (Beijing), No. 4, 1996, pp. 11-13.

³⁸ Lewin, K and Xu, Hui (1989), "Rethinking Revolution, Reflections on China's 1985 Educational Reforms", *Comparative Education*, Vol. 25, No.1, pp.7-17, (p.14).

³⁹ Hayhoe, Ruth (1989), *China's Universities and the Open Door*, Armonk, N.Y.: M.E.sharpe, p.127.

learned western manners and customs that helped transmitting western culture and values to the Chinese society.

The university autonomy brought another new element into China's higher education - university enterprises. Before the Cultural Revolution, many higher institutions ran farms, but it was for the purpose of fostering students' skills and experience of production and labour. In the 1980s, many universities set up factories and business for profit. Although it may be claimed to serve the similar purpose of training students' work skills and labouring abilities as well as enabling students to practise what they learned in their classroom, the most important reason of running such enterprises was to solve the funding problem. As China was in great shortage of funding in all areas of industries, every institution had to find ways to raise money. Universities and colleges were in an advantageous position in this aspect, and they set up their specialized enterprises, and their students and academics were able to practise what they had learnt from the classrooms and test their academic research results. Many intellectual properties and patents were produced in this way. From the mid 1990s university enterprises were developed so fast that some of them actually did not have anything to do with their teaching and research work of the university. Some of the university enterprises had even become an integral part of the national economy. As an American professor observed, "some school-owned enterprises in China, like the big company in Beijing University, are purely commercial ventures and do not involve students at all."⁴⁰

With the freedom given to higher education, China's universities and colleges were developing rapidly in both scope and numbers. In 1977, there were 404 universities and colleges with 272,971 new entrants and 625,319 undergraduate student enrolments. In 1988, the figures increased to 1,075, 669,700 and 2,065,900 respectively.⁴¹ From 1978 to 1988, 324,600 students graduated from regular universities and colleges, more than the total number during the first 3 decades after 1949. Postgraduate programs were restored in 1978 after 12 years of interruption

⁴⁰ Stern, David (1997), "Enterprise and Education: A View from China", <http://vocserve.berkeley.edu/CW82/ExecutiveSummary.html>, accessed 07/05/2002

⁴¹ Henze, Jürgen (1992), "The Formal Education System and Modernization: An Analysis of Developments Since 1978", in Ruth Hayhoe (ed.), *Education & Modernization: The Chinese Experience*, New York: Pergamon, pp.103-139 (p.127).

during and after the Cultural Revolution. By 1988, 110,148 Masters students and 2,956 PhD students had graduated from China's institutions of higher learning and research organisations. Another 113,000 postgraduate students were enrolled in the programs in 1988.⁴²

In the 1990s, China's higher education grew even faster. The Fourteenth Congress of the CCP Central Committee was held in Beijing in late 1992. The report of the congress confirmed to officially establish a socialist market economy in China.⁴³ Higher education was required to further develop its system to adapt to the market economy system. In addition, the fast development of information technology and globalisation of economy in the world forced China to keep up its education level with the advanced world. One of the strategies was to expand higher education and increase student numbers. From Table 3.2, one can easily note the sharp increase of tertiary enrolment numbers in the 1990s, especially in the latter half of the decade. In 1985 there were 1,703,000 university undergraduate students, but this number increased to 5,560,900 in 2000. According to statistics of the Ministry of Education (MOE), of every 10,000 people in China, there were 326 students studying at higher educational institutions in 1990, and the ratio increased to 376 in 1993, 470 in 1996, 504 in 1998, and 723 in 2000.⁴⁴

Table 3.2
Regular Higher Educational Institutions and Students (1965-2000)

Year	Institutions	Undergraduate students	Postgraduate students*
1965	434	674,436	4,546**
1977	404	625,319	--
1985	1,016	1,703,115	87,331
1988	1,075	2,066,000	113,000
1990	1,075	2,062,700	93,100
1993	1,065	2,535,500	106,800
1998	1,022	3,408,700	198,885
1999	1,071	4,134,200	233,500
2000	1,041	5,560,900	301,200

Note: The undergraduate enrolments include short-cycle diploma courses. Details are in Table 3.3

* Not all higher education institutions had postgraduate programs. Postgraduate programs were offered by some universities and research institutes. For example, in 2000 there were 415 higher education institutions and 323 research organisations that offered postgraduate programs.

⁴² *People's Daily*, 3 January 1990, p.1.

⁴³ *People's Daily*, 21 October 1992, p.2.

⁴⁴ Ministry of Education, "Major Index and Analysis of the Statistics of the National Education in Year 2000" [2000 nian quanguo jiaoyu shiye tongji zhuyao zhibiao ji jianxi], <http://www.edu.cn/20010910/3000909.shtml>, accessed 22/12/2002.

**This figure is from *Chinese Education Yearbook 1949-1981*, p.963.

SOURCES: *China Statistical Yearbook 1988*, p.873, 880 & 879 for 1965-1985 figures; *People's Daily*, 3 January 1990, p.1 for 1988 figures; the rest from Ministry of Education, *China Education Development Statistics Report*, [Quanguo jiaoyu fazhan tongji gongbao], <http://www.edu.cn/20010823/207279.shtml>; <http://www.edu.cn/20010823/207276.shtml>; <http://www.edu.cn/20010823/207271.shtml>; <http://www.edu.cn/20010823/207270.shtml>; <http://www.edu.cn/20011128/3012090.shtml>, accessed 18/12/2002.

3.5 Diversifying Higher Education

Until the late 1970s, China concentrated its efforts in the rigid 4- or 5-year undergraduate programs in higher education [*da xue ben ke*]. There were also a small number of 2- or 3-year short-cycle programs offered in some full-term program universities and colleges or junior colleges [*da xue zhuan ke*]. However, the percentage was very small, ranging from the lowest of 3.2% in 1967 to the highest of 28.6% in 1953 in the total higher education institutions.⁴⁵ The average rate of the years from 1949 to 1967 was 14.7%. From the end of 1970s, economic reform became the focus of the Chinese government, and educational reform and development was regarded as one of the strategies for this great project. Many researchers, scholars as well as the World Bank held an opinion that China need to train more medium level professionals and technical personnel to balance up the skilled workforce. One easy, faster and more economical way to do so was to develop short-cycle programs at regular colleges, universities, and specialized junior colleges.⁴⁶ This proposal in fact received a high level of welcome by the society. As China had virtually closed higher education for 10 years during the Cultural Revolution, thousands of young people had missed out their chances of receiving higher education. When the national tertiary entrance examination resumed in 1977, the successful rate for candidates to get into universities or colleges was very low. There were only 272,971 entrants into higher educational institutions in 1977,⁴⁷ but the number of graduates from senior high schools in that year alone was as many as 5,858,000,⁴⁸ a mere successful rate of 4.7%. In fact, for the first few years after the re-establishment of the examination system for tertiary education entrance, many older-aged candidates also sat for the examinations. However, the government gave

⁴⁵ See *China Education Yearbook 1949-1981*, p.967.

⁴⁶ See Du, Ruiqing (1992), *Chinese Higher Education, A Decade of Reform and Development (1978-1988)*, New York: St Mary's Press, p.32.

⁴⁷ Henze, J. (1992), op.cit., p.127.

priorities to young people under 25 years of age in the selection.⁴⁹ The chance of success for these candidates, however, was even slimmer. Most of them had entered the workforce, and even with a family to support. They had difficulty to compete with younger students in getting into the full-course programs in regular universities and colleges. There were also people over the age limit, who wanted to realise their dream of receiving higher education, which they had missed out during the Cultural Revolution decade. Regular universities and colleges could not give them the chance.

However, most short-cycle programs had flexible requirements on students. Not only age limit was not strictly imposed for some courses, but also short-cycle program students were exempted from living on campus, a requirement imposed on regular university and college students throughout their 4- or 5-year studies at the university. This was more suitable for older-aged students. In addition, the courses were shorter, so they could complete their course and obtain the tertiary qualification (usually a tertiary diploma) at a shorter period of time. This practice not only helped to solve the immediate shortage of professional and technical personnel for economic development, but also helped more people, both new graduates from senior high schools and older-aged people to realise their dream of receiving tertiary education. The popularity of this program spurred its rapid development. In 1981, 218,827 students were enrolled in short-cycle courses. These students accounted for 17.1% of the total number of undergraduate students in regular universities and colleges, including short-cycle colleges.⁵⁰ By 1994, enrolment in short-cycle courses increased to 1,281,768, 45.8% of the total enrolment in regular tertiary education institutions.⁵¹ The short-cycle courses were developing strongly during the 1990s. (See Table 3.3.) However, China's limited education budget and resources were not able to meet immediately the fast growing demand for higher education. Other options had to be explored. Non-traditional forms of adult higher education need to be cultivated. The Chinese government started to look around the world for models of open learning, correspondence learning and others. In the 1980s, several adult institutions of higher learning were established. They were TV university, worker college, farmer college,

⁴⁸ *China Education Yearbook 1949-1981*, p.1001.

⁴⁹ See requirements of candidates in *China Reconstructs*, Vol.27, No.4, April 1978, p.11.

⁵⁰ *China Education Yearbook 1949-1981*, p.967.

⁵¹ *Educational Statistics Yearbook of China, 1994* [Zhongguo jiaoyu shiye tongji nianjian, 1994], Beijing: People's Education Press, p.21.

management personnel college, educational college providing further training to teachers and educational administrators, independent correspondence college, and correspondence and night courses run by formal universities and colleges. These non-traditional forms of higher learning institutions were claimed by the World Bank to cost seven or ten times less per student than traditional colleges and universities.⁵²

Table 3.3
Enrolments in Short-Cycle and Regular Institutions of Higher Education
(Unit: 1,000 persons)

	Total Institutions of Higher Learning		Short-cycle Specialized College (2-3 years) *		Regular University & college (4-5 years)		Ratio of Total Enrolments (%)	
	Institution	Enrolment	Institution	Enrolment	Institution	Enrolment	Short-cycle	Regular
1981	704	1,279.5	--	218.8	--	1,060.6	17.10	82.90
1987	1,063	1,958.7	468	284	595	1,674.7	14.50	85.50
1994	1,080	2,798.6	453	1,281.8	627	1,516.9	45.80	54.20
1996	1,032	3,021.1	424	1,226.5	608	1,794.6	40.60	59.40
1998	1,022	3,408.7	432	1,174.1	590	2,234.6	34.44	65.56
2000	1,041	5,560.9	442	1,418.5	599	4,142.4	25.51	74.49

*Apart from short-cycle specialized colleges that exclusively offer short-cycle course, regular universities and colleges also offer short-cycle courses on campus or in their branch colleges. For example, in 2000, 1,008,700 students were enrolled in short-cycle specialized colleges, and the other 409,800 students were enrolled in short-cycle courses offered by branch colleges of regular universities and colleges.

SOURCES: 1981 figures are from *China Education Yearbook 1949-1981*, p.965 & 967; 1987 figures are cited by Du Ruiqing (1992), p.33; 1994 figures are from *Educational Statistics Yearbook of China, 1994*, p.16 & 21; others are from Ministry of Education, 1996 & 1998 "China Education Development Statistical Report" [Quanguo jiaoyu shiye fazhan tongji gongbao], <http://www.edu.cn/20010823/207271.shtml>; <http://www.edu.cn/20010823/207273.shtml>, accessed 19/10/2004, and "Year 2000 Brief Statistical Report on China Education Development" [2000 nian quanguo jiaoyu shiye fazhan tongji jiankuang], <http://www.edu.cn/20011219/3014655.shtml> accessed 23/12/2002.

Among the non-traditional forms of higher adult learning, the Radio and TV University was the largest institution. It was set up in 1960, closed down during the Cultural Revolution, and re-opened in 1979. It consisted of a network of Central Radio and TV University in Beijing, which was under the jurisdiction of the National Education Commission (MOE), and other 39 TV colleges at provincial level with 497 branches, 1550 working stations and about 2700 classes. During 1979-1988 period, the whole TV University system provided instruction to 1.61 million diploma course students. From 1982-1988 an aggregate of 1,044,839 diploma course students successfully completed their studies and were awarded diplomas. This figure accounted for 42.9% of the total output (2,436,634) of all types of adult higher learning institutions during the same period, 95.2% of the total output of short-cycle

⁵² Du, Ruiqing (1992), op.cit, p.35.

courses in regular higher education institutions, and 29.7% of the entire output of short-cycle higher education in both regular and adult higher learning institutions.⁵³

The second largest adult higher learning system was the worker colleges. They appeared in the early years of the CCP rule, especially during the Great Leap Forward period (1958-1960), when there was a hectic growth of all types of education. In 1958 there were 150 worker colleges, and the number grew to 410 in 1961.⁵⁴ During the Cultural Revolution, all educational sectors, formal or non-formal, were interrupted and stagnated. Nevertheless, Mao Zedong promoted a new type of worker university, which was called “July 21 University”. On 21 July 1968, Chairman Mao Zedong wrote a praising comment on the model of engineering course run by Shanghai Machine Tool Plant. The trainees of this course were all recruited from skilled workers of the plant. It was the same time as Mao decided to reaffirm the role of tertiary education in science and engineering.⁵⁵ The “July 21 University” was multiplied fast in China. In 1972, there were 68 institutions with a total number of 4,000 students, while by 1976, there were 33,374 institutions with a total enrolment of 1,485,000.⁵⁶

Because school curriculums were full of political content rather than academic studies during the “Cultural Revolution” decade, July 21 University could not have provided genuine academic tertiary education to workers. When the Cultural Revolution came to an end, the July 21 Universities began to be closed down or transformed into worker colleges. In 1979, new regulations were imposed on the worker colleges that only those who had completed upper secondary education or equivalent would be admitted, and that preference was given to outstanding experienced workers. Full-time courses usually lasted 2 or 3 years and the curriculums

⁵³ Huang, Shiqi (1992), “Nonformal Education and Modernization”, in Ruth Hayhoe (ed.), *Education and Modernization: The Chinese Experience*, New York: Pergamon, pp.141-180 (pp.161-162).

⁵⁴ Ibid., p.154.

⁵⁵ Cleverley, John (1985), *The Schooling of China*, Sydney: George Allen & Unwin, p.181.

On 22 July 1968, People’s Daily published Mao Zedong’s instruction on the revolution in education: “*It is still necessary to have universities; here I refer mainly to colleges of science and engineering. However, it is essential to shorten the length of schooling, revolutionize education, put proletarian politics in command, and take the road of the Shanghai Machine Tool Plant in training technicians from among the workers. Students should be selected from among workers and peasants with practical experience, and they should return to production after a few years’ study.*” From *China Reconstructs*, Vol.17, No.11, November 1968, p.14 & 9.

⁵⁶ Huang Shiqi (1992), op.cit., pp.154-155.

basically followed the short-cycle courses offered at regular universities and colleges. In 1983, the national government recognized the credentials awarded by registered worker colleges to be equivalent to diplomas or certificates issued by regular higher education institutions to short-cycle course graduates. From the mid 1980s, workers colleges became a part of the adult higher education system, 50% of the colleges were under the jurisdiction of the central and provincial governments (ministries or industrial departments), 40% by individual large enterprises, and 10% by regional education departments or trade unions.⁵⁷ Student sources not only came from skilled workers in factories or enterprises, but also from clerical workers, managerial and technical personnel as well as graduates from general high schools.⁵⁸

Table 3.4
Adult Institutions of Higher Learning (1987-2000)

	1987	2000
TV university	39	45
--Students	566,000	347,000
--Teachers	9,100	28,300
Worker/staff college	915	466
--Students	338,000	332,400
--Teachers	36,300	38,100
Farmer college	5	3
--Students	1,104	800
--Teachers	200	100
Management personnel college	168	117
--Students	55,000	167,000
--Teachers	13,622	12,000
Educational college	268	138
--Students	251,200	257,800
--Teachers	24,900	14,400
Independent correspondence college	4	3
--Students	33,300	12,700
--Teachers	200	500
Correspondence & night courses by uni & college	600	--
--Students	612,000	2,418,700
--Teachers	--	--
Total institutions	1,399	772
Total students	1,860,000	3,536,400
Total teachers	84,300	93,400

SOURCES: Du Ruiqing (1992), p.36 for 1987 figures; 2000 figure from Department of Development Planning of Ministry of Education, "Year 2000 Brief Statistical Report on China Education Development", <http://www.edu.cn/20011219/3014655.shtml>, accessed 18/12/2002.

⁵⁷ Huang Shiqi (1992), op.cit., p.157.

⁵⁸ Tang, Xiaoping (1988), "On the Planning Management of Adult Education" [Tan chengren jiaoyu de jihua guanli], in Shouxin Li (ed.), *Studies on the Issues of China Education Development* [Zhongguo jiaoyu fazhan wenti yanjiu], Beijing: China Planning Press, pp.99-106.

The adult higher education institutions played an important role in training skilled manpower for the country. Most of the courses offered in these non-formal higher learning institutions were vocational and technical based. In 1987 there were 385,400 faculties in the 1,063 regular full-term universities and colleges across the country, and there were only 84,000 faculties in the 1,399 non-formal institutions of higher learning. Non-formal institutions had a total enrolment of 1,860,000 students,⁵⁹ while regular universities and colleges had 1,959,000 students.⁶⁰ Yet the majority of graduates from non-formal institutions received positive comments by employers. Both Du (1992) and Huang (1992) have discussed this aspect in their book or paper. The non-formal higher education model has gained its ground in China up to today. In 2000, China had 772 higher education institutions for adults, with a total enrolment of 3,536,400, compared to 1,041 regular institutions of higher learning with 5,560,900 undergraduate students.⁶¹ Although the ratio in 2000 was lower than in 1987, one has to bear in mind that regular tertiary entrance rate increased to 73.2% (of graduating senior high school students of the same year) in 2000, while in 1990 it was only 27.3%.⁶²

Table 3.5
Growth Rate of Adult Higher Learning and Regular Higher Education Institutions

	1987	2000	Change Rate (1987=100%)
Adult Higher Learning Institutions	1,399	772	55.18%
--Entrants	--	1,561,500	--
--Enrolments	1,860,000	3,536,400	190.13%
--Full-time Teachers	84,300	93,400	110.79%
Regular Institutions of higher learning	1,063	1,041	97.93%
--Entrants	617,000	2,206,100	357.55%
--Enrolments	1,959,000	5,560,900	283.86%
--Full-time Teachers	385,000	462,800	120.21%

SOURCES: Du Ruiqing (1992), p. 36 for figures of adult institutions in 1987; *China Statistical Yearbook 1989*, p.793, 798, 796 & 795 for figures of regular institutions in 1987; 2000 figure from Department of Development Planning of Ministry of Education, "Year 2000 Brief Statistical Report on China Education Development" [2000 nian zhongguo jiaoyu shiye fazhan tongji jian kuang], <http://www.edu.cn/20011219/3014655.shtml>, accessed 18/12/2002.

⁵⁹ Du Ruiqing (1992), op.cit., p.38.

⁶⁰ *China Statistical Yearbook 1989*, p.796.

⁶¹ Department of Development Planning of the Ministry of Education of PRC, "Year 2000 China Education Development Statistical Brief Report" [2000 nian zhongguo jiaoyu shiye fazhan tongji jian kuang], <http://www.edu.cn/20011219/3014655.shtml>, accessed 18/12/2002.

⁶² Department of Development Planning of the Ministry of Education of PRC, "Year 2000 China Education Development Statistical Brief Report" [2000 nian zhongguo jiaoyu shiye fazhan tongji jian kuang], <http://www.edu.cn/20011219/3014655.shtml>, accessed 18/12/2002.

In addition to the 7 types of adult higher learning institutions, there was another avenue for adults to obtain higher qualifications. That is state-administered examinations for self-taught students [*zi xue gao kao*]. The State Council set up National Examination Steering Committee for Self-Taught Students of College Courses in 1983 to provide overall guidance. Its specific office was set up in the Ministry of Education (MOE). Each province also had a provincial level office to administer the examinations. There were 13 subcommittees on various academic fields and one subcommittee on research of examinations. The 14 subcommittees consist of 230 prominent scholars and educators from universities and research organizations. These subcommittees provided guidelines in the given fields and recommended textbooks and references. The examinations held at regular intervals were open to all in the society, both young and old. Candidates who had successfully passed all the required examinations were awarded with a tertiary diploma, which was recognized as equivalent to that offered by regular university or college. This system was developed quickly as a highly institutionalised system, with a good reputation of strict standards and a well-conceived combination of independent study, community assistance and state-administered examination.⁶³ In fact, the examinations were usually very difficult, and they required diligence and persistence for years before the candidates were able to succeed in passing the examinations and getting the diploma. For those on-the-job candidates, they usually took one examination at a time, and took a few years to complete the whole set of examinations for a diploma. By the end of 1989, the average total of single-course certificate recipients had reached 4.7 million (with some double counting), 409,764 diplomas had been awarded to examinees meeting the requirements for short-cycle courses, 2,570 diplomas had been awarded to those meeting the requirements for regular four-year courses and 507 bachelor's degrees had been conferred on examinees.⁶⁴ Examinations for self-taught students were developed into a very strong program during the 1990s. Here are figures of some years only. In 1996, 15,700 candidates were awarded diploma of four-year courses and 240,600 candidates were awarded diploma for short-cycle courses.⁶⁵ In 1998, 35,300 candidates received four-year course diploma and 283,200 candidates received

⁶³ See Huang Shiqi (1992), *op.cit.*, pp.163-165.

⁶⁴ *Ibid.*, p.164.

⁶⁵ See Ministry of Education (1996), "China Education Development Statistical Report" <http://www.edu.cn/20010823/207273.shtml> accessed 15/10/2004.

short-cycle course diploma.⁶⁶ In 2000, 488,900 candidates received diplomas or degrees.⁶⁷

3.6 Reforming Curriculums and Pedagogical Practice

It was addressed at the 1985 national educational conference that China's traditional theory of education and teaching methods were "totally incompatible with modern science and technology development". At the conference, Vice-Premier Wan Li pointed out:

*China's traditional educational thinking and ossified teaching methods have a long history and are deep-rooted...The pattern of thought formed under the guidance of this kind of traditional education theory is totally incompatible with modern science and technology development. Scholastic forced feeding throttles wisdom and prevents the emergence of talented people who can make great progress in science and technology. We need large numbers of these talented people. ...Now we have too few talented people. This has much to do with traditional educational thinking and teaching methods.*⁶⁸

Traditionally, education had been for entering higher educational institutions. Teaching contents had been designed for that purpose, and teaching methods were handed down by generations. This type of teaching and learning proved to be inconsistent with the requirements of social and economic development, and the modernization programs. In the country areas, children of farmers/peasants need to learn knowledge and skills that could help them to improve their agricultural productions. However, rural school curriculums were not designed to suit the local characteristics and needs, but followed national school programs which were designed for academic excellence and promotion to upper level of education. Since basic education in rural areas had never attracted enough attention and investment from the government, educational level had always been lower than cities, and rural children did not have much chance of entering higher education institutions. Therefore, parents would rather keep their children home doing production labour than sending

⁶⁶ Ministry of Education (1998), "China Education Development Statistical Report"
<http://www.edu.cn/20010823/207271.shtml>, accessed 19/10/2004.

⁶⁷ Ministry of Education (2000), "Year 2000 Statistical Report on National Education Development",
<http://www.edu.cn/20011128/3012090.shtml>, accessed 15/10/2004.

them to school. It was reported that some township, village or private enterprises violated the law and employed under-age workers, and the youngest worker was as young as 10 years old.⁶⁹ Female children were in worst situation of starting and completing primary schooling. In some economically backward country areas, such as Gansu Province, there were up to 80% of female school-age children not attending school in 1986. This problem obviously impeded the government's project of popularizing 9-year compulsory education, and the vicious cycle made it difficult to improve labour skills and farming technology in the countryside. It was estimated that 70% of new agricultural technology available in the 1980s was not able to be popularized due to the low educational level of farmers, and lack of agricultural specialists and experts.⁷⁰

In the cities, there were also problems in teaching and curriculum development. The percentage of intake in higher educational institutions was only around 30 percent (1985 figure), but those students who missed out their chance of getting into higher education found them not having enough skills for immediate employment. In regard to this situation, the government in addition to proposing streaming upper level secondary education into 50% general and 50% VTE tracks, requested that vocational-based courses be offered in general high schools.

Despite all this effort, problems still remained. Although one can argue that looking down manual and skilled work has been deeply rooted in Chinese people's mind and this mentality could not be overcome overnight, one of the major reasons for the difficulty of promoting VTE was the education system. The Chinese government adopted a "key schools" [*zhong dian xue xiao*] system. The key school system existed in all sectors of education, from university level to high school level. There were key primary schools in the 1980s but later removed by the government. The government designated a group of schools as key schools under the immediate control of the national, provincial or city government. The key schools enjoyed the privilege of getting the best resources and facilities from the government. Students were recruited on the basis of academic merits (top achievers in unified national

⁶⁸ *Beijing Review*, Vol. 28, No. 24, 17 June 1985, p.20.

⁶⁹ Zhang, Ning (1992), *op.cit.*, p.155.

examinations). The rationale behind it was that China had limited education funding, this model was able to concentrate limited resources to produce high quality students. The key schools were also designated to serve as role models for other schools to follow.⁷¹ The schools were regarded as prestigious selected schools only enrolling 4% of the secondary population.⁷² Students graduated from key general senior high schools had over 95% chance of getting into higher education institutions. Being admitted into key senior high schools would mean a guarantee of a place in tertiary education (most likely into key universities), a good job after graduation and high social status in future. Students would feel proud and their families would feel honoured. They were admired by society as well. Because of all these privileges, competition for admission was very high. The method of choosing students into these key schools was the scrutinising academic examinations, just like the unified national tertiary entrance examinations. To prepare for these examinations, students and teachers would have to focus on long hours of academic studies.

The Chinese government realised the serious problem of this examination-oriented model of education in schools. In 1993, the “Outlines of Chinese Educational Reform and Development” clearly re-addressed the importance of curriculum development and reform. It stressed the importance of developing students’ problem-solving ability, enlarging students’ knowledge and skills, reducing students’ overburdened homework, promoting local admission of primary schools⁷³, and focusing on all-round education. From then on, quality education [*su zhi jiao yu*] was very often mentioned in government documents and media. Nevertheless, this problem did not seem to be tackled effectively, despite of the rhetoric and arguments of many scholars, educationists, as well as government. The serious problems still remained by the turn of the 21st Century.

In fact, teaching methodology and curriculum problems were found to be common in all educational sectors. As the traditional force-feeding method was

⁷⁰ Wang, Mingda (1987), “Education in Rural schools Must be Reformed” [Nongcun xuexiao jiaoyu bixu gaige], *Renmin Jiaoyu*, No.12, pp.3-4.

⁷¹ Lewin, K. & Xu, Hui (1989), op.cit, (p.11).

⁷² Ibid.

⁷³ Although the government abolished selected key primary school system, competition between schools in academic achievements of pupils were still high, because they wanted to remain their

dominant in the Chinese classrooms, and rote learning was the skill for passing examinations, students' real life working skills were limited. Chinese Education News [*Zhongguo Jiaoyu Bao*] reported that in 1987 and 1988, about 5,000 graduates who had been assigned jobs were returned to universities and colleges by employers.⁷⁴ This forced universities and colleges to reform their curriculums and teaching contents to meet the needs of the developing economy and society. In the 1990s when labour market had adopted a complete market system, this problem seemed to be more serious. Students need to have solid basic knowledge and skills to meet the requirements of employers. Universities and colleges faced with arduous tasks of producing useful and capable manpower for the society.

reputations of high achieving schools and parents wanted schools to be focused. Parents would send their children to schools that had good academic reputations or used to be key schools.

⁷⁴ *Chinese Education News* [*Zhongguo jiaoyu bao*], 18 March 1989.

CHAPTER FOUR

REVITALISING VTE AFTER 1980

4.1 Needs and Significance

China's educational system during the Cultural Revolution decade was in a state of mess and disorientation. Almost all the VTE schools had been closed or changed into factories or other facilities. By 1976, 94.2% of all high school students were enrolled in general schools, and only 5.8% were in vocational and technical schools.¹ In 1977, 63.7% (or 9,931,000) of 15,586,000 graduates from junior high schools were admitted into general senior high schools². In the same year, out of 5,858,000 general senior high schools graduates,³ only 278,000 succeeded to get into tertiary education institutions⁴, and another 366,312 were accepted into secondary specialized schools (including teacher training schools)⁵. There was another small number of admissions into skilled worker schools.⁶ This means that a large proportion of young people had to be integrated into the labour force without substantial vocational training. This situation came to the attention of the national government. At the National Educational Work Conference in April 1978, the importance of developing a contingent of skilled workers for the economic development of the country was addressed. Deng Xiaoping gave instruction that "(i)n order to train qualified personnel for the needs of socialist construction, we must study carefully how to implement the policy of combining education with productive labour more satisfactorily."⁷ He called on the national government to work on a plan to develop schools in various forms. In

¹Liu, Junfang (1992), "Progress in Vocational Education", *Beijing Review*, Vol.35, No.12, March 23-29, pp.31-35 (p.31).

² *China Education Yearbook 1949-1981*, p. 1001.

³ Ibid.

⁴ Henze, Jürgen (1992), "The Formal Education System and Modernization: An Analysis of Developments Since 1978", in Ruth Hayhoe (ed.), *Education & Modernization: The Chinese Experience*, New York: Pergamon, pp.103-139 (p.127).

⁵ *China Education Yearbook 1949-1981*, p. 983. This may include graduates from junior secondary high schools.

⁶ There were 120,000 entrants into skilled worker schools in 1976, see Li, Lintian & Wang, Ping (eds.) (1994), *A Brief History of Vocational & Technical Education in China* [Zhongguo zhiye jishu jiaoyu jianshi], Beijing: Beijing Normal University Press, p.148.

April 1980, the Ministry of Education (MOE) held a conference on the national secondary specialized education work [*quan guo zhong deng zhuan ye jiao yu gong zuo hui yi*]. The conference reviewed the 30 years work before the Cultural Revolution, confirmed the functions and responsibilities of VTE in China, and resolved to establish 239 national key schools of secondary specialized education. On 7th October 1980 the State Council approved a report on restructuring secondary education submitted by the Ministry of Education. The document stated:

*The foundation of secondary VTE in China is very weak. Before the Cultural Revolution, Comrade Liu Shaoqi promoted the “two education systems and two labour systems”, which were suitable for our country’s situation. They played an important role in promoting the education reform at that time. However, due to the sabotage of the “Gang of Four” not only the education and labour systems did not get reformed, but also a large number of secondary specialized schools and technical schools were forced to close, and agricultural schools and vocational schools were completely destroyed. This resulted in a mono system of secondary education, which was seriously disconnected with the national economic development... Every year there are several million of people who need to enter labour force but have no specialized knowledge and training. At the same time, all industries and trades are in great need of skilled forces, but they have to provide 2 to 3 years of apprentice training to the new workers recruited. This negatively affects the increase of production. This situation is not beneficial to the four modernizations construction and social order and unity. Secondary education structure must be reformed.*⁸

The document highlighted five areas of reforms. They are:

- ◆ Reform curriculums in general high schools. General high schools must gradually incorporate vocational (technical) subjects into their curriculums. Students should be allowed to select subjects.
- ◆ Convert a number of general high schools into vocational (technical) schools,

⁷ Deng Xiaoping (1978, 22 April), “Speech at the National Conference of Educational Work”, *Comrade Deng Xiaoping on Education*, Beijing: People’s Education Press, 1990, pp.58-66 (p.62-63).

⁸ Ministry of Education & National Bureau of Labour (1980, 27 September) “Reports on Structural Reform in Secondary Education” [Guanyu Zhongdeng Jiaoyu Jiegou Gaige de Baogao], reprinted in Department of VTE of National Education Commission (ed.) (1989), *Selected Documents on Vocational and Technical Education 1978-1988* [Zhiye Jishu Jiaoyu Wenjian Xuanbian 1978-1988], Beijing: San Lian Bookshop, 1989, pp.37-42 (p.37).

vocational secondary schools and agricultural secondary schools.⁹

- ◆ All trades and business should run vocational (technical) schools. All measures must be explored to run vocational (technical) education in response to the needs of production development and services industries. Apart from government institutions and enterprises, collective organisations and individuals are also encouraged to run vocational schools.
- ◆ Skilled worker schools must be fully developed and well operated. Skilled worker schools aimed to train middle level skilled workers. Concentrate on the development of the existing skilled worker schools and gradually expand the sector with good planning. The current administration system in such schools will remain unchanged.
- ◆ Develop secondary specialized schools. Secondary specialized schools are training intermediate level skill and managerial personnel. The current administration system in such schools will remain unchanged.¹⁰

The document accentuated that all measures must be taken to develop VTE at secondary education level. However, graduates from vocational (technical) schools, vocational secondary schools and agricultural schools were not guaranteed of jobs upon graduation. Instead, they could be recommended by labour department (or labour service companies) and tested by employing units, based on the principle of meeting specialized training of the individuals, and employing on merit. Individuals could also freely choose jobs. At this time, secondary specialized school and skilled worker school graduates were still assigned jobs by the government. The document also set regulations on funding, staffing and application procedures for new vocational (technical) schools. This document basically concentrated on developing vocational schools. It specified that secondary specialized schools and skilled worker schools should continue to follow the existing regulations that had already been in practice.

4.2 Resurrection and Expansion of VTE Schools

After the document on secondary educational structural reform was issued in October

⁹ Vocational (technical) schools are also called vocational senior high schools. Agricultural secondary schools and vocational secondary schools are usually junior secondary level, which recruit graduating students from primary schools.

1980, VTE schools of all types began to embark on rectifying, reforming and developing. Old schools were restored, existing schools were readjusted and new schools were established. In 1980, 3,314 vocational high schools and agricultural schools were set up. Within 4 years, the number was more than doubled. Secondary specialized schools and skilled worker schools were growing steadily. (See Table 4.1)

Table 4.1
Secondary VTE Schools 1977-1984 (unit: 1,000 persons)

	1977	1978	1979	1980	1981	1982	1983	1984
Sec specialized schools	1,457	1,714	1,980	2,052	2,170	2,168	2,229	2,293
--Enrolments	391.3	529.3	714.2	761.3	632	628	688.4	811.2
--Entrants	208.8	268.0	265.4	252.9	238.1	419.5*	477.8*	546.1*
--Full-time teachers	57.9	69.3	78.9	91	98.4	110.2	115.8	118.4
Teacher Training schls	1,028	1,046	1,053	1,017	962	908	861	1,008
--Enrolments	297.9	359.9	484.5	482.1	436.9	411.3	454.8	511.3
--Entrants	157.5	179.1	226.2	214.7	195.1	--	--	--
--Full-time teachers	28.9	30.3	34.0	37.7	37.5	39.2	40.6	42.5
Voc (& Agric) schools	n.a.	n.a.	n.a.	3,314	2,655	3,104	5,481	7,002
--Enrolments	n.a.	n.a.	n.a.	453.7	480.9	703.6	1,220.1	1,744.8
--Entrants	n.a.	n.a.	n.a.	307.2	266.6	426.0	756.8	939.0
--Full-time teachers	n.a.	n.a.	n.a.	23	29	40	73	104
Skilled worker schools	1,333	2,013	2,933	3,305	3,669	3,367	3,443	3,465
--Enrolments	243.0	381.9	639.9	700.3	679.2	511.9	525.2	627.6
--Entrants	131.6	257.0	346.6	331.3	284.2	--	--	--
--Full-time teachers	19.6	27.9	45.3	61.3	79.7	74.0	81.2	78.4

* These are combined figures of both secondary specialized schools and teacher training schools.

SOURCES: *China Education Yearbook 1949-1981*, pp.981-983, 985 for secondary specialized schools and teacher training schools from 1977-1981, and p.190 for entrants in skilled workers schools; Li, Shouxin (ed.) (1988), *Studies of China Education Development Issues*, p.342 & 347 for vocational and agricultural schools from 1980-1984, and p.342 for entrants in secondary specialized schools and teacher training schools from 1982-1984; Li, Lintian and Wang, Ping (1994) (eds.) *A Brief History of Vocational & Technical Education in China*, p.173 for the rest of the data. Blank means not existing, and "--" means not available.

The table shows that secondary VTE schools were expanding fast from 1977. In fact, however, VTE did not receive enough attention compared to other sectors of education. Considerable efforts and energies went into academic syllabuses and textbooks in general high schools, into staffing and resourcing key or priority general high schools [*zhong dian zhong xue*], and into developing higher education system. This was because the Chinese government was eager to catch up with the advanced countries in terms of science and technology, and that it was generally considered that higher education should carry out that task. In addition, it was Chinese traditional thinking that higher level of education would give individuals opportunities for bright career future. Although government regulations allowed VTE school graduates to sit

¹⁰ Ministry of Education & National Bureau of Labour (1980, 27 September), op.cit., (pp.38-39).

in the national tertiary education entrance examinations, it was, in reality, very hard for them to compete with general high school graduates in gaining positions in universities and colleges, because examinations were based on general education subjects and very academic. VTE school students did not learn as much in the academic subjects as those general high school students because they had to study specialized subjects and receive training in specific vocational and technical areas. From 1977 to 1981, success rate of entrance into universities and colleges each year was between 4.03% and 6.86%, with an average of 5.22%.¹¹ From 1982, enrolment numbers began to improve. By 1984, successful entrance rate raised to 25%, and it remained on the similar level till the early 1990s.¹² In such highly competitive situation, VTE school graduates had very slim chance of getting into tertiary education.

Another reason was that vocational education did not attract enough attention from the authorities, who focused their attention on achieving immediate economic results by promoting economic development. Investment on education did not bring immediate result, so authorities tend to ignore that part when it came to the issue of funding. VTE suffered even more disorientation as higher education and elitist or “talent” oriented education was perceived by the Chinese authorities to be important in producing talents for China’s modernization programs in industry, agriculture, science and technology, and national defence.

As the pace of China’s economic reform began to speed up in early 1980s, the needs for more competent technicians were keenly felt. The “Decisions on Structural Reform in Education System”, an epic-marking document for the educational development in the 1980s and 1990s, issued by the CCP Central Committee in May 1985, seriously addressed this problem. One important area of the reform confirmed in this document was on VTE. The document stated:

The construction of socialist modernization programs not only need high level scientists and technology experts, but also needs millions of middle and junior elementary level skilled personnel, managerial

¹¹ See Henze, Jürgen (1984), “Developments in Vocational Education since 1976”, *Comparative Education*, Vol.20, No.1, pp.117-140 (p.116).

¹² See Table 8.2 and 8.3 in Chapter 8.

*personnel, skilled workers, who have received sound VTE, as well as other workers both urban and country areas who have received good vocational training. Without such a large contingent of skilled work force, advanced science and technology and equipment are not able to convert into the realistic social production force. However, VTE is the weakest area in the current entire educational system in China...The issues of VTE have been addressed for many years, but VTE has not opened up a new prospect. It is mainly due to the reasons that there has been a lack of proper requirements on the prospective employers in ideological, cultural and skill preparation, and the traditional prejudice against VTE has been deeply rooted. Therefore, ...we must reform employment system at the same time reforming educational system. We must adopt the principle of "Training before employment". In future, all work units must give priority to graduates from all types of vocational and technical schools in recruitment.*¹³

The document advocated to accelerate reforms and enlarge enrolment in specialized schools and skilled worker schools, to improve teaching conditions of vocational schools and to develop VTE schools through various and flexible ways. The decision affirmed that the ratio of student enrolment between general senior high schools and secondary VTE schools should reach 1:1 by 1990. Graduates from general senior high schools would partly be admitted into general universities or colleges, and partly enrolled in higher vocational and technical colleges. All students who did not enter universities or VTE institutions could receive short-course training of VTE and then enter the work force.

The document also recommended that economically developed provinces or cities should give importance and attention to VTE development, with a focus on the secondary VTE level, while at the same time developing tertiary VTE, and gradually establishing an entire VTE system consisting of elementary, secondary and tertiary VTE, which would closely respond to the needs of industries and business, and establishing pathways to general education system.¹⁴

¹³ Central Committee of the CCP (1985, 27 May), "Decisions on the Reform of Educational Structure", *People's Daily*, 29 May 1985, p.1 & 3.

¹⁴ "Wang Mingda Talks about Problems in Vocational Education Development in Developed Regions" [Wang Mingda tan jingji fada diqu zhiye jiaoyu fazhan wenti], *Vocation and Education* [Zhiye yu jiaoyu] (Beijing), No.9, (1994), pp.3-5.

The rationale for developing VTE was the “human capital” theory.¹⁵ Western industrialized countries had viewed education and training as an investment for the individuals to raise their productivity and earnings, for firms to increase their profit, and for countries to develop their economy.¹⁶ Education not only improves the individual choices, but also produces an educated population, that is necessary for industrial development and economic growth.¹⁷ Many Chinese educationists and government officials argued that China’s economic development would depend on quality productive work force who could apply advanced technology and skills, but the general education level of the Chinese population was too low to meet the demands of such.¹⁸ They supported the idea that secondary VTE should play a major role in solving the problem.¹⁹ Developed countries’ experiences, such as West Germany, Japan, USA, France and Australia were repeatedly discussed in China.²⁰ It was argued that the reason for rapid growth of these countries’ economies was their emphasis on VTE. For example, West Germany’s “Dual System”²¹ provided

¹⁵ See Thunø, M. (Winter 1991-1992), “Secondary Vocational Schools in Post-Mao China”, *China Information*, Vol. 6, No.3, pp.44-56; Meng, Guangping (ed.) (1994), *An Introduction to Chinese Vocational and Technical Education* [Zhongguo zhiye jishu jiaoyu gailun], Beijing: Beijing Normal University Press, pp.7-18; Yang, Jin (1996), *The Interaction between the Socialist Market Economy and Technical and Vocational Education and Training in the People’s Republic of China*, (PhD thesis), UK: The University of Manchester; Min, Weifang (1987), *The Impact of Vocational Education on Productivity in the Specific Institutional Context of China: A Case Study*, (PhD thesis), USA: Stanford University), published by UMI, Ann Arbor, Michigan.

¹⁶ See Becker, Gary S. (1964), *Human Capital: A Theoretical and Empirical Analysis, with Special Reference to Education*, New York: Columbia University Press, p.2; Belfield, Clive R. (2000), *Economic Principles for Education: Theory and Evidence*, Cheltenham, UK: Edward Elgar, p.33.

¹⁷ Yang, Jin (1996), op.cit., p.2.

¹⁸ See Zhang, Ning (1992), “A Conflict of Interests: Current problems in educational reform”, in Andrew Watson (ed.), *Economic Reform and Social Change in China*, London: Routledge, pp.144-170.

¹⁹ See Zhang, Fuzhen, and Wang, Yizhi (eds.) (1991), *Applied Pedagogy of Vocational and Technical Education* [Yingyong zhiye jishu jiaoyu xue], Tianjin: Nankai University Press, pp.31-33; Meng, Guangping (ed.) (1994), *An Introduction to Chinese Vocational and Technical Education* [Zhongguo zhiye jishu jiaoyu gailun], Beijing: Beijing Normal University Press, pp.6-62.

²⁰ See Liang, Zhongyi (1990), *Vocational and Technical Education in Seven Countries* [Qi guo zhiye jishu jiaoyu], Changchun: Jilin Education Press; Zhou, Qu & Si, Yinzhen (eds.) (1991), *Comparative Studies of Vocational and Technical Education in China and Overseas Countries* [Zhong wai zhiye jishu jiaoyu bijiao], Beijing: People’s Education Press; Meng, Guangping (1994), op.cit.; Zhou, Qu, et.al. (1994), *Vocational and Technical Education in Overseas Countries* [Guowai zhiye jishu jiaoyu], Beijing: Beijing Normal University Press; Wang, Zhen, et.al. (1997), *Comparative Studies of Vocational Education in China and Overseas* [Zhong wai zhiye jiaoyu bijiao], Tianjin: Tianjin Science and Technology Press.

²¹ The “Dual System” was introduced in Germany in 1969, which was to strengthen the links between education and employment. Within this system, vocational education and occupational training are provided simultaneously to participants by schools and employers respectively. See Gill, Indermit S. & Dar, Amit (2000), “Germany”, in Indermit S. Gill, et.al. (eds.), *Vocational Education and Training Reform*, Oxford University Press, pp.485-513.

vocational training to more than 70 percent of young people in the 15 -18 age range,²² and about 60 percent of the labour force obtained apprenticeships or similar vocational qualification. This system of training seemed to have provided a high quality labour force, which produced the high quality products for which Germany is famous.²³ In contrast, China's labour force only contained 3% senior level skilled workers, and 26% middle-level skilled workers.²⁴

By 1990, secondary VTE had been developed to meet the target set out in the 1985 document of the CCP. All together in the whole country, there were 2956 secondary specialized schools with 1,567,100 enrolments, 1,026 teacher training schools with 677,300 enrolments, 9,164 vocational and agricultural schools with 2,950,100 enrolments, and 4,184 skilled worker schools with 1,331,700 students at school. Besides, there were 2,140 vocational training centres with 395,000 trainees.²⁵ By 1991, the number of entrants in VTE schools had reached 50% of the total entrants at senior secondary education level.²⁶

By 1992, China's economic development had achieved remarkable progress, and the central-planning economy adopted since the early 1950s had been changed to a market economy. China's education system must change accordingly. On 13th Feb 1993, the CCP Central Committee and the State Council jointly issued "Outlines of China's Educational Reform and Development" [*Zhongguo jiaoyu gaige he fazhan gangyao*], which readdressed the importance of developing vocational education in order to raise the quality of work force for vitalising China's economy. The State Council also issued "Suggestions on Carrying out the 'Outlines'" [*Guanyu "Zhongguo jiaoyu gaige he fazhan gangyao" de shishi yijian*], which advocated to stream post-primary, post-junior secondary and post-senior secondary students according to plan [*you ji hua de fen liu*]. In the areas where nine-year compulsory education was not popularized primary vocational education should be developed.

²² Meng, Guangping (1994), op.cit., p.5; Cantor, Leonard (1991), "Vocational Education and Training in the Developed World", *The Vocational Aspect of Education*, Vol.43, No.2, pp.173-182 (p.177).

²³ Cantor, Leonard (1991), op.cit., p.178.

²⁴ China Central Research Institute of VTE (1996), "Evaluation on the fulfilment of the 'World Bank Loan for Vocational and Technical Education Projects'", *Chinese Vocational & Technical Education* (Beijing), No.1, pp.7-10.

²⁵ Li, Lintian & Wang, Ping (1994), op.cit., p.174.

²⁶ National Education Commission & Central Research Institute of VTE, *1994 Annual Report of Vocational Education*, p.8.

Secondary VTE should be developed on a full scale, gradually realising 50-70% of junior secondary graduates entering secondary VTE schools or vocational training centres.²⁷ On 15th May 1996, “Vocational Education Law of the People’s Republic of China” was passed. The law stipulates the following:

People’s governments at various levels shall incorporate the development of vocational education into their plans for national economic and social development.

*Trade organizations, enterprises and institutions shall, in accordance with law, fulfil their obligations to provide vocational education.*²⁸

Vocational education shall be provided in light of actual needs and in conformity with the standards established by the State for classifying and grading occupations. A system comprising certificates of schooling, certificates of vocational training and certificates of occupational qualifications shall be practiced.

*The State practises a system whereby workers receive the necessary vocational education prior to employment or assignment.*²⁹

*People’s governments at or above the county level shall establish vocational schools and vocational training institutions to serve as a mainstay and play an exemplary role, which shall provide guidance and assistance to the vocational schools and vocational training institutions established in accordance with law by rural communities and other public organizations, as well as individual citizens.*³⁰

The “Outlines of China’s Educational Reform and Development” in 1993 and the “Vocational Education Law” in 1996 were the two major documents for the VTE’s further development after 1985 CCP’s decision on educational structure reform. The central government identified the three types of school-based secondary VTE schools (specialized, vocational, and skilled worker) to be the focus of development. In June 1996, the government set a further target to achieve an average of 60% of the total enrolment figure of senior secondary education in VTE across the country by 2000, and those cities which have realized universalisation of senior

²⁷ The State Council of the PRC (1994,3 July) “Suggestions on the Implementation of “Outlines of Chinese Educational Reform and Development”, in *Policies and Regulations on Vocational Education 1992-1996*, pp.103-122 (p.105).

²⁸ Article 6 of Chapter 1, *Vocational Education Law of the People’s Republic of China*

²⁹ Article 8 of Chapter 1, *Ibid.*

³⁰ Article 17 of Chapter 3, *Ibid.*

secondary education should have 70% of students in secondary VTE.³¹ The system expanded rapidly from 1985 to 1995, but began to decline after 1998. (See Table 4.2 and 4.3.)

Table 4.2
Secondary VTE Schools (1985-2000) (Unit: 10,000 persons)

	1985	1986	1990	1995	1996	1998	2000
Sec specialized	3,557	3,782	3,982	4,049	4,099	4,109	3,646
-- Students	157.10	175.72	224.44	372.15	422.79	498.08	489.52
-- Full-time teachers	17.39	19.31	23.454	19.51**	20.43**	27.85	25.64
Vocational	8,070	8,187	9,164	8,612*	8,515*	8,602*	7,655*
-- Students	229.57	256.00	295.01	378.63*	395.75*	454.92*	414.56*
-- Full-time teachers	14.07	16.35	22.40	29.21	30.76	33.57	28.18*
Skilled worker	3,548	3765	4184	4,507	4,467	4,395	4,098
-- Students	74.17	89.20	133.17	188.59	191.81	173.00	156.05
-- Full-time teachers	8.89	10.30	13.55	11.54	11.51	14.50	15.03
Total sec VTE	15175	15734	17330	17,168*	17,081*	17,106*	15,399*
-- Students	460.84	520.92	652.62	939.37*	1010.35*	1126.00*	1,060.13*
-- Full-time teachers	40.35	45.96	59.404	60.26**	62.70**	75.92	68.85*

Note: Secondary specialized schools include teacher training schools unless otherwise specified. Vocational schools include both junior high school and senior high school levels unless otherwise specified. However, vocational junior high schools were a small proportion in the vocational school sector. For example, in 1996 there were 1,469 vocational junior high schools with 808,900 students at school whereas there were 8,515 vocational senior high schools with 3,957,500 students at school. In 2000 there were 1194 vocational junior high schools with 886,400 students at school and 38,300 full-time teachers. These figures are not included in the 2000 statistics in the table.

*Not including vocational junior high schools.

**Not including teacher training schools.

SOURCES: 1985–1990 figures from Li, Lintian and Wang, Ping (1994), *A Brief History of Vocational and Technical Education in China*, Beijing: Beijing Normal University Press, p.173-174; 1995 & 96 figures from National Education Commission & Central Research Institute of VTE, *1997 Annual Report of Vocational Education*, p.14, 17 & 30; 1998 figures from *1999 Annual Report of Vocational Education*, p.22, 25& 33; 2000 figures from “Year 2000 Brief Statistical Report on China Education Development”, <http://www.edu.cn/20011219/3014655.shtml>, accessed 18/12/2002.

Table 4.3
Ratio of Entrants at Senior Secondary Education Level

	General Senior High	Secondary VTE	Percentage of VTE enrolments in the total
1978	--	--	5
1986	--	--	38.3
1990	--	--	47.62
1991	--	--	50.25
1992	--	--	53.80
1993	--	--	58.04
1994	--	--	58.31
1995	2,736,500	3,733,400	57.70
1996	2,822,300	3,832,500	57.68
1997	3,226,100	4,158,500	56.73
1998	3,595,500	4,089,100	53.42
1999	3,963,200	3,753,000	48.64

³¹ Li, Lanqing (1996, 19 June), “Conscientiously Carry out ‘Vocational Education Law’, Try Our Best to Open up a New Situation in Vocational Education Work”, speech given at the National Conference on vocational Education work, reprinted in *Policies and Regulations on Vocational Education 1992-1996*, pp.162-173, (p.162, 168).

2000	4,726,900	3,345,300	41.44
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SOURCES: 1978 and 1986 figures from Hou, Yan (1988), "Current situation, problems and countermeasures of secondary vocational and technical education", in Shouxin Li (ed.), *Studies on the Issues of China Education Development*, Beijing: China Planning Press, pp.136-149 (p.137); 1990-94 figures from National Education Commission & Central Research Institute of VTE, *1996 Annual Report of Vocational Education*, p. 15; 1995-1999 figures from *1999 Annual Report of Vocational Education*, p.27; 2000 figures from "Year 2000 Brief Statistical Report on China Education Development", <http://www.edu.cn/20011219/3014655.shtml>, accessed 18/12/2002.

4.3 Formal VTE System in China

In China, VTE includes various types and levels. In terms of levels, there are basically three levels: elementary, secondary and tertiary. The elementary level VTE is at junior secondary education level, secondary VTE is at senior secondary education level, and tertiary VTE is classified as higher education level.

Elementary VTE is mainly vocational junior high school education. These schools recruit primary school graduates to study 3- to 4-year courses. The training goal is to produce junior level skilled workers, farmers with specialized skills, and workers for the tertiary industries or other trades. These schools offer general junior high school curriculums in addition to some basic technical subjects and basic skill training. This type of education is mainly found in the less economically developed regions and rural areas, where education funding and standard are relatively lower. Sometimes, elementary vocational schools are regarded as the replacement of general junior high schools in under-developed areas, as the Chinese government tries to promote the universalisation of 9-year compulsory education. They are called "agricultural high school" [*nong ye zhong xue*], and "vocational (junior) high school" [*zhi ye zhong xue*]. This sector of VTE is to provide training for the needs of local production and development. In the VTE sector, elementary VTE did not get a great deal of attention and support for development. The Chinese government focussed on secondary VTE, which composed the major body of the entire VTE system in China, especially in Chinese cities. One should bear in mind that the Chinese government has a tradition of looking after city life at the expense of rural interests.

In 1965, agricultural and vocational junior high schools had 31.3% of the total enrolment in junior secondary education in China. These schools were operated on the

basis of “half farming/work and half studies”. They were totally closed down during the Cultural Revolution. From 1980, vocational (junior) high schools were resumed. In 1986, only 1% of junior high school students enrolled in agricultural and vocational high schools.³² In 1990, the ratio was 1.22% (478,800 of the total of 39,165,300 junior secondary school students), and by 1999 it increased to 1.55% (900,800 students of the total of 58,116,500 junior high school enrolments).³³

Secondary VTE is carried out through secondary specialized schools [*zhong deng zhuan ye xue xiao*], skilled worker schools [*ji gong xue xiao*] and vocational (technical) schools [*zhi ye (ji shu) xue xiao*]. The vocational (technical) schools are very often called as vocational senior high schools [*zhi ye gao zhong*]. These schools are mainly operated in cities. Secondary specialized schools include teacher training secondary schools [*zhong deng shi fan xue xiao*] that train primary school teachers, and secondary technical schools [*zhong deng ji shu xue xiao*] that train intermediate level technical and managerial personnel. These schools recruited graduates from general high schools, both junior and senior. The length of courses was 2 to 3 years for graduates from senior high schools, and 4 years for graduates from junior high schools. The school system still followed that established before the “Cultural Revolution”. There were 8 major specialized fields of training with over 400 specialized courses offered in the secondary specialized education system. Table 4.4 shows that the largest enrolments were in engineering apart from teacher training. Next to engineering were medicine, agriculture, economics and finance. In the 1990s, Business management became a popular subject as China adopted a socialist market system and more and more private business companies appeared. Each of the specialized training fields had individual schools. It was very rare that one school offered two or more fields listed in Table 4.4. Graduates from these schools would be employed as intermediate level specialized personnel, such as technical personnel. Except for teacher training secondary schools, secondary specialized schools were administrated by different ministries or departments of both central and local governments based on the principle of “train your own” [*shui yong ganbu shui ban xue*]. For example, railway-engineering school belonged to railway bureau, and textile

³² Zhou, Qu & Si, Yinzhen (eds.) (1991), *Comparative Studies of Vocational and Technical Education in China and Overseas countries*, Beijing: People's Education Press p.80.

industry school belonged to textile industry bureau or department. The central ministries or local bureaus established separate education or training department with a director who was in charge of the schools. The department controlled funding, staffing, facilities provision, and student intake and job allocation, while the schools were responsible for teaching and student administration.

Table 4.4
Secondary Specialized Schools by Fields of Specialisation
(Unit: 10,000 persons)

		1980	1983	1986	1989	1994	1996	1998	2000
Total	Schools	3,069	3,090	3,782	3,984	3,987	4,099	4,109	3,646
	Entrants	46.76	47.78	67.65	73.69	122.54	152.34	166.83	132.59
	Enrolments	124.34	114.33	175.72	217.75	319.79	422.79	498.08	489.52
Engineering	Entrants	8.33	9.12	14.98	17.02	33.69	46.70	54.43	46.14
	Enrolments	26.30	23.39	38.97	52.55	90.46	131.68	169.06	176.58
Agriculture	Entrants	3.42	2.94	4.04	4.06	4.70	5.67	6.75	4.71
	Enrolments	11.38	7.82	10.80	12.57	15.15	16.02	19.50	19.26
Forestry	Entrants	0.47	0.53	0.92	0.81	1.05	1.24	1.49	1.25
	Enrolments	1.22	1.37	2.75	2.69	3.54	3.81	4.55	4.91
Medicine	Entrants	6.57	6.17	8.69	9.31	12.58	13.94	16.73	17.88
	Enrolments	22.47	16.33	24.54	30.65	35.81	42.38	49.36	56.81
Teacher training	Entrants	21.47	19.14	22.70	22.72	29.55	32.86	32.64	20.73
	Enrolments	48.21	45.49	61.13	68.46	79.94	90.68	95.23	79.01
Economics & finance	Entrants	4.82	7.66	11.78	14.70	20.32	23.32	19.86	12.83
	Enrolments	10.75	14.56	26.34	37.48	47.23	65.74	65.70	52.35
Politics & law	Entrants	--	1.51	2.28	1.93	3.45	4.69	5.52	4.85
	Enrolments	--	2.74	4.96	4.41	6.85	9.62	12.51	14.47
Physical culture	Entrants	0.24	0.17	0.54	0.98	1.68	2.13	2.41	2.54
	Enrolments	0.62	0.68	1.39	2.99	4.73	5.83	7.02	7.64
Art	Entrants	0.43	0.37	0.82	0.98	3.05	5.22	7.21	7.36
	Enrolments	1.56	1.68	2.68	3.36	7.77	13.79	20.04	24.49
Management	Entrants	--	--	--	--	12.46	16.56	19.79	14.29
	Enrolments	--	--	--	--	28.31	43.24	55.11	54.00
Others	Entrants	1.01	0.17	0.91	0.97	--	--	--	--
	Enrolments	1.83	0.27	2.17	2.58	--	--	--	--

SOURCES: School numbers from *China Statistical Yearbook 2001*, <http://210.72.32.26/tjsj/ndsjsj/2001c/t2002c.htm>, accessed 27/10/2004; 1980-1989 entrants and enrolments from *China Statistical Yearbook 1990*, pp.716-717; 1994 entrants and enrolments from *China Statistical Yearbook 1996*, <http://www.stats.gov.cn/cdsj/information/zh1/r131a> accessed 16/09/2004; 1996 entrants and enrolments from *China Statistical Yearbook 1998*, Beijing: China Statistical Publishing House, p.688; 1998 entrants and enrolments from *China Statistical Yearbook 2000*, <http://www.stats.gov.cn/ndsjsj/zgnj/2000/T07c.htm> accessed 16/09/2004; 2000 entrants and enrolments from *China Statistical Yearbook 2001*, <http://210.72.32.26/tjsj/ndsjsj/2001c/t2013c.htm> accessed 16/09/2004.

Secondary specialized schools had the highest status among the three types of secondary VTE schools. Apart from its long history and comparatively more solid foundation in terms of administration and curriculums, secondary specialized school graduates were given professional classification and salary category of cadres, which

³³ National Education Commission and Central Research Institute of VTE, *1999 Annual Report of Vocational Education*, p.20.

was more stable and had higher level of income than workers' category. This was particularly the case in the 1980s. As the number of university entrants was limited, secondary specialized schools were allowed to recruit students from general senior high school graduates. This made people feel that secondary specialized education was only second to tertiary education, and to some extent employers could equally value secondary specialized school graduates with university graduates.

Recruitment of senior high school graduates into secondary specialized schools originated in Tianjin in 1978. In that year, a large number of general senior high school graduates could not secure a place in tertiary education, and they imposed a pressure on society for immediate employment. On 20 July 1978, the Tianjin government telegraphed Deng Xiaoping requesting an approval to recruit graduates from general senior high schools into secondary specialized schools and even in skilled worker schools. On 21 July, Deng Xiaoping passed the request to the Ministry of Education (MOE) with an instruction that "I think Tianjin can experiment with this plan." In that year, Tianjin started to recruit general senior high school graduates into secondary specialized schools. Two years later, the MOE announced to popularize this plan in the country. From then on, many secondary specialized schools, teacher training schools, skilled worker schools, and even apprenticeship training programs recruited senior high school graduates in addition to junior high school graduates.

With further reforms in educational and economic systems, higher education became more and more available to senior high school graduates. At the same time, the number of high school graduates decreased from mid 1980s as China's "one child" policy, which was introduced in mid 1970s, began to see the effects. From 1977 to 1980, over 5 million students graduated from senior high school each year, only 270,000 to 280,000 candidates were admitted into universities and colleges. From 1981 to 1985 the number of senior high school graduates decreased from 4,860,000 to 2,000,000 each year, and at the same time, tertiary education intakes increased from 278,000 to 600,000 each year. As a result, from 1985 onwards, the ratio of senior high school graduates among the entrants of secondary specialized schools started to drop. (See Table 4.5.)

Table 4.5
Student Intake in Secondary Specialized Schools (not including teacher training schools)

	Total entrants	Senior high school graduates	Percentage	Junior high school graduates	Percentage
1978	267,900	--	--	--	--
1979*	365,300	219,100	82.58	46,200	17.42
1980	252,900	146,800	58.0	106,100	42.0
1981	238,100	202,700	85.13	35,400	14.87
1982	240,800	198,400	82.39	42,400	17.61
1983	286,400	218,300	76.22	68,100	23.78
1984	350,000	237,500	67.85	112,500	32.15
1985	451,900	255,900	56.62	196,000	43.38
1986	449,500	190,300	42.33	259,200	57.67
1987	480,500	168,200	34.68	316,800	65.32
1988	540,500	175,600	32.48	364,900	67.52
1989	507,700	159,700	31.45	348,000	68.55
1990	502,200	150,800	30.02	351,400	69.98

* The total entrants of secondary specialized schools including teacher training schools were 92,317. There was no detailed data on the teacher training school entrants and specialized (technical) school entrants. It is estimated that there was 50% of each.

SOURCE: Li, Lintian & Wang, Ping (eds.) (1994), *A Brief History of Vocational & Technical Education in China*, Beijing: Beijing Normal University Press, pp.161-162.

Skilled worker schools train middle level skilled workers for factories, and business enterprises. Ministry of Education (MOE) and its provincial departments do not have direct control over them. They are administered by labour bureau of central and local governments or enterprises. The National Bureau of Labour and the provincial departments of labour were responsible for supervising the overall administration work of the skilled worker schools. For example, Tianjin Electronic Instruments Skilled Worker School was under the jurisdiction of Tianjin Electronic Instrumental Industry Administration Bureau. The school offered specialized courses in electronic engineering and manufacturing. Graduates from this school would find employment in machinery and electronics industries.³⁴

Skilled worker schools mainly recruited junior high school graduates. The training courses were usually for 3 years full-time. Some highly specialized training fields required senior high school graduates for undertaking special types of work in production [*te shu gong zhong*], but this was a small percentage among the total enrolments in skilled worker schools. Senior high school graduates studied for 2 years in skilled worker schools. According to 1990 data, there were altogether about 450

³⁴ See *Tianjin Electronic Instruments Skilled Worker School* (Brochure).

specialized training programs offered by skilled worker schools in China.³⁵

Skilled worker schools were usually set up on the factory sites. Their students were involved in production work in the training field up to 60% of the total schooling.³⁶ In a way, skilled worker schools were similar to the Germany's "Dual System" of training (combination of school and field training in factories). The difference is that the running of skilled worker schools was in the sole responsibility of the government departments or ministries of industry in China.

In 1980, the State Council of China endorsed "Report on the Structural Reform of Secondary Education" prepared by the Ministry of Education (MOE) and the National Bureau of Labour. The report suggested to convert a number of general senior high schools into vocational (technical) schools, and to encourage all industries and business to run vocational (technical) schools, that would recruit students mainly from graduates of junior high schools.³⁷ This suggestion was immediately put into practice. Take Tianjin, one of the three municipal cities in China for example, in 1980 there were 17 vocational senior high schools in the urban districts. Six of the 17 schools were under the direct control of the Education Department of the municipal government. The other 11 schools were run by the joint efforts of Tianjin government and industries and enterprises. A few years later, enterprises started to run their own vocational (technical) schools. By 1985 the number of vocational schools in urban Tianjin increased to 83, twenty seven of them were run by the Education Department, forty were established by the joint efforts between education departments and industries or enterprises, and 15 were run by enterprises or social organisations. (See details in Table 4.6.) The administrative structure of vocational senior high schools was similar across the country. In 1997, there were 6010 vocational senior high schools in the whole country under the control of the local education departments or jointly run by the education departments and other industries or enterprises, 1895

³⁵ Zhou, Qu & Si, Yinzhen (eds.) (1991), *Comparative Studies of Vocational and Technical Education in China and Overseas Countries* [Zhong wai zhiye jishu jiaoyu bijiao], Beijing: People's Education Press., p.82.

³⁶ *China Educational Yearbook 1949-1981*, p.190.

³⁷ Ministry of Education & National Bureau of Labour (1980, 27 September), "Reports on Structural Reform in Secondary Education" [Guanyu Zhongdeng Jiaoyu Jiegou Gaige de Baogao], reprinted in Department of VTE of National Education Commission (ed.) (1989), *Selected Documents on Vocational and Technical Education 1978-1988* [Zhiye Jishu Jiaoyu Wenjian Xuanbian 1978-1988], Beijing: San Lian Bookshop, 1989, pp.37-42.

schools were operated independently by industries or business, and 673 schools were set up by collectives or individual persons [*min ban*].³⁸

Table 4.6
Vocational Schools in Urban Tianjin in 1985

No. of schls	Run by
83	Total
27	Education department
1	City government
20	Industrial bureaus: (1) electronic instrument and meter industry; (2) textile industry; (3) metallurgic industry; (3) chemical engineering industry; (5) the second light industry; (6) the first machinery industry; (7) public health; (8) environment protection; (9) statistics; (10) auditing; (11) grain and food; (12) the second commerce; (13) goods of materials (commodities); (14) medicine pharmacy; (15) civil administration; (16) power supply; (17) public service administration; (18) railway; (19) civil aviation; (20) electricity administration.
11	Corporations/Companies: (1) clothing/garments; (2) household electrical appliances; (3) printing and decoration; (4) winery; (5) economic development; (6) automobile industry; (7) human resources development; (8) electric power construction; (9) hotel; (10) telecommunication; (11) agriculture, industry and commerce
8	Government institutions: (1) district people's government; (2) industry and commerce bank; (3) blood research institute; (4) Tianjin library; (5) local government; (6) local bureau of labour; (7) production and service administration bureau; (8) navigational matters bureau
2	Democratic parties
4	Social organisations
7	Factories/Enterprises: (1) automobile water pump; (2) automobile vibration reducer; (3) petroleum production; (4) oil refinery; (5) paper manufacturing; (6) railway signal; etc.

SOURCE: Luo, Shan (1988), "Vocational Education in Tianjin", *History Data of Adult Education and VTE in Tianjin*, No.5, pp.59-71 (pp.61-62).

Length of courses offered by vocational senior high schools was usually 3 years, with a small percentage of 2 years. Areas of studies offered by these schools covered a great range of over 400 fields.³⁹ Most of the courses were related to the newly and fast growing areas, such as tourism and hospitality, finance, administration and management, health and services, electronic and computer science, and civil engineering construction and property management⁴⁰ These areas were categorised as the tertiary industries, that constituted a major part of the fast growing economy. Vocational senior high schools responded to the great demand in these areas by offering relevant courses. Again take Tianjin for example, in 1985, there were

³⁸ 1997 *Annual Report of Vocational Education*, p.15.

³⁹ Zhou, Qu & Si, Yinzhen (eds.) (1991), op.cit., p.82.

⁴⁰ Detailed examples are such as hotel management and cooking; accounting, foreign trade and banking; business management, joint ventures, planning and statistics, marketing, information technology and information management; nursing, infant nutrition, dental care, tailoring and fashion designing, automobile service and package designing; electronic technology, computer software and computer hardware; carpentry, electrical engineering and electric appliance.

altogether 121 courses between the 83 vocational senior high schools in urban Tianjin, and 80% of them were in the fields of tertiary industries.⁴¹ These fields of training were not offered in the traditional curriculums in secondary specialized schools and skilled worker schools. In a sense, vocational senior high schools were supposed to complement the other two types of VTE schools to make the whole VTE system more comprehensive. The three types of VTE schools were expected to provide a full range of VTE and to prepare students for entering the work force after 2 or 3 years of study.

Unlike the other two types of secondary VTE schools, the government did not issue any specific policy guidelines or official regulations as to how vocational schools should be run. The 1980 report of the Ministry of Education (MOE) and National Labour Bureau only vaguely stated: “(We) must consider the needs of production and service industries, broaden methods of school operation, run various kinds of vocation (technical) schools.”⁴² Thunø observed the situation that the government left the final decisions concerning the management and the financing of vocational schools with the local authorities in rural and urban areas”.⁴³ This find-your-own-way policy gave vocational schools considerable freedom in school operation, student enrolment and management, and curriculum development. It gave the school flexibility in meeting the demands for skills and specialties in society. On the other hand, however, the lack of national standards could also be frustrating for the vocational schools, as China had been practising a planning system and everybody was used to following the rules set by the central government. In the meanwhile, as the other two types of secondary VTE schools were closely linked with government departments or enterprises, they had a strong sense of belonging and support, and their students were trained for the jobs required by these government departments or industrial enterprises. Vocational schools did not have such sense of security. Hence they had to find their own way to survive.

⁴¹ Luo, Shan (1988), “Vocational Education in Tianjin”, *History Data of Adult Education and VTE in Tianjin*, No.5, pp.59-71 (p.63).

⁴² Ministry of Education & National Bureau of Labour (1980, 27 September), “Reports on Structural Reform in Secondary Education” [Guanyu Zhongdeng Jiaoyu Jiegou Gaige de Baogao], reprinted in Department of VTE of National Education Commission (ed.) (1989), *Selected Documents on VTE 1978-1988* [Zhiye Jishu Jiaoyu Wenjian Xuanbian 1978-1988], Beijing: San Lian Bookshop, 1989, pp.37-42 (p.38).

⁴³ Thunø, Mette (Winter 1991-92), “Secondary Vocational Schools in Post-Mao China”, *China Information*, Vol. 6, No.3, pp.44-56 (p.48).

In addition to the VTE schools, general high schools also offered vocational and technical subjects to students as a part of the school curriculums. This was in response to the suggestions in the report on restructuring secondary education prepared by the national education conference coordinated by the Ministry of Education (MOE) in 1980 and endorsed by the State Council. However, these VTE subjects in fact did not play a major role in the general school curriculums. Vocational subjects in general high schools, especially in large cities, usually were something like one or two weeks training experiences in vocational schools, farms or military units. Take one general high school in Tianjin for example, first year or second year students in senior school were required to go to a designated vocational school to do a couple of weeks training in tailoring, or typing, or electrical appliances maintenance, etc. and receive a certificate of completion of such program. Without this certificate, a student would not be issued graduation certificate from high school even though s/he had passed all the school subjects s/he was required or chose to take. This was very common in Tianjin.⁴⁴ Therefore, vocational subjects were not really made available in general high schools. As general high school students were heavily loaded with academic subjects, it was very difficult to include real vocational subjects into the school curriculums, such as child studies, carpentry, home economics, accounting, music performance, and so on, which can be easily found in Australian school curriculums. One of the most important reasons for this is that tertiary education entrance examinations did not include vocational subjects. For general senior high school students whose only aim of study was to pass the entrance examination and get into university or college, they did not see any relevance of learning vocational subjects.

Tertiary VTE (or higher VTE) include vocational and technical teacher training colleges [*zhi ye ji shu shi fan xue yuan*], vocational and technical specialized colleges [*zhi ye ji shu zhuan ke xue xiao*], higher skilled worker schools [*gao ji ji gong xue xiao*], and short-course vocational universities [*duan qi zhi ye da xue*].

The vocational and technical teacher training colleges were established to train specialized teachers for VTE schools. The first two such colleges were set up in

⁴⁴ Author's private interview with Li Zhang, Tianjin, 28 November 1997.

Tianjin and Jilin in 1979 with the approval by the State Council. By 1990, a total of 14 vocational and technical teacher training colleges had been set up. 11 of them offered 4-year Bachelor Degree courses and the other 3 offered short-cycle (2 to 3 year) diploma courses. The colleges recruit graduates from senior secondary educational institutions, including secondary specialized schools, skilled worker schools, vocational (technical) high schools, and general senior high schools. The courses are usually of 2 to 3 years duration. A very small number of courses recruit graduates from junior high schools to study for 5 years. The training aims of the colleges are to produce senior level technical and managerial personnel. Students are awarded certificate of higher education diploma upon graduation.

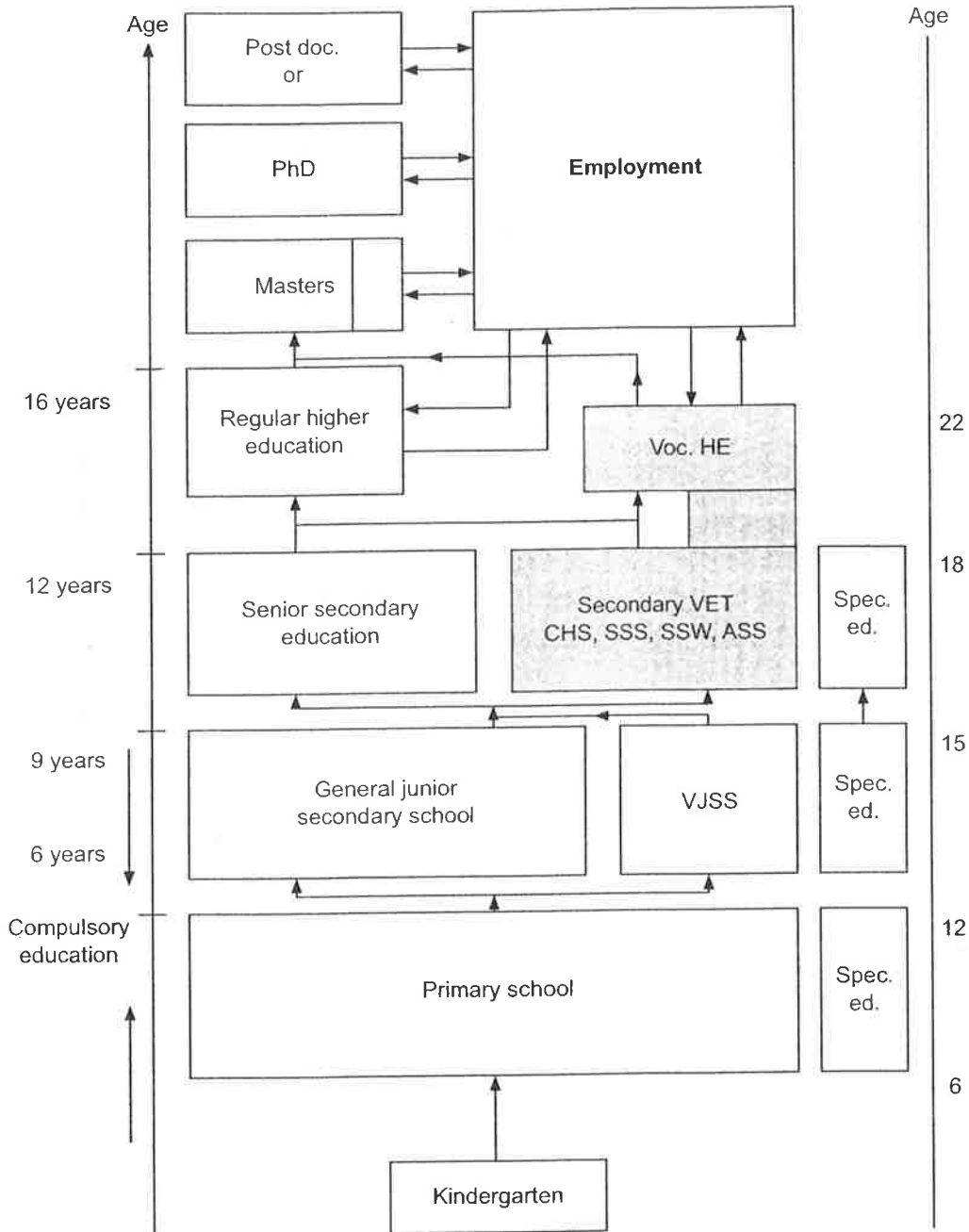
The higher skilled worker schools recruit graduates from secondary vocational (technical) schools, skilled worker schools, general high schools, and in-service skilled workers with similar level of educational background. These schools aim at producing senior level first-line professional skilled personnel in production, construction, management and service sectors. Duration of courses is 2 to 3 years. Students are issued two certificates upon graduation: diploma of higher specialized education (academic qualification), and certificate of skill level (skill qualification).

The short-course vocational universities were developed from the early 1980s in response to the immediate needs for specialized personnel in local economic constructions. These universities were run by private bodies or in self-funding manners. Students paid full tuition fees and were not assigned jobs by the government. From 1980-1990, 114 such universities were set up with a total of 720,000 enrolments. This form of education helped China to train more specialized personnel without costing the government any money. It also gave students more opportunities for receiving higher education.

By 1999, there were altogether 1,345 institutions of higher VTE of various types (including independent adult higher learning institutions in the non-formal education sector), which offered diploma courses to 3,980,600 students at school.

These students accounted for 55.37% of enrolments in tertiary education in China.⁴⁵

Figure 4.1 China Education System Ladder



Note: VET: vocational and technical education (VTE); CHS: vocational senior high school; SSS: secondary specialized school; SSW: skilled worker school; ASS: adult specialized school; VJSS: vocational junior secondary school; Voc. HE: vocational higher education; Spec. ed: special education

SOURCE: Misko, Josie and Liu, Yufeng, et.al. (2002), *Linkages between Secondary and Post-Secondary Vocational Education and Training in China and Australia*, Adelaide: NCVER, p.22.

⁴⁵ National Education Commission & Central Research Institute of VTE, *1999 Annual Report of Vocational Education*, p.28.

4.4 Non-Formal VTE Institutions

In addition to the formal VTE institutions of the three levels, there are non-formal VTE schools also at the three levels, namely elementary, secondary and tertiary. The major part of non-formal VTE is adult VTE and training, which provide specialized training for adults after employment.

Adult elementary VTE consists of workers/staff elementary schools [*zhigong chudeng xuexiao*] and farmer elementary schools [*nong min chu deng xue xiao*]. These schools exist mainly in countryside and less developed regions, where 9-year compulsory education is not popularized.

Adult secondary VTE is of two major parts. The first part is adult secondary specialized schools [*cheng ren zhong deng zhuan ye xue xiao*], and the second part is adult technical training schools [*cheng ren ji shu pei xun xue xiao*]. The former offer 2 years or longer period courses, which are taken as equivalent to formal secondary specialized education. The latter offer short-term training courses to adult individuals in the professional and technical skills needed for employment or transfer to new jobs. Some adult learners also take the courses as personal interest or enrichment.

Adult higher VTE include radio and TV universities [*guang bo dian shi da xue*], staff/worker schools of higher learning [*zhi gong gao deng xue xiao*], farmer higher learning schools [*nong min gao deng xue xiao*], correspondence colleges [*han shou xue yuan*], and so on. These institutions recruit in-service workers and farmers. They offer diploma courses of 3-year full-time study, and 4-year part-time study. Some of them offer full-term university courses of 4-year full-time study, and 5-year part-time study. Most of the students in these schools are part-time students. Graduates from these courses are granted the same qualifications as those from formal higher VTE institutions.

Apart from the adult VTE schools, employment training centres [*jiu ye xun lian zhong xin*] were set up in the 1980s to help people obtain skills for employment. In 1981, the CCP Central Committee and the State Council jointly issued a document requiring “labour service companies should run all types of vocational and technical

training classes, and those more developed areas should set up employment training centres.”⁴⁶ Soon after that, employment-training centres proliferated rapidly. In 1982, 242 such centres were set up. By 1990, the number increased to 2140.

In addition to the three types of non-formal VTE schools, there are apprenticeship and on-the-job training. Apprenticeship training is offered in government-owned industrial enterprises and construction units, but the apprentices are only a very small number among the total staff and workers of the work units. The length of training is usually 2 or 3 years, and the required entrance level is junior high school education. Apprenticeship training is administered by individual production units, and the training is engaged in production, and supervised by master workers [*shi fu*]. The apprentices undertake all the studies and training in the production unit, and after 3 years of training will remain in the work unit as workers. In 1986, the State Council made a decision that staff training should be listed as the focus of adult education. This plan was addressed as an important reform in adult education. The task of on-the-job training was enforced to provide training to workers, farmers, cadres, technical and specialized personnel in the fields required by their job.

4.5 Responsibility of VTE Administration

The “Vocational Education Law of the People’s Republic of China” states:

The administrative department for education under the State Council shall be responsible for the overall planning, comprehensive coordination and macro-management of vocational education.

The administrative departments for education, labour and other relevant departments under the State Council shall, within their respective functions and responsibilities defined by the State Council, be responsible for the different aspects of vocational education.

*Local people’s governments at or above the county level shall strengthen leadership, overall coordination, supervision, guidance and assessment of vocational education in areas under their jurisdiction.*⁴⁷

China’s VTE system was and is administered at both national and local government

⁴⁶ Li, Lintian & Wang, Ping (1994), op.cit., p.168.

⁴⁷ Article 11 of Chapter 1, *Vocational Education Law of the People’s Republic of China*.

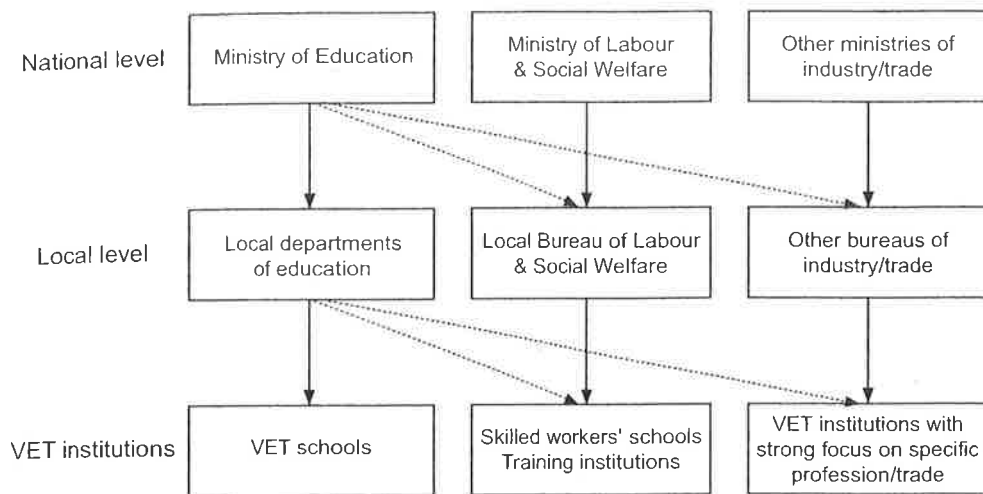
level. (See Figure 2) At the national level, the major bodies responsible for the VTE is the Ministry of Education (MOE) [*jiao yu bu*] and the Ministry of Labour and Social Security Welfare [*lao dong she hui fu li bu*]. In addition, all the relevant ministries are responsible for co-ordinating and supervising VTE within their fields. The Ministry of Health, Ministry of Natural Resources, Ministry of Transportation and Communication, Ministry of Agriculture, Ministry of Geology, Ministry of Forestry, China Civil Aviation, and other ministries all have a technology or education department, which is in charge of VTE and training.

The Ministry of Education (MOE) is responsible for administering academic credentials of various types of education and training. Its major roles include drafting principles, policies, laws and regulations, standards in research and administrative works, and supervising works in these areas. The Department of VTE and Adult Education in the Ministry is in charge of general VTE credentials, while the Department of Higher Education in the Ministry handles academic credentials of higher VTE.

The Ministry of Labour and Social Security Welfare is responsible for drafting classifications of occupations, standards of vocational skills and standards of trades and professions. It is also responsible for drawing up development and management programs for skilled worker schools, and plans and policies on in-service training, before-the-job training and change-of-job training. The Department of Training and Employment in the Ministry is in charge of urban and rural employment and vocational training. It is also responsible for drawing up development plans and administrative rules for skilled worker schools and employment training centres. The other ministries of industry are responsible for the overall planning, all-round coordination and macro administrative work of VTE within their own system.

At the provincial level in Figure 4.2, local government departments of education, labour and other specialized industries and trade are responsible for administering VTE within their own system. They are under the general guidance of the national government and carry out VTE development to meet local needs in the areas of economy, science and technology, and education. Local level governments have power for decision on specific matters and administration of VTE schools.

Figure 4.2 Administration of the Chinese VTE System



Note: VET: VTE

SOURCE: Misko, Josie and Liu, Yufeng, et.al. (2002), *Linkages between Secondary and Post-Secondary Vocational Education and Training in China and Australia*, Adelaide: NCVER, p.23.

4.6 Research Institutions of VTE in China

Starting from 1980, VTE research institutions began to be established up from the national level down to local provincial and city levels. On the national level, there were research institutions within the National Education Commission (MOE), Ministry of Labour, and other ministries of industry. There also existed an association of VTE, China Vocational Education Society, which was established in 1917 by Mr Huang Yanpei⁴⁸, but expanded rapidly after 1980. Now it has branches all over the country. It is both a research organisation and an operating body to run non-formal VTE schools or vocational training programs for individuals in the society.

The major roles and responsibilities of the national level research institutions were to carry out policy research on VTE in China, provide consultation services to the government on strategic planning for VTE development, provide information on

⁴⁸ Huang Yanpei (1878-1965), an educationist and the founder of China Vocational Education Society [*Zhonghua zhiye jiaoyu she*]. He was also a government official, serving as vice premier and minister, and vice chairman of Political Advisory Committee of China. – See Li, Guilin (ed.) (1989), *A History of Chinese Education*, p.497-498.

VTE development of both China and overseas, develop curriculums and teaching materials, formulate rules and regulations on standards of teaching and assessment, and promote model school experience to the country. Apart from the government-run research institutions, higher education institutes also set up VTE research centres. The majority of these centres are located in VTE teacher training universities and colleges. They are engaged in research in curriculum development, teacher training projects, VTE evaluation, teaching methodology development, and so on.

On provincial and city levels, VTE research centres were under the control of provincial or city government or within universities or colleges. Structures were similar to the national level institutions. Their responsibilities were to carry out research and development of VTE for the province or city that they were situated in. By 1995, most provinces (including autonomous regions) and municipal cities had set up research institutes for VTE, but remote regions, specifically Qinghai, Ningxia, Xinjiang and Tibet had no research centre of their own.⁴⁹ These regions were categorised as economically under-developed areas. Education level was lower than the rest of the country.

These research institutions functioned as consultants to VTE administrators, policy makers and promoters, education evaluation conductors, curriculum developers, VTE teacher training coordinators, VTE information providers, and editors and publishers of VTE journals and magazines. A number of research centres were set up as Sino-Germany cooperation projects in vocational education research and development, such as the Central Research Institute of VTE in Beijing, and research centres of VTE in Shanghai and Liaoning. These centres were much better staffed and funded. Germany provided academic consultants to these centres.

Although research institutions played a very important role for the development of VTE in China, a few major problems were identified in the 1995 report published by the National Education Commission (MOE) and the Central Research Institute of VTE. Firstly, a number of VTE offices in provincial or city

⁴⁹ National Education Commission and Central Research Institute of VTE (1995), *Reports of Research Projects in Vocational and Technical Education during the Ninth "Five-Year Plan" Period* [Zhiye jishu jiaoyu "Jiuwu" guihua xueke diaoyan baogao], Beijing, pp.61-66.

government were understaffed; some offices only had one or two full-time staff, and many had 3-4 staff members. They had difficulties in discharging their duties effectively. Secondly, there was a shortage of funding, so it was very difficult to conduct research projects. Thirdly, there was a lack of communication and liaison between the research centres and other government departments as well as industries. Research centres were not able to function well in this isolated situation.

The author would argue here that such problems could not be avoided in the centrally government controlled system in China. These research centres were in fact controlled by the government. Researchers and administrative staff were public servants, just like personnel in other government units. Their funding was totally relying on the government budget. As there was a shortage of funding for all fields, it was very difficult to get sufficient funds for the VTE research centres. As a result of this, research centres or offices could only function as an administrative office rather than a research centre. In addition, China had just been opened up to the world, and it had lagged behind in theoretical research in education as well as many other fields. Most researchers in the VTE centres had little training or knowledge of VTE development. It would take a long time to catch up in this regard. As one researcher in the Central Research Institute of VTE commented:

Although the government has been enforcing a drastic development in secondary VTE, and the number of enrolments has reached the target, there are so many problems unresolved. In fact there are very few people in China who know how to develop VTE effectively. We are all new in this area.⁵⁰

Another problem relating to the lack of research output that the author has observed is that China was under the tight control of the CCP government since 1949. During this period of time, there were many political and ideological movements, in which tens of thousands of people were punished because of their public statements against the CCP's policies. Their examples were lessons for people to learn. Academics and researchers, though having their own opinions or doubts on government's policies, dared not to speak out. One researcher in VTE said to the author during an interview:

⁵⁰ Author's interview with Ms Fan, educational researcher, Beijing, 15 December 1997.

I once expressed my views about secondary VTE to my supervisor, which were contradictory to the government's policy. My supervisor told me not to write them out; otherwise I would lose my 'rice bowl'.⁵¹

The point made here is that Chinese researchers played a role more as government policy promoters and followers than consultants and assessors. They were not to raise critical opinions on government policies. This situation began to change in late 1990s, when political situation in China became more open. Ordinary people were allowed to voice their opinions, as long as they did not go to the extremes. Researchers and educationalists started to express their views and criticisms on educational issues. There were several journal articles and books discussing problems in the Chinese VTE policies.⁵² More Western advanced countries' experiences and academic works were introduced into China. Debates on VTE policy issues were carried out among some academic researchers. This was a progress towards catching up with advanced countries.

4.7 Foreign Aids for VTE Development

From 1985, the Chinese government negotiated with the World Bank for a loan to help develop secondary VTE in China, although the World Bank had begun to shift its focus of support to more general education projects in other countries and had expressed considerable scepticism on Chinese formal VTE development.⁵³ After many talks and negotiations, the World Bank eventually agreed to lend China a loan from August 1990⁵⁴. The World Bank provided China a special loan equivalent to US\$50 million with low interest. It was mainly to be used on facilities and library holding for specialized fields of training in machinery processing, electrical appliance installation and maintenance, electronic engineering, chemical engineering, printing,

⁵¹ Author's interview with a Chinese education researcher, Adelaide, 30 March 2001.

⁵² See Liu, Jinghui & Zhao, Zhiqun (1996), "Several Basic Issues in Vocational Education of our Country" [Guanyu wo guo zhiye jiaoyu de ruo gan jiben wenti], *Chinese Vocational and Technical Education* (Beijing), No. 1, pp.34-37; Shi, Weiping (2001), *Comparative Vocational and Technical Education* [Bijiao zhiye jishu jiaoyu], Shanghai: East China Normal University Press.

⁵³ See Yang, Jin (1996), *The Interaction between the Socialist Market Economy and Technical and Vocational Education and Training in the People's Republic of China* (PhD thesis), p.6.

⁵⁴ Department of VTE of National Education Commission & Central Research Institute of VTE (1996), "Evaluation on the implementation of 'the World Bank loan on VTE'" [Guanyu "shijie yinhang daikuan zhiye jishu jiaoyu xiangmu" wancheng qingkuang], in *Chinese Vocational & Technical Education* (Beijing), No.1, pp.7-10.

computer technology, food processing, garment designing and manufacturing, accounting, and finance administration. It was also used for recruiting overseas specialists and providing training for VTE teachers and administrators. The conditions of the loan required China to provide at least equal amount of funding for the capital construction, furniture and other relevant expenses as supporting funding. These funds were aimed at two major areas: developing a number of back-bone multifunctional VTE centres for the local VTE development; and establishing a group of VTE specialized teacher training faculties or colleges. The funding was to be used in 71 schools and colleges (including 12 VTE teacher training programs or colleges) in 17 provinces and municipal cities across the country to make them the leading force for the VTE development in China.⁵⁵

Unlike other loans, the World Bank loan was used in medium and large cities, which were comparatively economically advanced. 51.4% of the funding was injected into five big cities and provinces: Beijing, Shanghai, Tianjin, Liaoning, and Jiangsu. The reason was that these five cities and provinces were identified as the most in need of skilled workers with specialized training backgrounds.⁵⁶ The Chinese government intended to use the World Bank loan to increase investment in VTE from the domestic sources. By way of this program, funding problems would be resolved in those targeted colleges and schools. According to the Chinese government, the benefits of this program to the Chinese VTE were significant.

Firstly, the targeted VTE schools and colleges were equipped with advanced facilities including teaching buildings and equipment, teaching materials and resources. Secondly, the World Bank loan brought to China overseas specialists and expertise in VTE administration. This enabled administrators in the Chinese VTE schools to learn from overseas counterparts and improve their administrative works at school. Thirdly, the World Bank loan's teacher training programs provided training for teachers in those targeted schools. By the end of 1994 there were altogether

⁵⁵ National Education Commission (1989, 24 May), "Strengthening Administration and Improving Outcomes of the World Bank loan on VTE Projects in the Provinces/Cities and Schools" [Guojia jiaowei zhiye jishu jiaoyu si guanyu shijie yinhang zhi jiao daikuan xiangmu sheng shi ji xuexiao jiaoliang guanli, tigao xiaoyi ying chengnuo shixiang de tongzhi], reprinted in *Policies and Regulations on VTE 1989-1992*, Beijing: Beijing Normal University Press, pp.338-340.

⁵⁶ Department of VTE of National Education Commission & Central Research institute of VTE (1996), op.cit.

107,943 persons who had received training under this program, 103 teachers had been sent overseas for training, and 46 people went on study tours overseas.⁵⁷ The targeted schools had adopted advanced teaching methodologies from overseas schools. This could be regarded as the pioneer programs (schools) for the development of VTE over the country. The changes in these schools provided role models for other schools to follow. Fourthly, the advanced facilities and equipment brought into the targeted schools increased schools' productivity. The schools were able to train students with practical skills by involving students in school-run business that had modern facilities and equipment. Graduates from these schools were able to meet the duty requirements of their prospective employers, and were qualified to be medium or senior level skilled workers. This excellent outcome set good examples for other VTE schools to follow. Fifthly, the World Bank loan imposed or tended to impose on the governments of all levels and society an impression that developing VTE should be a prime task of the country. In late 1980s and early 1990s, while all areas needed money for development, a large amount of money was allocated to the VTE for development. The impact of this program was significant.

Since 1990 when the World Bank loan program started, Chinese VTE grew rapidly. By the end of 1994, the total enrolments in the 12 VTE teacher training colleges increased from 6,368 to 21,458. Of the 59 targeted VTE schools, 50 had been awarded as the key or core schools at provincial or national level. During the 5 years from 1990 to 1995, secondary VTE were developing at the fastest pace.⁵⁸

Apart from the World Bank loan, another large source of overseas aid was the support from Germany. As Germany's "Dual System" in vocational and technical education and training was considered as effective by the world community in producing high quality skilled work force and keeping unemployment rate low,⁵⁹ the

⁵⁷ Department of VTE of National Education Commission & Central Research Institute of VTE (1996), *op.cit.*

⁵⁸ *Ibid.*

⁵⁹ See Li, Shuxing (1989), "Speech at the Opening Session of Symposium on Vocational Education", in China National Education Commission and Hanns-Seidel-Stiftung Foundation of Federal Germany (eds.), *Symposium on Vocational Education* [Symposium Über Die Berufliche Ausbildung], Beijing: Beijing University Press, p.3; Cantor, L. (1991), "Vocational Education and Training in the Developed World", *The Vocational Aspect of Education*, Vol.43, No.2, pp.173-182; Gill, Indermit S. & Dar, Amit (2000), "Germany", in Indermit S. Gill, et al (eds.), *Vocational Education and Training Reform*, Oxford University Press, pp.485-513.

Chinese government and researchers were certainly interested to seek advice and support from Germany. From the early 1980s, there began talks and exchange visits between China and Germany on possible German assistance in setting up model vocational schools, colleges and centres in China's major cities. In 1983, the first German assisted vocational school was set up in Nanjing. From then on, many projects were established one after another. Germany provided facilities and equipment as well as consultants in those projects. A number of VTE teachers were sent to Germany to learn German experience. In 1989, a symposium on vocational education was held jointly by China and Germany in Beijing. About 10 German-assisted schools gave reports on the past 3 or 4 years' experience in learning the German "Dual system". They claimed that the projects were successful, and that the German model was beneficial to China's VTE development.⁶⁰ The Chinese schools did not copy the exact curriculums from the German system, but what the Chinese were trying to learn was the approach to involve both schools and enterprises in running VTE and their teaching methodology. Between 1984 and 1994, Germany provided China a total aid of 260 million Deutsche mark. Over 200 vocational education experts came to China to give lectures and another 56 VTE experts were sent to China on long-term basis. By the mid 1990s, 32 projects had been set up with the joint efforts of China and Germany. These projects were of two major types. One was vocational education and training institutions in the fields of machinery, construction, light industry, textile, agriculture, electrical engineering, and so on, and the other was vocational education service institutes such as language training centre, teacher training centre, translation facility and VTE research institute.⁶¹

In 1997, the author visited one of such projects in Tianjin – China-Germany Vocational Training Centre. The centre was claimed as the largest cooperative project in education between the two countries. It physically covered a site of 48,000 square metres, with a capacity for 800 full-course (3 years) students and 1,000 short-course trainees. Its facilities and equipment were very impressive. There were 9 workshops and 24 laboratories; all were equipped with advanced teaching facilities. There were

⁶⁰ National Education Commission of PRC and Hanns-Seidel-Stiftung Foundation of Federal Germany (1989), *Symposium on Vocational Education* [Symposium Über Die Berufliche Ausbildung], Beijing: Beijing University Press, p.3 & 11.

⁶¹ Yu, Zuguang (1996), "Achievements and Perspectives of China and Germany Cooperation in Vocational Education", *Chinese Vocational and Technical Education* (Beijing), No.12, pp.32-34.

140 teaching staff, and a number of them had received training in Germany for a year. About 13 German specialists and experts were stationed on the long-term basis in the Centre. Students or trainees were issued certificates upon graduation, which were recognised by China and Germany. The Centre offered 5 programs: 1) 3-year course to train skilled workers; 2) 2-year higher VTE program to train managerial personnel for enterprises; 3) 6-month teacher training program to train field practice teachers; 4) short-term skill training programs for skilled workers, technicians and engineers; and 5) German language program. Students who achieved excellent study results had chances to gain scholarships to further study in Germany. The Centre had close relationships with enterprises. Students in the 3-year course had to spend 1 year working in enterprises designated by the Centre and the other 2 years' study at the Centre. The Centre claimed itself, apart from teaching, trying to "provide service for industries, and to engage itself in product designing and production by making use of its advanced facilities and unique position as a cooperative partner with Germany and its relationship with other international enterprises".⁶²

The international aids to VTE in China were supposed to play a role model for the further development of VTE throughout the country. However, "the anticipated trickle-down effect of these projects is questionable, ... since the cost level of the German projects makes any comparison with Chinese-run vocational schools seem irrelevant."⁶³ A major problem identified for Chinese VTE schools in learning the "Dual System" was the lack of funding.⁶⁴ As one can see, the Tianjin Chinese-Germany Vocational Training Centre was so well funded that ordinary schools had no ability to match. In the "Dual System", enterprises are expected to play an important part in funding and training. In reality, however, many Chinese industrial enterprises were struggling with funds to cover many costs elsewhere, and therefore they had great difficulties or had no interest in providing funding for VTE schools. This problem will be discussed further in Chapter Five.

⁶² China-Germany Vocational Training Centre (Tianjin), *Introduction to the Centre* (brochure).

⁶³ Thunø, M. (Winter 1991-92), "Secondary Vocational Schools in Post Mao China", *China Information*, Vol.6, No.3, pp.44-56 (p.46).

⁶⁴ See Xu, Chengying (1994), "Discussing the Learning of German 'Dual System' in Vocational Training for Enterprises", *Selected Papers of the 3rd Symposium on the Practice of Vocational Education of the Federal Germany* [Lianbang Deguo zhiye jiaoyu shijian di san jie yantao hui lunwen ji], Tianjin, pp.28-30.

Throughout the 1990s, China had kept close contact with overseas countries, and international exchange programs were carried out in many places. Apart from Germany's aids and support projects in China, Australian government also provided support from 1998 for China's VTE development. Australia provided A\$18,390,000 to run a VTE development project with the Chinese government, which is known as the "Chongqing Project", as the base of this project was located in Chongqing.⁶⁵

⁶⁵ National Education Commission & Central Research Institute of VTE, *1999 Annual Report of Vocational Education*, p.16.

CHAPTER FIVE

SOME FUNDAMENTAL PROBLEMS IN SECONDARY VTE

5.1 Funding

Educational funding has always been a problem in developing countries. China is of no exception. When money is needed in all areas for development, it is very difficult for the government to allocate adequate funds for education. In 1985, public education expenditure was 3.5% of GNP, compared with the international average of 5.6%.¹ Observations were made that in the late 1980s, “more money was allotted for industrial undertakings (with an expected high rate of return) and less for investment in education.”² Since then, public education expenditure remained below 3%. According to statistics issued each year in the 1990s by the National Education Commission (MOE) and National Statistics Bureau, fiscal budgetary expenses on education was 2.99% of GNP in 1992, 2.68% in 1994, 2.44% in 1996, 2.55% in 1998, and 2.87% in 2000.³ This ratio was far below the world average, and even below some developing countries like India. (See Table 5.1.)

Table 5.1
Total Education Expenditure as a Percentage of GNP in the World (1996)

China	2.3
India	3.4
Japan	3.6
Germany	4.8
United Kingdom	5.4
United States	5.4
Australia	5.6
France	6.1

¹ National Statistics Bureau of PR China (1990), *China Statistical Yearbook 1990* [Zhongguo tongji nianjian 1990], Beijing: China Statistical Publishing House, p.868.

² Henze, J. (1992), “The Formal Education System and Modernization: An analysis of developments since 1978”, in Ruth Hayhoe (ed.), *Education and Modernization: the Chinese Experience*, New York: Pergamon, pp.103-139 (p.124).

³ National Education Commission & National Statistics Bureau, 1993, 1996, 1998 & 2000 “Statistical Announcement on Education Expenditure in China, <http://www.edu.cn/20010823/207359.shtml>, <http://www.edu.cn/20010823/207358.shtml>, <http://www.edu.cn/20010823/207356.shtml>, <http://www.edu.cn/20010823/207354.shtml>, <http://www.edu.cn/20020104/3016255.shtml>, accessed 15 Jan 2003.

Canada	7.0
Norway	7.5
South Africa	7.9
Denmark	8.2
Sweden	8.3
World	4.8
<i>Low/middle income countries</i>	
East Asia & Pacific	2.7
Europe & Central Asia	5.4
Latin America & Caribbean	3.7
Middle East & North African	5.2
South Asia	3.0
Sub-Saharan Africa	4.3

SOURCE: World Bank Indicators (1999), *World Bank Indicators and International Data*, Washington D.C.: World Bank, cited by Clive R. Belfield (2000), *Economics Principles for Education: Theory and Evidence*, Cheltenham, UK: Edward Elgar Publishing Ltd., p.3.

The lack of funding although was due to the lack of money on a national level for all walks of life, the major problem rested with the attitude of the authorities. In China, education had never been given priority.⁴ Many leaders perceived it as public welfare, from which little profit could be gained. The authorities would invest more money in the areas where immediate results could be seen.⁵ “Industries and telecommunications come first, finance and commerce second, make what is left do for culture and education” was a catchword, and it reflects the reality of how education was perceived.⁶ In the 1988 National People’s Congress, there were bitter complaints in education circles about the reordering of priorities in funding allocations, in which more money was set aside for industrial undertakings and less for investment in education.⁷ Rumours circulated that the then CCP General Secretary Hu Yaobang was so angry at the problem that some central and local leaders lacked understanding of and commitment to investment in education that he collapsed physically during a discussion meeting at the Congress. Although it was clear that China’s economic basis was weak and all areas needed money, and economic reforms and development were the priority of the country, more funding could have been injected into education. The reason for saying that is, during the 1980s, for example, tens of millions of public money were spent on imported cars and other luxury consumption items, billions of *yuan* on new buildings and hotels, which became

⁴ *Guangming Daily*, 6 January 1989.

⁵ See Zhang, N. (1992), “Current Problems in Educational Reform”, in Andrew Watson (ed.), *Economic Reform and Social Change in China*, London: Routledge, pp.144-170 (p.147).

⁶ *Educational Information Reference News* [Jiaoyu qingbao cankao], 20 August 1984.

⁷ See Henze, J. (1992), *op.cit.*, p.124.

oversupplied and stayed empty later, and tens of millions of *yuan* were spent on entertainment/restaurant expenses and other benefits.⁸ Therefore, the shortage of funding was not only due to the lack of capital in China, but more importantly it was the attitude of the leaders. In addition, there were no specific regulations and mechanism to oversee the implementation of education funding on all government levels.⁹

With the limited funding for education, VTE did not have adequate share. International research findings indicate VTE is costly, and is 3 to 9 times higher than general education.¹⁰ Nevertheless, in China, general education is very often given priority in funding from the government's budget. Primary and secondary education sectors received less funding than higher education sector, while within the senior secondary education sector, vocational education funding was worse off than general education. (See Table 5.3.) Looking at individual provinces and municipal cities, the differences were even bigger in some areas. (See Table 5.2.) About 50% of the provinces and municipal cities provided less funding for VTE schools than general senior high schools. Some provinces or cities provided 40% less funding for VTE schools than general senior high schools, whereas some other provinces provided over 40% more funding to VTE schools than general senior high schools. What is ironic is that Beijing, the capital of China, rated secondary VTE lower than general senior high schools in budgetary funding. Tianjin and Shanghai, two other largest cities in China, provided even less funding for vocational education. In fact, in the western regions, where economic situation was worse than the other two regions, 7 out of 10 provinces (including one municipal city) provided higher budget on VTE schools than general senior high schools. This situation was not consistent with the national government's strategy that more economically developed regions and cities should promote secondary VTE more than under-developed regions.¹¹

⁸ *Guangming Daily*, 29 March 1989.

⁹ Zhang, N. (1992), *op.cit.*, p.148.

¹⁰ See Henze, J. (1992), *op.cit.*, p.124; 1999 *Annual Report of Vocational Education*, p.62; Blaug, Mark (1973), "Forecasting All Occupations - Thailand", in Bashir Ahamad, and Mark Blaug (eds.), *The Practice of Manpower Forecasting: A Collection of Case Studies*, Amsterdam: Elsevier Scientific Publishing Company, pp.106-130 (p.129); Metcalf, David H. (1985), *The Economics of Vocational Training: Past Evidence and Future Considerations*, Washington D.C.: The World Bank, pp.26-28;

¹¹ See The State Council of PRC (1994,3 July), "Suggestions on the Implementation of "Outlines of Chinese Educational Reform and Development" ["Zhongguo jiaoyu gaige he fazhan gangyao" de shi shi yijian], reprinted in *Policies and Regulations on Vocational Education 1992-1996* [Zhiye Jiaoyu Zhengce Fagui 1992-1996], Beijing Normal University Press, pp.103-122 (p.105), & National

Table 5.2
Comparison of Budgetary Operating Expenses per-student in All Provinces, Autonomous Regions and Municipal Cities (1999)
(Unit: RMB yuan)

	General Senior High Schools	Secondary VTE Schools	Difference (General Senior High Schools = 100%)
National	1269.31	1204.10	94.86%
Eastern Regions			
Beijing (city)	2976.94	2814.79	94.55%
Tianjin (city)	2604.05	1650.03	63.36%
Shanghai (city)	4484.54	2661.76	59.35%
Hebei	1152.04	807.96	70.13%
Jiangsu	1508.96	1456.07	96.49%
Zhejiang	1505.75	1416.92	94.10%
Fujian	1314.91	1344.90	102.28%
Hainan	1238.03	1782.70	143.99%
Shandong	1056.29	1386.88	131.3%
Guangdong	1833.42	2519.98	137.45%
Guangxi	806.73	1146.97	142.18%
Liaoning	1246.28	1399.38	112.28%
Middle Regions			
Shanxi (Taiyuan)	1072.33	941.08	87.86%
Inner Mongolia	992.13	795.49	80.18%
Jilin	1095.81	1053.80	96.17%
Heilongjiang	1291.12	1288.12	99.77%
Henan	874.12	644.01	73.68%
Anhui	951.17	551.28	57.96%
Jiangxi	760.55	793.60	104.35%
Hubei	796.68	851.42	106.87%
Hunan	902.33	1133.06	125.57%
Western Regions			
Yunnan	1646.52	1456.52	88.46%
Qinghai	1666.82	1549.05	92.93%
Tibet	5353.8	1899.87	35.49%
Chongqing (city)	1035.16	1273.17	122.99%
Sichuan	964.02	1120.89	116.27%
Guizhou	879.84	969.71	110.27%
Shanxi (Xi'an)	856.63	883.60	103.15%
Gansu	972.15	1366.72	140.59%
Ningxia	931.90	1254.73	134.64%
Xinjiang	1348.51	1831.84	135.85%

Note: Eastern regions are economically more developed regions in China; middle regions have the second best economic situations and conditions; and the western regions are the lowest economic areas. SOURCE: National Education Commission & Central Research Institute of VTE, *1999 Annual Report of Vocational Education*.

Education Commission (1996, 10 April), "The National Education Ninth Five-Year Plan and Development Plan toward 2010" [Quanguo Jiaoyu Shiye "Jiuwu" Jihua he 2010 Nian Fazhan Guihua], reprinted in *Policies and Regulations on Vocational Education 1992-1996* [Zhiye Jiaoyu Zhengce Fagui 1992-1996], Beijing Normal University Press, pp.144-158 (p.151).

Table 5.3
Budget Operating Expenses per-student in Different Sectors of Education
(Unit: RMB yuan)

	1994	1995	1996	1997	1998	1999
Tertiary education	5047.61	5442.09	5956.70	6522.91	6775.19	7201.24
General secondary education	514.37	561.86	624.37	671.91	705.12	736.55
-- Senior high	882.78	985.23	1088.05	1155.36	1248.25	1269.31
-- Junior high	450.37	492.04	549.24	591.38	610.65	639.63
Vocational education	840.62	897.42	1007.88	1084.80	1113.67	1204.10
Primary education	236.06	265.78	302.54	333.81	370.79	414.78

SOURCE: National Education Commission and Central Research Institute of VTE, *1999 Annual Report of Vocational Education*, p.62.

There were complaints that vocational schools were in worse position than their counterparts within the secondary VTE sector. The central government tried to promote the development of vocational senior high schools since 1980, but left it to the local education departments and industrial bureaus. However, until 1986 the majority of provinces and cities had not included normal expenditure of vocational schools into their government's budget.¹² Vocational schools felt that they were treated like a second cousin in terms of financial support from the government. Most of the schools relied on funding from specialized ministries, or by joint efforts of education departments and industrial bureaus or enterprises. Sometimes, the central and local governments provided some subsidies for the administration of vocational schools, with expectations that industrial departments or enterprises would provide funding and facilities for teaching and training. Very often, such funding was once only, or the amount varied from year to year. There was no continuity and guarantee for future supply, and the amount of funding was usually lower than general education, which was insufficient to meet the cost of school operation. According to Luo Shan, in the years between 1979 and 1985, there were over 100 vocational schools in Tianjin. The education funding could only meet 25% of their normal expenses.¹³ Compared with international standard, the Chinese government's funding in VTE is far below some of the developed countries. Lei Shiping's comparative studies show that Australian governments (commonwealth and states altogether) invest 50% of VET (vocational education and training) funding, German government 55%, New Zealand 70%, Denmark 67-75%. In contrast, Chinese government only

¹² Huang, Riqiang (1993), "A Brief Discussion on the Rapid Development of Vocational Senior High Schools in Beijing" [Beijing Shi zhi ye gao zhong xun su fa zhan yuan yin qian xi], *Fuzhou Teacher Training Specialized School Journal* [Fuzhou Zhi Zhuan Xue Bao] (social science edition), No.1, pp.67-71.

¹³ Luo, Shan (1988), op.cit., p.65.

provided 20% of operating expenses in vocational education.¹⁴

One may argue that the aim of VTE was to train specialists and skilled workers for industries and enterprises and therefore should be funded by industrial sectors and enterprises, as China is short of funding in all walks of life.¹⁵ The Chinese government also advocated that secondary VTE should be closely related to industries and business and must seek funding from enterprises. It tried to introduce the Germany's "Dual System" model and Japan's experience of vocational training into the Chinese VTE system.¹⁶ It adopted a policy that enterprises should be levied for having their future employees trained, and that large enterprises and business companies with more than 1,000 staff should be encouraged to run their own worker training schools or vocational schools. To promote this approach, the government conducted pilot projects in 6 cities and later introduced to 15 cities.¹⁷ However, this model was hard to popularize, because there was no proper mechanism established to oversee the funding from enterprises. Many of them regarded education and training not as their responsibility and tried to avoid investing in VTE.¹⁸ Some enterprises even charged vocational schools high fees when they were approached to provide field-practice place for VTE students.¹⁹ High profile and profit enterprises would rather and could easily recruit new workers from university and general senior high school graduates, or used cheap labour from the countryside, while low profit enterprises were struggling with money for development and therefore had difficulties to provide for school training.

¹⁴ Lei, Zhengping (2002), "The Deviation between the Targets and Measures of Current Vocational Education Policy of Our Country and the Correction" [Wo guo xianxing zhiye jiaoyu zhengce mubiao he shouduan de beili ji jiaozheng], *Journal of Henan Vocational and Technical Teachers College*, No.1, pp.5-7, reprinted in China RENDA Social Sciences Information Center, *Vocational and Technical Education*, 2002, No.4, pp.2-4.

¹⁵ Wang, Xiaohui (1995), "Some Views on the Development of China's Vocational Education" [Dui wo guo zhiye jiaoyu fazhan de ruo gan sikao], *Educational Research [Jiaoyu yanjiu]* (Beijing), No.6, pp.16-20.

¹⁶ In Germany, vocational education was run by joint efforts of vocational schools and enterprises. In Japan, vocational education was provided by education system, labour system and large enterprises.

¹⁷ Yang, Jin (1993), "Technical and Vocational Education in the People's Republic of China: Current Status and Proposals", *The Vocational Aspect of Education*, Vol. 45, No. 2, pp.135-143.

¹⁸ See Yang, Jin (1996), *The Interaction between the Socialist Market Economy and Technical and Vocational Education and Training in the People's Republic of China*, (PhD thesis), UK: The University of Manchester, p.281.

¹⁹ Education and Culture Committee of National Political Consultative Committee (1993, Jan), "Investigation Report on VTE in Beijing, Liaoning and Sichuan" [Guanyu Beijing shi, Liaoning sheng, Sichuan sheng zhiye jishu jiaoyu de diaocha baogao], reprinted in *Selected Documents on VTE 1992-1996*, Beijing: Beijing Normal University press, pp.239-248.

The author argues that the fundamental reason for the lack of government funding and lack of legislation on enterprises to invest in VTE is because of the Chinese government's elitist mentality. In China, although the government had been advocating for education for all, the focus of education on the elite or on ordinary masses was always an issue. The "elite" schools in China are usually referred as "key point" [*zhong dian*] schools, which focus on academic successful students and aim at educating them to be the future elite/cream of society. In the 1950s and 1960s, the Chinese government paid great attention to keypoint/elite schools (which actually included exclusive school for the children and grandchildren of national top leaders), and this practice was criticized and abolished during the Cultural Revolution decade.²⁰ In the 1980s, keypoint schools were re-created, with the justification that China needed to train high-level professional and specialized talents so as to catch up with the advanced countries in the world. Elite schools and universities attracted more funding from the government and were equipped with the best teaching resources and facilities.²¹ The government's strategy of diverting 50% or more of senior secondary students into the VTE stream was to ease the burden of general education, which aimed at leading students to university. This strategy was not unique in China, but applied in other developing countries, such as Egypt, as well.²² Although the Chinese government's rhetoric of VTE development for the country's economic development was loud, its focus of attention was still on general education. Priority was always given to the few at the expense of the many.

Until the end of 1980s senior secondary and tertiary education was tuition-free to Chinese young people. From mid 1980s, China's economic system was gradually shifting towards a market economy and educational policies were expected to change accordingly. To meet students' and parents' demand for further education after 9-year compulsory schooling, the government from 1985 began to allow universities and

²⁰Unger, Jonathan (1982), *Education under Mao*, New York: Columbia University press, pp.23-24, 111-114; Rosen, Stanley (1984) "New Directions in Secondary Education", in Ruth Hayhoe (ed.) *Contemporary Chinese Education*, Armonk, New York: M.E.Sharpe, pp.65-92 (pp.69-70).

²¹ Pepper, Suzanne (1984), *China's Universities*, The University of Michigan, pp.20-24.

²² See World Bank (1991), *Vocational and Technical Education and Training: A World Bank Policy Paper*, Washington, D.C., p.12.

colleges to enrol fee-paying students at a certain proportion of the total enrolment.²³ These students usually did not score enough marks in the national entrance examinations, but were enrolled as extra quota students, on condition that they pay full-fee for the course. From 1991 the national government adopted a full-fee policy for all new students in secondary VTE schools (except for teacher training).²⁴ This practice was the preparation for the tuition fee policy on all post-compulsory education students from 1993, when the Third Plenary Session of the Fourteenth Central Committee of the CCP passed “Decisions on Relevant Issues of Establishing a Socialist Market System”, which officially set China onto a market economy from the planning system. The Chinese government began to impose fees on all students of senior secondary education level and above. Tuition fees provided a considerable amount of school expenses. In 1993, tuition fees accounted for 14.53% of the total expenditure on secondary VTE. In 1994 the percentage increased to 15.36%, 17.86% in 1995, 19.04 in 1996, and in 1997 the percentage increased to 21.80%.²⁵

Another source of funding outside the government’s budget was “school-run enterprises” [*xiao ban qi ye*]. They include factories, business companies or farms.²⁶ A school-run enterprise had its permanent full-time staff and workers. It was the same or similar to other enterprises in terms of administration and operation. The “school-run enterprises” had actually been operated in schools since the “Cultural Revolution” or even before then, but they were called “school-run factories” [*xiao ban gong chang*], and “school-run farms” [*xiao ban nong chang*]. They were a part of the school curriculums aiming at developing students’ ideology of labour and working skills.

²³ Central Committee of CCP (1985, May 27), “Decisions on the Reform of Educational Structure by the Central Committee of the CCP”, *People’s Daily*, 29 May 1985, p.1 & 3.

²⁴ National Education Commission, National Bureau of Commodity Price, Ministry of Finance and Ministry of Labour (1991, 20 July), “Temporary Regulations on Fee Charges in Secondary VTE schools”, reprinted in Department of VTE of National Education Commission (1993), *Policies and Regulations on VTE, 1989-1992* [Zhiye Jishu Jiaoyu Zhengce Fagui 1989-1992], Beijing: Beijing Normal University Press, pp.329-330. This policy was addressed in the “Outlines of Chinese Educational Reforms and Development” in 1993.

²⁵ Based on National Education Commission and Central Research Institute of VTE, 1993, 1994, & 1997 *Annual Report on Vocational Education*.

²⁶ School-run enterprise was not something new, but rather it was started in the 1950s. Schools and universities set up factories or farms for students to receive labour education. See details in Chapter 2. During the Cultural Revolution, school-run factories were very popular. The author remembers working in the school-run factory binding books in primary school, and working in the school-run farm in secondary school in China. This kind of school-run enterprises was carried on into the 1980s when China’s economic reforms began, and these school-run factories became a means to generate income for schools.

(See Chapter 2.) In the post-Mao period, many of these factories were kept by schools and were transformed into “school-run enterprises”. In 1988 there were 1,458 school-run enterprises in Shanghai, producing profits of over 100 million *yuan* RMB.²⁷ This model was strongly supported by the central and state governments. To encourage schools to run “school-run enterprises”, the government provided incentives such as tax deduction or tax free for the profit made by “school-run enterprises”.²⁸ By the end of 1992, about one fourth of vocational schools and skilled worker schools and over 20% of secondary specialized schools had set up school-run enterprises. Their combined total net income was about 650 million *yuan* RMB.²⁹ In many cities, such as Dalian, Yantai, Suzhou, and Beijing, there were some schools that were doing extremely well in this area. Such schools not only had sufficient funding for school operation and development, but also were able to improve staff’s working and living conditions, which was very important for stabilising the teaching force and maintain staff quality.³⁰

The Chinese government was aware that developing secondary VTE must depend on multiple channels for funding. Social support must be explored. Commissioned training, self-funding and the levying of educational surcharges should play a role in the financing area. Henze observed the possibilities of such and predicted that these non-government models would eventually become the main sources of financial support.³¹ Unfortunately, this prediction did not come true by the end of the 20th Century. Government budget remained around 70% of the fiscal expenses on secondary VTE, and non-government sources remained under 30% of the total expenditure on VTE, although there was slight improvement year by year. (See Table 5.4.) During the 20 years’ development of secondary VTE from 1980 to 2000,

²⁷ Whiteside, T. & Minxuan Zhang (1992), “Recent Developments in Technical and Vocational Education in the Chinese Senior Secondary System”, *The Vocational Aspect of Education*, Vol. 44, No.3, pp.283-294.

²⁸ See Central Committee of CCP and State Council (1993, 13 Feb), “Outlines of China’s Educational Reforms and Development” [Zhongguo jiaoyu gaige he fazhan gangyao], reprinted in *Policies and Regulations on Vocational Education (1992-1996)*, Beijing: Beijing Normal University, pp.81-103 (p.251).

²⁹ Notes of “Forum on the Development of School-Run Enterprises by VTE Schools”, in *Selected Documents on VTE 1992-1996*, p.249-255.

³⁰ See Wang, Mingda (1993, 7 July), “Speech at the Work Conference of Developing School-Run Enterprises and Consolidating Practical Training Bases for Vocational and Technical Schools in the Whole Country” [Wang Mingda tongzhi zai quanguo zhiye jishu xuexiao dali fazhan xiaoban chanye, jiaqiang shixi jidi jianshe gongzuo zuotanhui shang de jianghua], reprinted in *Policies and Regulations on Vocational Education 1992-1996*, pp.255-263 (p.160-261).

funding remained as a major problem that was addressed in all of the government's important documents and reports. The funding problem was mainly due to the lack of attention and commitment by government leaders and industrial enterprises, and it was a knotty problem to handle.

Table 5.4
Expenditure on VTE from Varied Revenues Nationwide (not including teacher training schools) (Unit: 1 billion RMB yuan)

	1993	1994	1995	1996	1997
Total expenditure on education	105.994	148.878	187.795	226.234	253.173
Total expenditure on sec VTE	11.096	15.138	19.152	22.892	25.956
Fiscal expenditure on sec VTE	8.643	11.540	13.887	16.367	17.985
-- budget expenses	6.129	8.330	10.003	12.107	13.212
-- local tax	0.349	0.512	0.750	0.867	1.156
-- training fund from enterprises	1.472	2.101	2.385	2.610	2.800
-- earnings from school-run business	0.484	0.465	0.566	0.573	0.592
-- others	0.208	0.133	0.183	0.210	0.225
Fund by social organisations & individuals	0.055	0.149	0.227	0.264	0.317
Donation by society	0.381	0.432	0.691	0.725	0.665
Tuition and fees	1.612	2.325	3.420	4.358	5.659
Others	0.406	0.691	0.927	1.187	1.330

SOURCES: National Education Commission & Central Research Institute of VTE, 1993, 1994, & 1997 *Annual Report of Vocational Education*

5.2 Structural Problems

In the secondary VTE sector, there were a number of structural problems that affected the development. Firstly, secondary VTE lacked overall planning and coordination. Skilled worker schools were administered by departments of labour, secondary specialized schools were run by ministries of specialized fields and their local counterpart bureaus, and vocational high schools were operated by education departments and other bodies or jointly by education department and industries. There was a lack of communication between these administrative agencies in terms of overall planning for long-term human resource development and specific school curriculums. As a result, there were too many repetitions of similar types of schools. At the early period of the development in the 1980s, all the sectors of VTE paid great attention to a rapid increase of school numbers and enrolment to meet the target set by the central government, overlooking the negative effects of such development, such as

³¹ Henze, J. (1992), op.cit., p.124.

over-supply of some courses and competition for and lack of resources. The schools were usually of small size. In 1986, the average number of students at secondary specialized schools was 464. The average figures for skilled worker schools and vocational schools were 236 and 313 respectively.³² By 1996, the numbers increased to 1031, 429 and 465.³³ Although secondary specialized schools had improved substantially in this regard, the number of students in skilled worker schools and vocational schools were still small. Large or small in size, each school would need its own infrastructure -- teachers, facilities and equipment, administration staff, and so on. As a result, there was a great waste of resources and facilities while at the same time there was lack of funding for adequate resources and facilities. This problem was common in the whole country. In 1995, an investigation group from Beijing Education Department wrote in its report:

At the same time that there is a great lacking of investment (in vocational education), there is a serious situation that there is a great wastage of education resources. Due to the isolated departmental control of "small but comprehensive" and "big and comprehensive", the limited education resources (including schools in Beijing administered by central government departments) are unable to function to its best effect. In addition, many schools are small in size and have low education outputs.³⁴

Secondly, the Chinese government proposed to develop vocational schools in cities, especially at senior secondary level, but there were no clear policy and guidelines for the development. As Mette Thunø argues, the government's documents on developing vocational schools had very vague statements, and no national statements had been made concerning job definitions, contents of training, or qualification standards. This left the final decisions to the local authorities in rural and urban areas. "The policy towards vocational schools could be described as: teach whatever is needed locally, in whatever way you see fit, using whatever means you

³² Hou, Yan (1988), "Current situation, problems and countermeasures of secondary vocational and technical education" [Zhong deng zhi ye ji shu jiao yu de xian zhuang, wen ti ji dui ce], in Shouxin Li (ed.), *Research on Issues about Chinese Education Development* [Zhongguo jiaoyu fazhan wenti yanjiu], Beijing: China Planning Press, pp.136-149 (p.139).

³³ National Education Commission & Central Research Institute of VTE (1996), *Annual Report of Vocational Education*, p.12.

³⁴ Beijing VTE Investigation Group (1995), "Some Thoughts and Suggestions on Fully Developing and Reforming Vocational Education" [Guan yu dali fazhan, gaige zhiye jiaoyu de ruogan sikao yu jianyi], *Selected Essays for the First Annual Conference of Beijing VTE Association*, Beijing, pp.1-5.

choose.”³⁵ There were no standardised curriculum guidelines and teaching materials.³⁶ As the country was moving from central planning to a market economy, things were run by local demands. Anything that was profitable and would lead to immediate benefits to local economies, people would want to do. Anything that generated money, everybody was engaged in doing it. As a result, many schools chose to offer the same specialized courses. Foreign affairs services, finance and accounting, fashion designing and tailoring, early childhood education, domestic electrical appliances, etc were the hot courses to be offered. In Beijing, 34 schools offered courses of foreign affairs services, 20 schools offered finance and accounting, and 15 schools offered early childhood education.³⁷ In the first few years, as there was a great demand for these specialized workers and personnel, graduates from these schools found jobs easily. However, a few years later, there was a glut of graduates in these fields.

The establishment of vocational schools was aimed at offering training in vocational subjects not available at other institutions or factories, and in fields needed at local level. However, the government’s decentralised approach towards vocational schools created complications not only in the vocational school sector, but also in the entire secondary VTE system. Because there were no clear guidelines on the standards of training, and there was no coordination in curriculum management, vocational schools could produce unsatisfactory training outcomes of poor quality/low competence of students, and could disturb the job market with an over-supply of labour in certain specialized areas. Thus secondary specialized schools offering the same or similar courses that the schools specialized and expert in would be affected. Their graduates would have difficulty in finding jobs because of the oversupply of skilled manpower in their fields of training. What was more disturbing is that some schools often changed courses, and there was no stability in school operation. They adopted a profit-oriented approach and were not able to establish a solid foundation of their courses.³⁸

³⁵ Thunø, Mette (Winter 1991-1992), “Secondary Vocational Schools in Post-Mao China”, *China Information*, Vol.6, No.3, pp.44-56 (p.50).

³⁶ Ma, Zhaoqiu (1985), “Who is Responsible for the Teaching Materials in the Vocational Senior High Schools?” [Zhiye gaozhong de jiaocai you shei guan?], *People’s Daily*, 20 November, p.5.

³⁷ Hou, Yan (1988), *op.cit.*, p.144.

The third problem regarding secondary VTE structure was that schools were run on the length of courses, rather than the content of studies. All the three types of schools offered courses ranging from 2 to 4 years. This was partially due to the reason that human resource management was also based on the academic credentials that were based on the number of years of education that an individual had received. In addition, curriculums were usually pre-planned based on the availability of teachers, and course content was usually narrowly focused. This supply-oriented approach that had been applied for over 30 years in the planning economy was not suitable for the market demands in the new economic system. Students graduating from such courses were not prepared for wider range of skill requirement or a sound knowledge foundation to adapt to job requirements. If there was any change in the labour market, it was very hard for students to adjust to the changes and demands, and it was also difficult for school to change half way through the course. In 1965, Phillip Foster questioned the feasibility of school-based vocational education and argued that this type of vocational education would result in producing “human waste”. Foster asserted that “schools are remarkably clumsy instruments for inducing prompt large-scale changes in underdeveloped areas.”³⁹ What the Chinese government was trying to do in the secondary VTE development during the 1980s and 1990s was based upon human capital theory. According to Foster, however, large-scale planned development will not keep abreast with the fast changing labour market.

5.3 Entering Depression

Secondary VTE in Chinese cities fell into depression from late 1990s. In 1999, the national average level of entrants in senior secondary VTE schools began to fall below 50% of the total new enrolments in senior secondary schools (see Table 4.3). According to statistics (see Table 5.5), the 1999 entrants in secondary specialized schools increased from the previous year in 18 provinces but decreased in 13 provinces and municipal cities. The situation was worse in vocational senior high schools, increasing in only 7 provinces and decreasing in the other 24 provinces and

³⁸ Du, Min'er (1996), “Strengthen Research on the New Problems in the Adjustment of Study Fields” [Jia qiang dui zhuan ye tiao zheng zhong xin wen ti de yan ju], *Chinese Vocational & Technical Education* (Beijing), No.1, pp.24-25.

municipal cities. (See Table 5.6.) In junior secondary vocational schools, entrants were also decreased by a great extent across the country, and some provinces had around 50% or over reduction.⁴⁰

Table 5.5
Entrants in Secondary Specialized Schools in Three Designated Geographical and Economical Development Regions

Eastern Region	1999	Increase from 1998 (%)	Middle Region	1999	Increase from 1998 (%)	Western Region	1999	Increase from 1998 (%)
Beijing	33,744	-7.76	Shanxi	43,640	7.85	Sichuan	62,264	-14.72
Tianjin	20,005	-16.13	Inner Mongolia	35,304	34.05	Guizhou	34,167	22.89
Hebei	65,722	4.2	Jilin	28,151	-14.10	Yunnan	26,816	-10.05
Liaoning	39,316	2.41	Heilongjiang	40,237	13.19	Tibet	923	33.57
Shanghai	33,812	-19.59	Anhui	71,707	23.71	Shaanxi	37,835	19.37
Jiangsu	112,190	-13.16	Jiangxi	48,579	29.30	Gansu	20,240	10.50
Zhejiang	46,186	-7.88	Henan	76,097	-9.34	Qinghai	3,000	13.46
Fujian	39,461	20.89	Hubei	75,241	-24.08	Ningxia	4,306	21.50
Shandong	106,443	10.36	Hunan	70,043	-6.63	Xinjiang	26,320	27.64
Guangdong	73,398	8.11				Chongqing	22,028	-22.30
Guangxi	37,416	2.55						
Hainan	6,892	-0.58						
Total	614,585	-1.31	Total	488,999	0.10	Total	237,899	0.68

SOURCE: *Vocational Education Annual Report, 1999*, p.46 & 47.

Table 5.6
Entrants in Senior Secondary Vocational Schools in Three Designated Geographical and Economical Development Regions

Eastern Region	1999	Increase from 1998 (%)	Middle Region	1999	Increase from 1998 (%)	Western Region	1999	Increase from 1998 (%)
Beijing	31,004	-21.69	Shanxi	41,091	-3.97	Sichuan	64,416	-11.17
Tianjin	23,790	-14.31	Inner Mongolia	32,658	-7.37	Guizhou	17,040	-4.49
Hebei	152,189	-9.99	Jilin	39,510	-6.84	Yunnan	36,985	-1.07
Liaoning	55,030	-26.08	Heilongjiang	27,287	24.17	Tibet	467	150.00
Shanghai	28,601	-25.13	Anhui	61,003	1.84	Shaanxi	83,076	2.59
Jiangsu	58,731	-26.90	Jiangxi	54,627	-6.83	Gansu	20,414	9.68
Zhejiang	110,378	-7.23	Henan	167,436	-27.88	Qinghai	4,276	-17.31
Fujian	71,717	16.78	Hubei	38,083	-14.96	Ningxia	6,085	-4.69
Shandong	143,377	-10.26	Hunan	83,365	-19.34	Xinjiang	10,653	-21.90
Guangdong	79,538	4.88				Chongqing	29,196	-24.16
Guangxi	27,836	-14.98						
Hainan	3,924	25.81						
Total	786,115	-10.69	Total	545,060	-17.39	Total	272,608	-6.42

SOURCE: National Education Commission and Central Research Institute of VTE, *Vocational Education Annual Report, 1999*, p.44.

³⁹ Foster, P. (1965), "The Vocational School Fallacy in Development Planning", in C. Arnold Anderson & Mary Jean Bowman (eds.), *Education and Economic Development*, London: Aldine Publishing Company, pp.142-166 (p.144).

⁴⁰ See National Education Commission and Central Research Institute of VTE, *Vocational Education Annual Report, 1999*, p.42.

The statistics above show that entrants in the eastern regions (where most provinces and the municipal cities were economically advanced) as well as entrants in the relatively developed provinces in the middle regions had dropped dramatically. These figures were contrary to the government planning in its 1996 document that the percentage of secondary VTE school enrolments in these provinces should be further increased to reach the goal of 70%.⁴¹ In 2000, the average entrants number in all the three types of secondary VTE schools in the country dropped again, while entrants in general senior high schools kept increasing.⁴² Table 5.7 gives the detailed figures of entrants in secondary specialized schools and general senior high schools in all the provinces/autonomous regions and municipal cities. In the eastern and middle regions, where secondary VTE entrants were required to increase according to the national government's document, actually decreased further. Xing Hui summarizes newspaper reports of such problems:

*Vocational schools have incurred such unprecedented situations in history as "hesitating" [pai huai], "withering" [wei suo], "sliding" [hua po], "being in all-time low position" [di gu], "falling into a predicament" [kun jing], "moving backwards" [dao tui], and so on.*⁴³

Researchers such as Shi Weiping, Xu Guoqing and Huang Kexiao, argue that secondary VTE in urban China was facing serious problems in operation and some schools were collapsing.⁴⁴

⁴¹ This plan was made in "The National Education Ninth "Five-Year Plan" and Development Plan toward 2010" [Quanguo jiaoyu shiye "Jiuwu" jihua he 2010 nian fazhan guihua] issued by the National Education Commission on 10 April 1996, reprinted in *Policies and Regulations on Vocational Education 1992-1996* [Zhiye jiaoyu zhengce fagui 1992-1996], Beijing Normal University Press, pp.144-158 (p.151).

⁴² See *2001 China Statistics Yearbook* at <http://210.72.32.26/tjsj.ndsj/2001c/t2006c.htm> & <http://210.72.32.26/tjsj.ndsj/2001c/t2015c.htm>, accessed on 20/09/2004.

⁴³ Xing, Hui (2001) "On the relationship between senior middle schools and secondary vocational school and the tactics for their coordination and development", in *Hebei Normal University Journal* (Shijiazhuang, China), No. 4, pp.78-84, republished in *Occupational and Technical Education*, No.1, 2002, pp.19-25.

⁴⁴ Huang, Kexiao (2001), "We Should Think over the Tactics about the Deteriorating Quality of New Students in Secondary Vocational Schools" [Ying dui zhongzhixiao shengyuan zhiliang xiajiang zhi celue sikao], *Vocational Education Report* [Zhijiao Tongxu] (Changzhou Technical Teacher Training Institute Journal), July, pp.4-6, republished in China RENDA Social Sciences Information Center, *Vocational and Technical Education*, 2001, No.6, pp.29-31; Shi, Weiping & Xu, Guoqing (2001), "Reflection and Discussion on the school operation of secondary vocational schools in Urban China" [Dui woguo chengshi zhongzhi banxue moshi de fansi yu tansuo], <http://www.edu.cn/20011107/3008705.shtml>, accessed 15/09/2004.

Table 5.7
Entrants in Specialized Secondary Schools and Urban General Senior High Schools in Three Designated Geographical and Economical Development Regions

Province/Municipal City		Specialized Secondary Schools*			General Senior High Schools**		
		1999	2000	Increase (%)	1999	2000	Increase (%)
Eastern Region	Beijing	34,294	27,816	-18.89	38,913	43,652	12.18
	Tianjin	22,642	20,209	-10.75	24,847	25,323	1.92
	Hebei	85,156	61,751	-27.48	75,131	81,521	8.51
	Liaoning	42,839	30,399	-29.04	81,850	84,514	3.25
	Shanghai	35,302	29,978	-15.08	53,798	51,980	-3.38
	Jiangsu	124,574	106,369	-14.61	56,101	64,600	15.15
	Zhejiang	51,565	35,425	-31.30	67,581	75,958	12.40
	Fujian	43,034	34,819	-19.09	32,518	62,593	92.49
	Shandong	122,331	93,493	-23.57	143,694	173,340	20.63
	Guangdong	86,906	68,358	-21.34	77,596	90,734	16.93
	Guangxi	48,471	40,990	-15.43	25,678	31,528	22.78
Hainan	10,254	10,951	6.80	4,029	4,455	10.57	
Middle Region	Shanxi	62,146	45,379	-26.98	47,544	58,836	23.75
	Inner Mongolia	41,182	30,195	-26.28	38,710	51,544	33.15
	Jilin	33,470	22,569	-32.57	54,467	59,895	9.97
	Heilong-jiang	46,585	35,473	-23.85	61,428	68,548	11.59
	Anhui	84,723	49,191	-41.94	50,011	62,593	25.16
	Jiangxi	62,482	45,379	-27.37	39,682	49,190	23.96
	Henan	113,799	99,713	-12.38	84,822	104,878	23.64
	Hubei	89,643	62,418	-30.37	142,539	168,541	18.24
	Hunan	81,239	63,625	-21.68	63,422	78,537	23.83
Western Region	Sichuan	79,840	60,854	-23.78	61,647	68,657	11.37
	Guizhou	44,124	38,447	-12.87	20,268	25,191	24.29
	Yunnan	36,370	37,636	3.48	20,514	23,868	16.35
	Tibet	1,664	2,957	77.70	2,743	3,247	18.37
	Shaanxi	50,744	44,352	-12.60	52,083	62,425	19.86
	Gansu	25,067	29,898	19.27	25,288	28,861	14.13
	Qinghai	4,050	4,781	18.05	4,310	4,733	9.81
	Ningxia	6,003	7,973	32.82	5,458	6,534	19.71
	Xinjiang	35,971	38,781	7.81	32,517	37,241	14.53
Chongqing	27,291	23,095	-15.38	30,051	35,144	16.95	
Total	614,585	1,633,761	-18.85	1,519,240	1,764,846	16.17	

*Including teacher training schools.

** Only including schools in cities, not including schools in counties.

SOURCES: *China Statistical Yearbook 2000 & 2001* [Zhongguo tongji Nianjian 2000, 2001] at <http://www.stats.gov.cn/ndsj/zgnj/2000/T20c.htm>; <http://210.72.32.26/tjsj/ndsj/2001c/t2026c.htm>; <http://www.stats.gov.cn/ndsj/zgnj/2000/T22c.htm>; <http://210.72.32.26/tjsj/ndsj/2001c/t2028c.htm>, accessed on 2/09/2004.

While the number of VTE enrolment was falling, there was a shortage of skilled workers across the country. According to 1994 statistics, only 2.35% of the work force in China had credentials of undergraduate sub-degree (diploma) or higher, and only another 36.18% had received senior secondary education (including general senior secondary education and secondary VTE).⁴⁵ A survey of Beijing skilled

⁴⁵ Li, Lanqing (1996, 19 June), "Conscientiously Carry out 'Vocational Education Law', Try Our Best to Open up a New Situation in Vocational Education Work" [Ren zhen guan che "zhi ye jiao yu fa", nu li kai chuang zhi ye jiao yu gong zuo de xin ju mian] (speech given at the National Conference on Vocational Education Work), reprinted in Department of VTE of the National Education Commission (ed.), *Policies and Regulations on Vocational Education, 1992-*

workers in 1997 reveals that 75% were junior level skilled workers, 20.7% were intermediate level and 4.3% were senior level. Of all the skilled workers, 44.6% had only an education level of junior secondary education or lower. Only 18% had received secondary VTE.⁴⁶ Shanghai government conducted a survey among 60 manufacturing enterprises in 2001, which showed that only 3% of skilled workers were under the age of twenty-two, 40% between the age of 23 to 35, and there was not even one senior level technician under the age of 36 in the entire city.⁴⁷ In Shandong Province, there was a great shortage of skilled workers, especially at senior and intermediate levels. They only accounted for 0.27% and 2.31% respectively of the entire industrial work force.⁴⁸ This situation indicates that the CCP government's 1985 planning of human capital development through secondary VTE had failed. What appear to be the main reasons for this depressing situation are the inherent bias against VTE in government's attitude and ineffective implementation of government policies. The funding problems discussed earlier in this chapter are a perfect example. Teachers, students and parents perceived secondary VTE as a "dump" for "failures". Although the government documents stated secondary VTE graduates were allowed to sit for tertiary entrance examinations, few candidates could be successful, and thus secondary VTE was regarded as terminal education, which could not provide students a good career and social status. There was also a serious problem with employment opportunity for secondary VTE graduates, even though the government set a policy of "training before work". Employers often gave preference to university graduates and general secondary school graduates. (See more discussions in Chapter 8.)

Towards the end of the 1990s, China was preparing to join the World Trade Organization (WTO). The government realized that China needed to catch up with advanced countries in science, technology and education. Only in this way could

1996 [Zhiye jiaoyu zhengce fagui, 1992-1996], Beijing Normal University Press, pp.162-173 (p.164).

⁴⁶ Di, Hongxun, (2002), "An Analysis of the Needs for Skilled Personnel and an Discussion on the Strategy of Vocational Education Development" [Rencai xuqiu fenxi yu zhiye jiaoyu fazhan zhanlue tantao], *Vocational and Technical Education* (Changchun), July, pp.17-23, republished in China RENDA Social Sciences Informational Centre, *Occupational and Technical Education*, 2002, No.4, pp.5-11.

⁴⁷ Luo, Xinyu (2002), Luo, Xinyu, "Skilled workers schools in Shanghai have a empty house" [Shanghai ji xiao men ting leng luo], in *Chinese youth on line* [Zhong qing zai xian], <http://www.edu.cn/20020128/3018921.shtml>, accessed on 5/05/2002.

⁴⁸ Liu, Bin (2001), "The 'Cold' Thinking on Vocational Education" [Zhiye jiaoyu "leng" sikao], <http://www.edu.cn/20011122/3011227.shtml>, accessed on 05/05/2002.

China be competitive on the international market, and to do so China needed a highly skilled work force. From then on, higher VTE began to attract attention of the government. In 1998, the Ministry of Education (MOE) launched a project called “Gradually establishing a fly-over between general higher education and VTE” in its “Action Plan of Vitalising Education towards the 21st Century”. On 13 June 1999, the Central Committee of the CCP and the State Council issued “Decisions on Deepening Educational Reform and Promoting Qualities/Competence Education on a Full Scale”. It suggested that China must vigorously develop higher vocational education in all possible ways, and this included linking different types of education together and providing school graduates with opportunities of further education. The document addressed that VTE institutes may adopt various ways to enrol graduates from both general senior high schools and secondary VTE schools.⁴⁹ For secondary VTE graduates, who had slim chance to go into university before, this document seemed to give them hope. Nevertheless, the deep-rooted bias against vocational education in Chinese people’s mind was not easy to change. Even though higher VTE is rated as tertiary education, it is perceived as “vocational”, which is secondary to general education and of lower-status, according to the status-conscious Chinese society. (See more discussion in Chapter 8.)

In July 2002, the State Council held national conference on vocational education, and in August, the Council issued a document entitled “Decisions on Promoting Reforms and Development of Vocational Education on a Full Scale”. The document once again commented:

The reforms and development of vocational education still are faced with some problems. Some local areas lack adequate understanding on the importance of developing vocational education; there is not enough investment, foundation is weak, condition and facilities of schools are poor; administration system, school operation system, and quality of education all do not meet the needs of economic construction and social development; pre-employment training regulations have not been effectively carried out, and this negatively affects the enthusiasm of individuals to receive (vocational) education; large differences and discrepancies in development

⁴⁹ Central Committee of the CCP and State Council (1999, 3 June), “Decisions on Deepening Educational Reform and Promoting Qualities/Competence Education on a Full Scale” [Zhonggong zhongyang, guowuyuan guanyu shenhua jiaoyu gaige quanmian tuijin suzhi Jiaoyu de jue ding], <http://www.edu.cn/20012121/19629.shtml>, accessed 24/02/2004.

*between regions/areas, and between cities and rural areas.*⁵⁰

5.4 For or Against School-Based Secondary VTE

To promote school-based VTE or to develop general education has been debated for many decades in the international arena. Some scholars held misgivings toward vocational track. They found problems with secondary VTE system in developing countries, such as Ghana, Thailand, Columbia, Tanzania and Egypt.⁵¹ The World Bank had assisted a great deal of “diversified” secondary education in the developing countries in the 1960s to 1970s (through agricultural, technical, commercial and home economics options in regular secondary schools), but by mid 1980s it had decided that this style of school-based vocationalization was not effective.⁵² From the mid 1990s, some Chinese academics began to question the effectiveness of formal secondary VTE that was run on a large scale. In 1996 Liu Jinghui and Zhao Zhiqun published an article discussing the problems of effectiveness of school-based secondary VTE system.⁵³ Shi Weiping, a scholar from East China Normal University, strongly advocated that China should move VTE to post-secondary education.⁵⁴ At the same time, some other Chinese researchers supported the government’s policy that Chinese vocational education should be focused on secondary level.⁵⁵ Liu Chunsheng, a researcher of Tianjin University, quoted a survey result in support of his argument. In 2000, a study survey on 1,326 recruiting work units and 23,316 job seekers who had

⁵⁰ State Council (2002, 28 August), “Promoting the reforms and development of vocational education on a full-scale” [Da li tui jin zhiye jiaoyu gaige yu fazhan], <http://www.edu.cn/20020925/3069022.shtml>, accessed 6 November 2002.

⁵¹ See Phillip Foster (1965), op.cit., p.146; Psacharopoulos, George & Loxley, William (1985), *Diversified Secondary Education and Development, evidence from Colombia and Tanzania*, Baltimore: The Johns Hopkins University Press, pp.8-35; Metcalf, David H. (1985), *The Economics of Vocational Training: past evidence and Future Considerations*, Washington D.C.: The World Bank, p.28; Blaug, Mark (1973), “Forecasting All Occupations - Thailand”, in Bashir Ahamad, and Mark Blaug (eds.), *The Practice of Manpower Forecasting: A Collection of Case Studies*, Amsterdam: Elsevier Scientific Publishing Company, pp.106-130, p.129; World Bank (1991), *Vocational and Technical Education and Training: A World Bank Policy Paper*, Washington, D.C.: The World Bank, p.12.

⁵² World Bank (1991), *ibid.*, p.64; King, Kenneth (1993), “Technical and Vocational Education and Training in an International Context”, *The Vocational Aspect of Education*, Vol 45, No. 3, pp.201-216.

⁵³ Liu, Jinghui & Zhao, Zhiqun (1996), “Several Basic Issues in Vocational Education of Our Country” [Guanyu wo guo zhiye jiaoyu de ruo gan jiben wenti], *Chinese Vocational and Technical Education* (Beijing), No.1, pp.34-37.

⁵⁴ Shi, Weiping (2001), *Comparative Vocational & Technical Education* [Bijiao zhiye jishu jiaoyu], Shanghai: East China Normal University Press, pp.352-354.

⁵⁵ See Hao, Keming (2000), “A few issues on developing vocational education with full stride”, in *Educational Research* (Beijing), Vol. 21, No. 9, pp.3-8; Liu, Chunsheng (2002) “China Really Don’t Need Secondary Vocational Education in the 21st Century?”, in *Vocational and Technical Education* (Changchun) No. 4, pp.5-9, reprinted in *Occupational and Technical Education*, 2002, No.4, pp.22-26.

registered in job introduction agencies in Beijing reveal the following statistics in Table 5.8:

Table 5.8
Demand and Supply of Personnel with Different Educational Backgrounds

	Full uni degree and above	Higher VTE	Secondary VTE	Gen Secondary (jnr & snr)
Employers (demand)	0.22%	13.84%	79.07%	6.87%
Job seekers (supply)	2.94%	14.78%	55.12%	17.16%

SOURCES: Liu, Chunsheng (2002) "China Really Don't Need Secondary Vocational Education in the 21st Century?", in *Vocational and Technical Education* (Changchun) No. 4, pp.5-9, reprinted in China RENDA Social Sciences Informational Centre, *Occupational and Technical Education*, 2002, No.4, pp.22-26.

Liu argued: "Even in Beijing, where economy is highly developed and there are many high-tech enterprises, demand for secondary VTE graduates is close to 80%. Then, there will be no less demand in less developed areas. Moreover, with the further development of a market economy in China, enterprises will base their human resource policy on low costs. Undoubtedly, the secondary VTE development will make a great contribution to rationalising demand and supply of occupations and employment and to enhance full employment of society."⁵⁶ Liu supported his argument by also quoting human resource structures of three large groups of joint venture enterprises in three cities. They are Suzhou Industrial Compound, which was set up by joint efforts of Chinese government and Singapore government, Beijing Zhongguancun, which is called the "Silicon Valley" in China, and Tianjin Samsung Enterprise. (See Table 5.9.) Liu argued that the percentage of secondary VTE graduates in modernized enterprises showed that at present and even in future, China must continue to develop secondary VTE. The fact that Western advanced countries also relied on developing secondary VTE in their modernization also demonstrated the importance of secondary VTE. The reason that West Germany and Japan were able to quickly restore their economy from the debris after the Second World War and to realise modernization at a fast speed was also due to this 'secret weapon' of vocational education."⁵⁷

⁵⁶ Liu, Chunsheng (2002), "China Really Don't Need Secondary Vocational Education in the 21st Century?" [21 shiji zhongguo zhen de bu xuyao zhongdeng zhiye jiaoyu le ma?], *Vocational and Technical Education* (Changchun) No. 4, pp.5-9, reprinted in China RENDA Social Sciences Informational Centre, *Occupational and Technical Education*, 2002, No.4, pp.22-26.

Table 5.9
Educational Backgrounds of Employees in 3 Large Enterprise Groups (2000)

	Suzhou (164 enterprises with 18,000 employees)	Beijing "Silicon Valley"	Tianjin Samsung Enterprise (1,595 employees)
Tertiary diploma & above	18.4%		23.58%
Secondary VTE	47.77%	48%	54.24%
General secondary	21.7% snr secondary 12.06% jnr secondary		22.13%

SOURCE: Liu Chunsheng (2002), "China Really Don't Need Secondary Vocational Education in the 21st Century?" [21 shiji zhongguo zhen de bu xuyao zhongdeng zhiye jiaoyu le ma?], in *Vocational and Technical Education* (Changchun) No. 4, pp.5-9, republished in China RENDA Social Sciences Information Centre (2002) *Vocational and Technical Education*, No. 4, 2002, pp.22-26.

Research findings have affirmed Liu's argument that fast economic development in Western countries was due to secondary VTE. From the 19th Century to the 20th Century it was the development of vocational education, which was mainly in the form of apprenticeship system to train skilled labour, that helped the Western European countries such as the UK, Germany, France, and the USA to realise industrialization successfully.⁵⁸ In the 1970s and 1980s it was also the secondary vocational education that helped the Four Little Dragons in Asia (Taiwan, South Korea, Hong Kong, and Singapore) in their rapid economic growth, which brought a great impact on the world economy.⁵⁹ It should be also noted that "in many parts of West Europe it is precisely the upper vocational and technical school streams that have been expanding faster than the general streams in the late 1980s and early 1990s."⁶⁰ As Kenneth King argues emphatically that "(t)o an important extent this expansion of upper secondary technical education is in these OECD countries clearly linked to the need for larger numbers of technicians to operate in the rapidly changing structures of work."⁶¹

However, one may have to study carefully the different situations of these countries' development and their social, political and educational systems and conditions. In many developed countries, secondary vocational and technical

⁵⁷ Liu, Chunsheng (2002), op.cit.

⁵⁸ Goozee, Gillian (2001), *The development of TAFE in Australia*, Adelaide: NCVER, p.11; Shi, Weiping (2001), op.cit., pp. 20-26.

⁵⁹ Morris, Paul (1996) "Asia's Four Little Tigers: a comparison of the role of education in their development" in *Comparative Education*, Vol. 32, No. 1, pp.95-109.

⁶⁰ Jallade, J.P. (1994) Vocational Education and Training: West Europe, in *International Encyclopaedia of Education (IEE)*. 2nd edn, Oxford: Pergamon, cited in King, Kenneth (1993), "Technical and Vocational Education and Training in an International Context", *The Vocational Aspect of Education*, Vol 45, No. 3, pp.201-216., p.203.

⁶¹ King, K.(1993), *ibid.*, p.203.

education and training was closely linked with or provided by private agencies or business enterprises. In Japan, business and enterprises played a major and important role in vocational education and training.⁶² In Germany, technical training was provided by enterprises, while students learn general knowledge part-time at school. It should also be noted that, in the four Asian Little Dragons for example, secondary vocational schools were only a small proportion in secondary education system. In Hong Kong the percentage of students in secondary vocational/technical schools only increased from 4% in 1969 to 6.23% in 1979 and 8.96% in 1989, despite the fact that the government in 1975 had declared its policy on enrolment of 40%.⁶³ Morris explains the reasons that it was because “the government allowed market forces and parental expectations primarily to determine the distribution of pupils. In Hong Kong’s case, it also appears that the courses provided by training agencies on behalf of groups of employers constituted the form of technical education which was most appreciated both by aspiring employees and by employers precisely because it focused on basic applied skills which were immediately usable in employment situations.⁶⁴ From all these cases, one thing in common is that VTE was to a large extent relied on agencies outside the school system with close links to local industries, or on business enterprises themselves. In China’s case, one of the problems for the stagnation of secondary VTE is that very few business companies or enterprises were willing to be involved in providing training. Therefore, schools without adequate specialized expertise were unable to provide effective training to students, and consequently it was difficult for graduates to find employers who appreciated their training.

The issue of “for” or “against” secondary VTE should also be discussed in the political context. Hallak points out:

*Education is a major institution which can contribute to democracy and equality... and the problem of inequality of educational opportunity, be it geographical, sexual, and/or socio-economic, is closely linked to inequality of distribution of income, cultural goods, and political power.*⁶⁵

⁶² Shi, Weiping (2001), op.cit., pp.153-174.

⁶³ Morris, Paul (1996), op.cit.

⁶⁴ Ibid.

⁶⁵ Hallak, Jacques (1990) *Investing in the Future: Setting Educational Priorities in the Developing World*, Oxford: Pergamon Press, p.49.

In history, technical education was developing fast not only to meet the demand of industrialization, but also to respond to the social demand of equal opportunity. In the early years, schools were basically for the elite in the Western society. In the 17th Century, worker's schools or technical schools began to be set up for the poor children. Until the end of the 19th Century technical schools or apprenticeship systems were playing an important role in providing training for the working class.⁶⁶ However, as economy developed further, labour-intensive mass-production industries declined gradually, while more and more tertiary industries such as commerce and trade grew. Therefore, areas of training and education provided by schools must also be changed. After the Second World War, the economies of those advanced countries were rehabilitated, and education was also revived. As a result, secondary education developed further, and tertiary education enrolments also increased substantially. Hence, vocational schools began to be seen as a place for those less-able students, and social bias and inequality followed. In response to this situation, many industrialized countries began to close down secondary vocational education or shift the vocational education to post-secondary education level. In the 1960s and early 1970s, social ideology of equal opportunity influenced political and social development in Australia.⁶⁷ State education authorities abolished streaming and the distinctions between various secondary schools, and moved vocational education and training to post-secondary school level.⁶⁸ In the United States, VTE is also provided mainly at the post-compulsory education level. In North European countries, public-funded vocational education is delivered through upper secondary comprehensive schools or colleges such as in Sweden and UK, or through courses delivered in specialist vocational secondary institutions such as in Denmark, Finland, France and The Netherlands, but at the same time work-based apprenticeship (either government-led as in the UK or through social partnerships as in Austria, Germany and The Netherlands) are more heavily reliant on significant financial contributions from employers and trainees.⁶⁹ From the late 1960s, Swedish vocational education and training went through reforms from industrial-education-based to general-education-

⁶⁶ Shi, Weiping (2001), op.cit., p.12.

⁶⁷ Goozee, Gillian (2001), op.cit., p.22.

⁶⁸ Abrahart, Alan & Tzannatos, Zafiris (2000), "Australia", in Indermit S.Gill, Fred Fluitman, and Amit Dar (eds.), *Vocational Education and Training Reform*, Oxford University Press, pp.465-484.

based. This was to make vocational education and training more general thus enabling students to develop the flexibility they would require in a rapidly changing labour market, to adjust social biases by attracting prospective students from upper social groups, and to ensure access to upper secondary schooling for all youngsters regardless of sex, social and economic background and locality of residence.⁷⁰

These international experiences are good examples for China to learn. With the development of market economy, inequality of distribution of income, social status, political power and educational opportunities became more and more obvious in China. People with political power and money became richer. They sent their children to elite academic schools, where the children were prepared for entry to tertiary education. Even though some of their children did not score high enough marks in junior secondary schooling, they had money to send them to academic senior secondary schools by paying full fees and “donating” large sums of money to school. Each senior high school in Chinese cities had a quota of full-fee paying students as a part of the school’s revenue raising mechanism. Some parents of full-fee paying students were not rich, but for their children’s future, they borrow large sums of money from relatives and friends to support their children through the 3 years’ senior secondary schooling. This is because that having a tertiary education degree was so important for a young person’s future.⁷¹ In contrast, many young people with relatively low marks but from lower socioeconomic backgrounds were pushed into the VTE track, with understanding that they would be at the bottom of the urban society for life. They were not even given a chance at the later stage of personal growth and development to lift up their opportunities for career advancement. Although the government policy allowed them to sit in tertiary entrance exams, they were aware that they were in no position to compete with general academic school graduates. From an equal opportunity point of view, streaming system in upper secondary education would lead to serious social disparities, and would create psychological problems for young people at early stage of their life.

⁶⁹ Curtain, R. (2001), *An Entitlement to Post-compulsory Education: International Practice and Policy Implications for Australia*, Adelaide: NCVER, p.10.

⁷⁰ See Lindell, Mats & Abrahamsson, Kenneth (2002), *The Impact of Lifelong Learning on Vocational Education and Training in Sweden*, Adelaide, Australia: NCVER. p.4.

⁷¹ Xue, Xiaohe (2003) “Market System Can Not Be Brought into Education: An Interview with Ding Ningning, Director of Social Studies Division of Centre of Development Studies of the State Council”, <http://www.cnd.org/my/modules/wfsection/article.php%Farticleid...>, 24/09/2003.

Teenagers around the age of 14 or 15 usually do not have a clear idea about which direction of career they would choose. Their general knowledge is also not adequately developed. Deciding their career future at this time and training them in a narrow field for future employment is not helpful for their all-rounded development in life. Too early streaming students in education for future employment would be harmful for the student's life development. According to John Dewey, the only adequate training *for* occupations is training *through* occupations. He stated:

*The dominant vocation of all human beings at all times is living – intellectual and moral growth. ... To predetermine some future occupation for which education is to be a strict preparation is to injure the possibility of present development and thereby to reduce the adequacy of preparation for a future right employment.*⁷²

By streaming students into two streams that basically decide their future career has tremendous psychological impact on them. As secondary VTE in China was perceived as terminal education, students streamed into this track would have slim chance to get good job and high social status. Thus social opinions on secondary VTE is negative. From the time students entered the school, they would have low self-esteem because of this. (See Chapter 8.) This is one of the reasons for the decline of enrolments in secondary VTE schools in the late 1990s. However, the social bias against vocational education is not a unique situation in China, research findings indicate that it is a universal problem. King describes vocational training was once perceived by the Western society as something “for the working-class children”, or was “thought by the ruling powers to be particularly appropriate to subject peoples”.⁷³ Australian researchers have also found the traditional perception that vocational education is for people who “don't quite make it” or who are not academically competent “still exists very much”, and that TAFE College “is a second-best alternative to university”.⁷⁴ Blaug describes vocational secondary schools in Thailand as “unpopular with both parents and students and are generally regarded as providing

⁷² Dewey, John (1916), *Democracy and Education, An Introduction to the Philosophy of Education*, New York: Macmillan, pp. 362-363.

⁷³ King, K. (1993) “Technical and Vocational Education and Training in an International Context”, *The Vocational Aspect of Education*, Vol. 45, No.3, pp.201-216.

a second-best chance of schooling at the secondary level”.⁷⁵ In South Korea and Taiwan, where economy was developing fast due to the large-scale program of technical and vocational education, students, parents and teachers still consider it to be “a second-best alternative” “despite the promotion of technical/vocational schooling by governments”.⁷⁶

Human capital theory claims that education and training help individuals to increase their skills in employment and bring to them higher returns, and also help to increase productivity for firms.⁷⁷ However, development economists argue that there are no set rules for the ratios of vocational and general education. One of them asserts that “(i)n most school systems these ratios are assigned on faith or through tradition or through political necessity.”⁷⁸ In terms of effects of vocational education in producing economic returns for individuals and enterprises/employers, Belfield quotes research results that it “is less clear and evaluations of training have not proved definitive”.⁷⁹ Psacharopoulos and Loxley’s case studies of diversified secondary education in Colombia and Tanzania also was not able to provide evidence that the measurable monetary benefits of vocational education are greater than those of conventional education. They conclude that *All* forms of secondary education increase the productivity of the worker, but vocational schools have not yet proven better in this respect than conventional schools.”⁸⁰ These research results influenced the World Bank’s policy on lending. In 1991, the World Bank suggested that vocational and technical education and training are no more effective than academic secondary education in enabling graduates to enter wage or self-employment,⁸¹ and “lending for

⁷⁴ Maxwell, Graham; Cooper, Maureen; and Biggs, Neville (2000), *How People Choose Vocational Education and Training Programs: Social, Educational and Personal Influences on Aspiration*, Adelaide: NCVER, p.67, 74.

⁷⁵ Blaug, Mark (1973), *op.cit.*, p.129.

⁷⁶ Morris, Paul (1996), “Asia’s Four Little Tigers: a comparison of the role of education in their development” in *Comparative Education*, Vol. 32, No. 1, pp.95-109.

⁷⁷ See Becker, Gary S. (1964) *Human Capital: A Theoretical and Empirical Analysis with Special Reference to Education*, pp.7-36; Schultz, Theodore W. (1971), *Investment in Human Capital: The Role of Education and Research*, New York: The Free Press, A Division of the Macmillan Company, p.81.

⁷⁸ Bereday, George (1970) “Education and Economic Development”, Contribution to Education No. 40, p.17.

⁷⁹ Clive R. Belfield (2000), *Economics Principles for Education: Theory and Evidence*, Cheltenham, UK: Edward Elgar Publishing Ltd, p.33.

⁸⁰ Psacharopoulos, G. & Loxley, W. (1985) *Diversified Secondary Education and Development, evidence from Colombia and Tanzania*, , p.227

⁸¹ World Bank (1991), *Vocational and Technical Education and Training: A World Bank Policy Paper*, p.9.

prevocational courses should be replaced by programs to strengthen quality and access in academic secondary education.”⁸²

Research findings indicate that education levels have risen more quickly than job places,⁸³ and modern job duties usually require employees to have higher level of knowledge and skills. Modern technology and information society have changed employment structure. The old days’ single skill jobs are now replaced or being replaced by multi-skill jobs, and this requires employees to have the ability and training for new job requirements. Those who have gone through regular in-service short course training will normally increase their performance and income,⁸⁴ and those with higher level of education tend to have more capacity for further training. Good training programs have proven to be helpful to raise individual’s employment opportunities and firms’ productivity.⁸⁵ In Australia, people with university degrees or studying at university enrol in TAFE courses for further skill training to boost their chances for employment.⁸⁶ In China, reports say university graduates go to skilled worker schools for skill training in order to develop hands-on skills for better employment opportunities.⁸⁷ This situation is an indicator that a flexible post-secondary VTE system would be more suitable for the modern society.

Secondary VTE schools have been the focus of reform and development for over two decades in China, but not only it was full of problems, but it has fallen into depression. On 28 July 2002, Madam Chen Zhili, Minister of Education of the national government, summarized:

Generally speaking, vocational education in China still has a weak basis. Major problems are found as: lack of funding input, poor

⁸² World Bank (1991), op.cit., p.17.

⁸³ Marginson, S. (2000), *The Changing Nature and Organisation of Work, and the Implications for Vocational Education and Training in Australia: Issue Paper*, Adelaide: NCVER, p. 21.

⁸⁴ See Yang, Jin (1998), “General of Vocational? The Tough Choice in the Chinese Education Policy”, *International Journal of Educational Development*, Vol 18, No.4, pp.289-304 (p.302); Marginson, Simon (2000), *ibid.*, p.20.

⁸⁵ See Yang, Jin (1998), *ibid.*; Morris, Paul (1996), op.cit.; Belfield, Clive R. (2000), op.cit., p.33.

⁸⁶ Werner, Mark C. (1998), *Issues Regarding Higher Education Graduates in Vocational Education and Training*, Adelaide: NCVER. p.7 & 12; NCVER *Vetstats Highlights for 1999*, p.7. This type of students comprise of about 7% of the cohort.

⁸⁷ “University Graduates in Guiyang Go to Receive Training at Skilled Worker Schools”, <http://www.edu.cn/20020111/3017136.shtml>, accessed 05/05/2002; Zhu, Liyan, “About Five Thousand Tertiary and Secondary Specialized School Graduates Go to Skilled Worker Schools”, <http://www.edu.cn/20030926/3091860.shtml>, accessed 05/05/2002.

*conditions for school operation, varied levels of development in different areas; lack of co-ordination, ineffective use of resources, poor outcomes of education and training; difficulties in recruitment in vocational schools, decrease of training programs run by business and enterprises ...no effective implementation of employment system based on training; ...school models, curriculums, and teaching methodologies cannot be well suited to the demand of changing markets of labour; teachers have poor knowledge of management, labour structures and skills required by production and business, poor specialized skills and incompetence in field practice teaching.*⁸⁸

These problems or similar problems had been repeatedly addressed in many documents at any time of the development, from 1978 to the early 21st Century. Although problems cannot be resolved overnight, it seems that these problems could not be resolved ever, because they are due to the fundamental structural problems.

⁸⁸ Chen, Zhili (2002, 28 July), "We Must Rouse Ourselves Up, Keep Forging Ahead, and Strive to Promote Reform and Development in Vocational Education" [Zhenfen jingshen, kaituo jinqu, dali tuijin zhiye jiaoyu gaige yu fazhan], *Chinese Education News* [Zhongguo jiaoyu bao] (Beijing), 16 August, p.1, republished in China RENDA Social Sciences Informational Centre, *Occupational and Technical Education*, 2002, No.5, pp.2-5 (p.3).

CHAPTER SIX

SECONDARY VTE TEACHERS

When China's VTE started to revive at the end of the 1970s, most of the teachers were new to this profession, especially those in vocational schools. These teachers mainly came from two backgrounds. One group was former teachers from general high schools, who used to teach general school subjects, and the other was technical personnel or professionals working in specific industrial areas and later changed to be specialized subject teachers in the vocational (technical) high schools. During the two decades from 1978 to 1999, the number of VTE teachers increased substantially. The national government issued many regulations and policies on VTE teacher development. During these 20 years or so, there were many achievements, but at the same time there were severe problems. This chapter examines and discusses the progress and problems in this area.

6.1 Fast Growth in Number of Teachers

On 26 June 1986, the National Education Commission (MOE) issued "A Few Suggestions on Strengthening Development of Teaching Staff of VTE Schools" [*Guayu jiaqiang zhiye jishu xuexiao shizi duiwu jianshe de ji dian yijian*]. This document addressed the issues about the quantity and quality of VTE teachers, and it identified the problems as follows:

In the recent years, along with the extensive development of vocational and technical schools, the problems of shortages and poor quality of teaching staff have become very serious. There is extreme shortage of specialized subject teachers in vocational schools, and the sources of supply of such teachers are not stable. Secondary specialized schools need large numbers of general subject teachers as they have changed to recruit junior high school graduates, their specialized subject teachers need badly to update and upgrade their specialized knowledge as their specialized

knowledge are outdated; There are shortages of all types of teachers in skilled worker schools.¹

The Chinese government and schools adopted several methods to increase the number of teachers: 1) to recruit graduates from universities and secondary specialized schools; 2) to transfer professional or specialized personnel from industries or research institutes; 3) to retain some outstanding graduating students in school; 4) to employ part-time teachers from other schools or industries. By the end of the 20th Century, full-time teachers in secondary specialized schools and vocational schools had doubled in number from 1985, and skilled worker school teachers had increased by 150%. If compared with 1980 figures, the increase was much higher. Particularly, the number of vocational school teachers was multiplied by more than ten times. (See Table 6.1.)

Table 6.1
Full-time Teachers in Secondary VTE Schools

Year	Secondary Specialized	Skilled Worker	Vocational (Technical)
1977	57,900	19,600	-
1980	90,900	61,300	23,100*
1985	128,000	88,900	140,700*
1986	143,300	103,000	163,500*
1990	176,000	135,500	224,000*
1993	181,200	150,300	261,700*
1997	212,500	115,700	282,300
1999	211,800	150,300	296,100
2000	256,400	140,000	284,800

* Including vocational junior high schools.

SOURCES: Li, Lintian & Wang, Ping (eds.) (1994), *A Brief History of Chinese Vocational and Technical Education*, pp.173-174 for 1977-1990 figures; National Education Commission & Central Research Institute of VTE, *1997 Annual Report of Vocational Education*, p.30 for 1993 – 1997 figures (not including vocational school); *1999 Annual Report of Vocational Education*, p.34 for 1999 figures (not including vocational school); “National VTE Development Statistical Report” [Quanguo zhiye jiaoyu shiye fazhan tongji gongbao (1991-2000)], <http://www.edu.cn/20020326/3023506.shtml>, accessed on 5 May 2002 for 2000 and vocational school figures from 1993 onwards.

Part-time teachers were a new component of the teaching contingent, and they emerged in the 1980s. Before then, an individual was normally posted to one job, and the person would be very likely to remain in the workplace for all his or her life.

¹ National Education Commission (1986, 26 June), “A Few Suggestions on Strengthening Development of Teaching Staff of VTE Schools” [Guanyu jiaqiang zhiye jishu xuexiao shizi duiwu jianshe de ji dian yijian], reprinted in Department of VTE of National Education Commission (ed.), *Selected Documents on VTE, 1978-1988* [Zhiye jishu jiaoyu wenjian xuanbian, 1978-1988], Beijing: San Lian Bookshop, pp.335-339 (p.335).

When the Chinese government started reforms in economy and other social aspects, many newly established business companies (usually private ones) engaged some technical and professional people to work for them part-time. This practice was soon spread to other institutions such as schools. At first, it was private schools that would pay experienced teachers and professors from government schools and universities to teach in their schools on a part-time basis. Later, government schools and universities also recruited experienced professionals and academics as part-time teachers.² This was particularly common in the newly established schools. In the secondary VTE system, vocational schools applied this method to solve their staff shortage problem. In 1990 there were 18,933 part-time teachers in vocational schools, and in 1998 the number increased to 32,589.³ The part-time teachers were normally specialized personnel working in specialized industries and service industries. Schools invited them to teach on contracts, and the arrangement was beneficial to both parties: schools benefited from their technical expertise, while the individuals gained extra income.

The fast growth in number of VTE teachers resulted in an excellent staff and students ratio. (See Table 6.2.) In 1990, full-time teacher and students ratio in secondary specialized schools was 1:8.9, and the ratios were 1:12.7 in vocational (senior high) schools, and 1: 9.8 in skilled worker schools. The ratios were far below the norm of world level.⁴ Similar situation also was found in other sectors of education in China. For example, teacher and students ratio in tertiary education in 1987 was 1: 5.6,⁵ which was far below the world average. However, the low teacher

² The "part-time" here means that the person who is employed by the school or business company is a full-time employee of another work place such as school, government institution, or enterprise. Apart from his/her full-time job, the person holds another concurrent job on a part-time basis in another work place.

³ Wu, Jichen (1999), "Great Achievements in Teaching Staff Development in Vocational Education of Our Country in the 90s" [90 niandai woguo zhijiao shizi duiwu jianshe chengji feiran], *Chinese Vocational & Technical Education* (Beijing), No.9, pp.21-22.

⁴ Based on statistics in *Digest of Education Statistics, 2002*, <http://nces.ed.gov/programs/digest/d02/tables/dt395.asp>, accessed on 24/02/2004. The average teacher/students ratio in secondary education in the world was 1:16.25 in 1990 and 1:17.30 in 1997; in post secondary education, the world average ratio was 1:13.45 in 1990 and 1:14.03 in 1997. In Asian countries the average teacher/students ratio in secondary education was 1:18.26 in 1990 and 1:19.52 in 1997; in post-secondary education the ratios was 1:12.84 in 1990 and 1:14.90 in 1997.

⁵ Liu, Shurong (1988), "On Strengthening Staff Development" [Tan jiaqiang shizi duiwu jianshe wenti], in Shouxin Li (ed.), *Studies on the Issues of China Education Development* [Zhongguo jiaoyu fazhan wenti yanjiu], Beijing: China Planning Press, pp.164-171, (p166).

and students ratios did not mean a healthy situation in staffing. Leslie Lo discusses this situation as follows:

This kind of student/teacher ratio compares favourably with the best institutions in the world, and it should mean that class-size will be small, and ample guidance will be provided to all students. Unfortunately, an uneven distribution of workload among faculty members in most academic institutions has resulted in the most inefficient way of exploiting their strength. Colleagues on "sick leave", very old senior members in the departments, and the lack of incentives for hard work have combined to place a heavy workload on some, and dampened the spirit of others. The laudable concept of providing for each "according to his need" has, like in a myriad of work institutions in China, become a license for indolence and detachment in academia. Idle and near-idle manpower has caused a seemingly large teaching force to become ineffective.⁶

Lo's comments partly describe the problems in the secondary VTE sector. Despite of the overstaffing problem, there was a shortage of specialized subject teachers and field-practice teachers. This means that for general subject teachers, the teacher and students ratio was even lower than the average figures shown in the table below, while for specialized subjects and field-practice training, staff and students ratio could be ridiculously too high. The low staff/student ratio was likely to cause resource waste and impose a big burden on school budget because the school would have to spend a great amount of funding on staff's salary.⁷ At the same time, because there were too many teachers and there were only a certain number of courses offered each year, not every teacher was able to teach a subject each semester. Some of them had to wait for a number of semesters for their turn to teach in the course.⁸ This situation not only led to a waste of teaching resources but also hindered individual staff's career development.

⁶ Lo, Leslie N.K. (1989), "Chinese Education in the 1980s: A Survey of Achievements and Problems" in Joseph, Y.S. Cheng (ed.), *China: Modernization in the 1980s*, Hong Kong: The Chinese University Press, pp.553-591 (pp.580-581).

⁷ According to 1988 statistics, 76.5% of expenses in secondary education were on employees' salaries and other welfare. See Huang, Rao (2002), *Studies of General Policies of Chinese Education* [Zhongguo jiaoyu hongguan zhengce yanjiu], Beijing: Higher Education Press, p.83.

⁸ Liu, Shurong (1988), op.cit., p.166.

Table 6.2
Full-time Teacher and Students Ratios in Secondary VTE Schools (not including teacher training schools) (Teacher as 1)

	Secondary Specialized School	Skilled Worker School	Vocational School
1990	8.9	9.8	12.7
1993	11.58	11.57	13.86
1994	12.9	12.2	14.2
1997	16.59	16.69	15.88
1998	18.9	11.8	15.4
1999	20.1	10.4	15.0

SOURCES: National Education Commission & Central Research Institute of VTE, *Annual Report of Vocational Education 1995*, p.23, 1997, p.30, 1999, p.35.

Some Chinese academic researchers, such as Liu Shurong, also identified the low teacher/students ratio as a problem for healthy development of VTE,⁹ however, the government did not seem to have set a higher standard. In 1995 Wu Jichen and Li Wenming, two officials from the Section of Teaching Resources in the Department of VTE of the National Education Commission (MOE), published an article entitled “It’s An Urgent Task to Strengthen Teaching Staff Development in Vocational Education”. They discussed the problem of staff shortages in vocational schools based on 1:10 teach/students ratio as a standard. They claimed that if calculating based on this standard, even in Jilin Province, where VTE was well developed in comparison with other provinces, there was still a 29% shortage of teachers, especially for specialized subject and field practice teachers. When translated into numbers, this 29% was 3,207.¹⁰ This ratio standard that was used in assessing staffing problem by the government officials was definitely much lower than any standard in the world. Some questions would be asked here as why these government officials set such a low teacher/students ratio for vocational schools. If calculated at a higher ratio standard, would there be a shortage? And how much would the shortage be?

One possible reason for this situation is that in China teachers were permanent public servants in the government’s employment system. It was impossible for schools to lay off teachers, and it was a common practice that the Communist labour system had more people in the workforce with low remuneration [*gao jiu ye di shou*

⁹ See Liu, Shurong (1988), op.cit., p.166.

¹⁰ Wu, Jichen & Li, Wenming (1995), “It’s an Urgent Task to Strengthen Teaching Staff Development in Vocational Education” [Jiaqiang zhijiao shizi duiwu jianshe po zai meijie], *Chinese Vocational & Technical Education* (Beijing), No.12, pp.6-8.

ru], which had been adopted in China since the 1950s. Because the VTE schools required students to undertake equal amount of general subject studies and specialized subject studies, there had to be an equal number of teaching staff between general subjects and specialized subjects. Even though the overstaffing of general subject teachers kept a low teacher/students ratio, because there were serious shortages of specialized subject teachers in many VTE schools, schools had to find extra staff to teach specialized subjects and field-practice training subjects.

6.2 Shortage of Specialized Teachers

In 1995, Wu Jichen and Li Wenming conducted their investigations in 153 VTE schools of the 3 types across 14 provinces, and through 189 consultation meetings and over 8000 questionnaires to management and teaching staff of VTE schools, and concluded that “(a)t the same time when great development has been achieved in vocational education, there are still a number of serious and even fundamental problems in teaching staff development.” The first problem they identified was the shortages of specialized subject teachers and field-practice supervising teachers. They gave an example that some schools offered four specialized study (training) programs but only had five specialized subject teachers for the whole school. The schools barely had any field-practice teachers. On average, schools had one field-practice teacher for every 200 students. In 1993, Liu Kang from Department of Training in the National Ministry of Labour also published an article addressing the similar problems in skilled worker schools. He pointed out that practical training teachers in skilled worker schools were in shortage by 50% according to a survey in 1992.¹¹ Another article also identified a common problem in skilled worker schools that “field practice teachers are over-worked, while general subject teachers have little work to do”.¹² The characteristics of training in skilled worker schools are in its practicality. 50% of learning were allocated to hands-on training according to the government’s national

¹¹ Liu, Kang (1993), “Basic Views on Strengthening Teachers Development in Vocational Training” [Jiaqiang zhiye peixun shizi duiwu jianshe de jiben gouxiang], *Vocational Education Research* (Tianjin), No.3, pp.4-7.

¹²Han, Yuansheng (1993), “Investigation and Analysis in the Current Situation of Teaching Staff in Skilled Worker Schools of Shanxi Province” [Shanxi sheng jigong xuexiao shizi xian zhuang de diaocha he fen xi], *Vocational Education Research* (Tianjin), No.1, pp.12-13.

curriculum guidelines¹³, but there were only 25% of the teachers who were doing the field-practice teaching work. (See Table 6.3.)

Table 6.3
Ratio of Full-Time Teachers in Secondary VTE (%)

Secondary Specialized Schools*	1990	1994	1998	1999
General Subject	--	34.41	--	--
Specialized Subject	43.6	51.4	57.23	58.22
Skill Foundation Course	15.2	12.7	8.98	8.40
Field-Practice	--	1.54	2.08	2.46
Vocational Schools		1994	1998	1999
General Culture Subject		--	48.11	47.53
Specialized Subject		45.7	46.71	47.26
Field-Practice		1.8	2.71	2.64
Skill Workers Schools		1994	1998	
Practical Training		25.2	25.5	

* Not including teacher training schools.

SOURCES: National Education Commission & Central Research Institute of VTE, *1994 Annual Report of Vocational Education*, p.22 & *1997 Annual Report of Vocational Education*, p.34 for 1990 & 1994 figures; *1999 Annual Report of Vocational Education*, p.37 for 1998 & 1999 figures.

This table shows that there were only a very small percentage of teachers carrying out field-practice supervision work. However, the national curriculums for all the three types of VTE schools were designed with a substantial percentage of field-practice in students' training. It is a common sense that a chef cannot be a good chef without thousands of hours of practice, and an electrician cannot operate just by book knowledge. They need first hand training. According to the national government's curriculum guidelines for vocational schools, the proportions of general subjects, specialized theory subjects, and field practice should be 4: 3: 3 for humanities [*wen ke*] courses (such as finance and accounting), and 3: 3: 4 for engineering, agriculture and medicine courses (such as electric engineering, horticulture, or nursing). For the professional or specialized fields which require more emphasis on practical training, the ratios should be 2.5 : 2.5 : 50.¹⁴ According to this standard, field practice supervising teachers were in a great shortage.

¹³ Meng, Guanping (ed.) (1994), *An Introduction to Chinese Vocational and Technical Education* [Zhongguo zhiye jishu jiaoyu gailun], Beijing: Beijing Normal University Press, p.116. This book was written and published by Department of VTE of the National Education Commission. The book was used as one of the textbooks in the training programs for VTE school principals in China.

¹⁴National Education Commission (1990, 31 December), "Suggestions on Formulating Teaching Plans for (3-year courses in) Vocational Senior High Schools" [Guanyu zhiding zhiye gaoji zhongxue (san nian zhi) jiaoxue jihua de yijian], reprinted in *Policies and Regulations on VTE, 1989-1992* [Zhiye jishu jiaoyu zhengce fagui, 1989-1992], Beijing: Beijing Normal University Press, pp.254-258 (p.255).

In its “Decisions on the Reform of Educational Structure” in 1985, the CCP government already recognised the shortage of specialized teachers and stressed the pressing need for the development of VTE teachers. When the government suggested a group of general high schools be converted into vocational schools, it encouraged the schools to find specialized and technical teachers by themselves.¹⁵ One common practice by schools was to convert some general subject teachers into specialized subject teachers. Ni Yongquan, Principal of Huainan City Vocational Education Centre, gives examples that one of their school’s methods was to convert general subject teachers of “similar” areas into specialized teachers, such as mathematics teachers changed to teach architecture surveying [*jian zhu ce liang*] or architecture drafting [*jian zhu zhi tu*], and physics teachers changed to teach electrical engineering courses.¹⁶ Whiteside and Zhang also observed such situation in Chinese vocational schools. They describe mathematics teachers switched to teaching accounting and business studies, physics teachers changed to teach electronics equipment and repair, and history and geography teachers changed to teach tourism.¹⁷

This method might help to solve the shortage of specialized subject teachers within a short period of time, but it could not guarantee the quality of teaching. As a Chinese saying goes: “Difference in profession makes one feel worlds apart” [*Ge hang ru ge shan*]. One would assume that in China’s situation, even if a teacher of general subject were to teach a specialized subject seemingly related to his/her expertise, the person would have to receive specialized training before the change of job, in both specialized knowledge and skills and teaching methodology. However, it was impossible for the Chinese vocational schools to retrain all the teachers who were to change their teaching areas. One of the reasons was due to the shortage of funding¹⁸, but the author of this dissertation would argue that the main reason was the

¹⁵ Central Committee of CCP (1985, 27 May), “Decisions on the Reform of Educational Structure by the Central Committee of CCP”, *People’s Daily*, 29 May 1985, p.1 & 3.

¹⁶ Ni, Yongquan (1992), “Tasks for Vocational School Principals” [*Zhiye zhongxue xiaozhang ying zuo hao de ji xiang gongzuo*], in *Research of Education Management* (Beijing), No.4, pp.36-38.

¹⁷ Whiteside, Tom. & Zhang, Minxuan (1992), “Recent Developments in Technical and Vocational Education in the Chinese Senior Secondary System”, *The Vocational Aspect of Education*, Vol. 44, No.3, pp.283-294 (p.290).

¹⁸ Qian, Zhuo (1993), “A Brief Discussion on the Current Situation and Development of VTE Teachers” [*Qiantan zhijiao shizi duiwu de xianzhuang ji jianshe*], *Vocational and Technical Education* (Changchun), No.8, p.7.

lack of leadership and proper management in schools. Most vocational schools were converted from general high schools, however, the management teams still remained the same, and they lacked knowledge and experience of vocational education.

In fact, another possible way of increasing specialized teachers was to transfer some experienced skilled workers and specialized experts from enterprises and industries into vocational schools, and the Chinese government encouraged schools to do so.¹⁹ This option, however, was not fully exploited. One of the problems was due to the government's rigid regulations on employment and salary systems. In China, skilled workers were on the payroll of industrial enterprise system, which is generally known as worker wage system, but teachers were on the payroll of public institution system, which is cadre salary system. It was very hard to transfer a person across the systems. Many vocational school principals experienced this dilemma.²⁰

By 1998, specialized subject teachers derived mainly from four types of backgrounds: 1) from universities or from colleges of science and engineering, with no teacher training background. They had tertiary education qualifications, good foundation in specialized subject theories, but lacked experience in professional practice and pedagogical theory and practice; 2) from normal university or teacher training schools. These teachers had good knowledge in pedagogy, but needed to learn specific specialized subject content for teaching and lacked teaching experience; 3) from VTE teacher training colleges. These teachers were regarded as core teachers, but in small numbers; 4) from industries or research institutes. These people were skilled workers, engineers or specialized personnel. They had rich practical experience in specialized areas, able to supervise students in field training practice, but small in number and lacked pedagogical theory and practice.²¹

¹⁹ Central Committee of the CCP (1985, 27 May), "Decisions on the Reform of Educational Structure".

²⁰ Wu, Jichen & Li, Wenming (1995), op.cit.

²¹ Wang, Rongcheng & Ding, Xunyan (1998), "Strengthening the Development of Specialized Teachers" [Jiaqiang zhuanke jiaoshi duiwu jianshe], *Chinese Vocational & Technical Education* (Beijing), No.10, p.30 & 32.

6.3 The “Big Gap” in Staffing

China’s education system was decimated during the “Cultural Revolution” decade from 1966-1976, and teachers’ professional development stagnated. As a result, a “big gap” [*qing huang bu jie*] was created at both age and academic levels of staffing in the entire education system. In tertiary education, for example, 60% of university professors in 1986 were over 60 years of age, 45% of associate professors were over 56 years of age, and 75% of lecturers were over the age of 46.²² In the VTE system, the situation was similar or worse.

In China, it is considered that the prime period of one’s career life is between the age of 35 - 50.²³ However, some people believe that the peak time of a person’s career should be at the age of 36 - 45. They based this conclusion on a calculation resulting that the prime age range of Nobel Prize winners was 36 - 45.²⁴ The VTE schools lacked people of this age group particularly in the senior positions. According to 1995 statistics by the Ministry of Transportation and Communications [*jiao tong bu*], there were 4,345 full-time teachers in the total 53 secondary specialized schools run by the transportation and communications systems in the country. 16.7% of them were over 50 years of age, 53.8% of them were under 35 years of age, and 29.5% were between the age of 36-50. Of these 4,345 full-time teachers, 16.5% were senior lecturers, 73.9% of these senior lecturers were over 50 years of age. 51.6% of the senior lecturers were retiring within 5 years.²⁵

On the national level of the entire VTE system, this situation was across the board. Tables 6.4 and 6.5 show the rank and age spectrum of specialized secondary school teachers and vocational school teachers in 1994. In the specialized secondary schools, only 13.77% of the total teaching staff were senior-level lecturers, and over

²²Liu, Shurong (1988), “On Issues about Strengthening the Development of Teacher Contingent” [Tan jiaqiang shizi duiwu jianshe wenti], in Shouxin Li (ed.), *Studies on the Issues of China Education Development* [Zhongguo jiaoyu fazhan wenti yanjiu], Beijing: China Planning Press, p.166.

²³ National Education Commission & Central Research Institute of VTE, *1997 Annual Report of Vocational & Technical Education*, p.33.

²⁴ Liu, Shurong (1988), op.cit. The author quotes: “Among the 215 Nobel Prize winners from 1901, the prime age range is 36 – 45, with the peak age of 39... Many Chinese-origin academics made fame around the age of 35 – 45.” p.166.

74% of the senior-level lecturers were over the age of 50. There were only 24.78% of the senior lecturers at the age of 36 to 50. In vocational (technical) schools, 5.8% of teaching staff were at senior level position, and 77.82% of senior teachers were over the age of 50. Only 21.39% of senior teachers were between the age of 36 and 50. In skilled worker schools, the problem was also very serious. According to *1994 Annual Report of Vocational and Technical Education* published by the Ministry of Education (MOE) and Central Research Institute of VTE, only 8.2% of theory subject teachers and 1.6% of field-practice teachers held senior level positions.²⁶

Table 6.4
Full-Time Teachers by Rank and Age in Secondary Specialized Schools in 1994
(Not including teacher training schools)

Age	30 & under	31-35	36-40	41-45	46-50	51-55	56-60	61 & over	Total
Total	71,956	34,023	22,555	15,204	14,776	16,733	11,482	306	187,035
Snr lecturers	30	239	887	1,281	4,213	10,119	8,703	282	25,754
Lecturers	9,070	18,954	16,658	12,000	9,641	6,218	2,620	19	75,180
Asst Lecturers	54,549	14,299	4,737	1,813	843	320	107	4	76,672
Instructors	8,307	531	273	110	79	76	52	1	9,429

SOURCE: *Educational Statistics Yearbook of China 1994*, Beijing: People's Education Press, p.47.

Table 6.5
Full-Time Teachers in Vocational Schools by Rank and Age in 1994

Age	25 & under	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61 & over	Total
Total Staff	51,229	64,361	33,658	22,391	18,641	20,741	19,182	10,341	719	241,263
Snr Teachers	10	10	91	185	481	2,342	6,062	4,501	381	14,063
Level 1 Teachers	117	2,724	8,614	10,256	11,381	14,544	11,131	5,142	218	64,187
Level 2	11,459	45,106	20,994	10,305	5,685	3,170	1,500	464	43	98,726
Level 3	12,919	10,861	2,728	905	452	241	132	39	3	28,280
Not Ranked	26,664	5,660	1,231	740	642	444	357	195	74	36,007

Note: Level 1 is the highest in rank next to senior teacher in secondary schools.

SOURCE: *Educational Statistics Yearbook of China 1994*, Beijing: People's Education press, pp.74-75

In the secondary VTE teaching force, there were problems in all the three age groups.²⁷ Most senior level staff members were at the age of 50 and over, and these teachers were retiring in 5 to 10 years' time. Their knowledge for teaching was also outdated. Young teachers under 35 years of age lacked adequate knowledge, skill and experience of VTE education, because most of them entered this teaching area straight after college/university, where they only had received general education. Teachers of 35 – 50 years of age group were new to the profession in the early 1980s, when they

²⁵ Zhu, Qianyang (1996), "Constantly Improve the Quality and Competence of Teachers in Secondary Specialized Schools" [Buduan youhua zhongzhuan shizi duiwu], *Chinese Vocational and Technical Education* (Beijing), No.10, pp.18-19.

²⁶ National Education Commission & Central Research Institute of VTE, *1994 Annual Report of VTE*, p.23.

first joined the VTE teaching workforce. They had to find their way in teaching and curriculum development and gradually gained experience through years of teaching. However, according to Wu Jichen and Li Wenming (1995), these teachers needed to update and upgrade knowledge in their specialized teaching fields, but there was little training and research facilities provided to them due to funding problems.²⁸ It was also noted that many teachers (especially specialized subject teachers) had heavy workload in teaching and it was difficult or impossible for schools to arrange training for their teachers because the schools did not have funding for teaching relief.²⁹ According to a survey, 80% of vocational school teachers had never taken relief-from-work [*tuo chan*] training.³⁰ The overall situation in VTE schools was that there was a lack of core [*gu gan*] group of teaching staff that could play a leading role in both teaching and research.³¹ Even in Shanghai and Jilin Province, where VTE was comparatively well developed, 44% of vocational schools being surveyed did not have one senior teacher.³² Situations were worse with specialized subject and field practice teaching staff. Not only there were shortages of teachers in number, but also specialized teachers had lower qualifications and academic positions.³³

One of the reasons for this situation was that during the ten years from 1966 to 1976, and even the few years afterwards, there were not proper recruitment of teachers in schools, and the teachers already in the schools did not have much chance for professional development. Therefore, teachers' professional competence was not of high standard. Even though there were chances of promotion for teachers, the promotion was usually based on seniority rather than merits. "Education qualifications + years of service" were normally the measure for promotion. Political affiliation (such as whether the person was a CCP member) was also an important factor for

²⁷ Group 1: over 50 years of age; Group 2: 36-50; Group 3: age 35 and under.

²⁸ Wu, Jichen & Li, Wenming (1995), "It's an Urgent Task to Strengthen Teaching Staff Development in Vocational Education", *Chinese Vocational & Technical Education* (Beijing), No.12, pp.6-8.

²⁹ Qian, Zhuo (1993), op.cit.

³⁰ Wu, Jichen & Li, Wenming (1995), op.cit.

³¹ Huang, Rao (1999), "Deepen the Reforms of Teaching in Vocational Education, Promote Qualities/Competence Education on a Full Scale, Strive to Develop High Quality Workers for the Modernization Construction in the 21st Century" [Shenhua zhiye jiaoyu jiaoxue gai ge, quanmian tuijin suzhi jiaoyu, wei peiyang 21 shiji xiandaihua jianshe xuyao de gao suzhi laodongzhe er fendou], *Chinese Vocational & Technical Education* (Beijing), No.9, pp.11-17.

³² Wu, Jichen & Li, Wenming (1995), op.cit.

³³ Liu, Kang (1993), "Basic Views on Strengthening Teachers Development in Vocational Training" [Jiaqiang zhiye peixun shizi duiwu jianshe de jiben gouxiang], *Vocational Education Research* [Zhiye jiaoyu yanjiu] (Tianjin), No.3, pp.4-7; Wu, Jichen & Li, Wenming (1995), *ibid.*

promotion in the 1970s and early 1980s. Besides, there were limited quotas for promotion each year, and these quotas were usually given to older teachers. An observation by a research group in Beijing is that many school leaders lacked confidence in middle-aged and young teachers. They treated this group of teachers harshly, and did not give younger teachers a chance. When these younger teachers made great achievements in teaching and research, they could only be awarded as “model teacher”, but could hardly be promoted to the senior level position.³⁴

6.4 Qualifications of Secondary VTE Teachers

Overseas research findings have proved that teachers' qualifications, experience and knowledge contribute positively towards student achievements in school.³⁵ The Chinese government officials and education researchers wished to learn from international models. They studied experiences of a number of developed countries such as the United States, Germany, Switzerland, and Japan, and discovered that these countries required VTE teachers to have the following qualifications:

- ◆ General subject and specialized theory subject teachers must possess tertiary education degree, and practical training teachers must have educational qualifications at secondary specialized/technical education level or above;
- ◆ They must be equipped with pedagogical theory;
- ◆ They must go through a period of practical experience as a specialized professional as well as teacher training, so that they possess both knowledge and skills as technical/professional personnel as well as a teacher/trainer.³⁶

³⁴ Research Group of Secondary Specialized School Teacher Development of Beijing (1995), “Investigations in and Reflections on the Problems in the Development of Middle-Aged and Young Teachers”, *Selected Essays of the First Annual Conference of Beijing Vocational and Technical Education Association* [Beijingshi zhiye jishu jiaoyu xuehui shou jie nianhui youxiu lunwen ji], Beijing, pp.62-69.

³⁵ Psacharopoulos, George & Woodhall, Maureen (1985), *Education for Development, An Analysis of Investment Choices*, Oxford University Press, p.220.

³⁶ Zhou, Qu & Si, Yinzhen (eds.)(1991), *Comparative Studies of Vocational and Technical Education in China and Overseas Countries* [Zhong wai zhiye jishu jiaoyu bijiao], Beijing: People's Education Press, p.178; Fang, Ping (1989), “Teacher Development in Overseas Vocational and Technical Education Systems” [Shi lun guowai zhiye jishu jiaoyu jixi de shizi jianshe], *Overseas Education* (Beijing), No.3, pp.27-31.

The Chinese government adopted similar models for secondary VTE teacher development. The first problem they found that was inconsistent with overseas countries is the lower academic qualification profiles of the secondary VTE teachers. In 1985, only 48.1% full-time teachers in secondary specialized schools and 19.3% full-time teachers in vocational (senior high) schools had 4-year³⁷ tertiary qualifications.³⁸ On 17 May 1986 the National Education Commission (MOE) issued “Proposed Regulations on Duty Requirements of Secondary Specialized School Teachers”. The regulations set detailed requirements on all levels of teaching staff, including instructors [*jiaoyuan*], assistant lecturers [*zhu li jiang shi*], lecturers [*jiang shi*], and senior lecturers [*gao ji jiang shi*]. Instructors must have three-year sub-degree (2-3 years of studies) from tertiary education institutions. Assistant lecturers and lecturers must possess a Bachelor degree or a Master degree, and senior lecturers must have a doctoral degree or have rich experiences and higher achievements in teaching and research.³⁹

A month earlier, on 2 April 1986 the national government issued policies on academic qualification requirements of teachers in skilled worker schools.⁴⁰ The document specified similar requirements on skilled worker school teachers, but skilled worker schools were allowed to employ graduates from secondary specialized schools or skilled worker schools to work as instructors [*jiao yuan*] or lower level field-practice supervising teachers [*shixi zhidao jiaoshi*], with condition that these teachers must have no fewer than 100 hours training in pedagogy, psychology and teaching methodology.

³⁷ In China, a Bachelor degree course is usually 4 years or longer.

³⁸ Wu, Jichen & Li, Wenming, (1995), op.cit.

³⁹ National Education Commission (1986, 17 May), “Proposed Regulations on Duty Requirements of Secondary Specialized School Teachers” [*Zhong deng zhuan ye xuexiao jiaoshi zhiwu shixing tiaoli*], reprinted in Department of VTE of National Education Commission (ed.), *Selected Documents on VTE 1978-1988*, Beijing: San Lian Bookshop, pp.292-302.

⁴⁰ Central Leading Group for Reforms of Professional/technical Titles (1986, 2 April), “Proposed Regulations on Duties Requirements of Skilled Worker School Teachers” [*Jigong xuexiao jiaoshi zhiwu shixing tiaoli*], reprinted in Department of VTE of National Education Commission (ed.), *Selected Document on VTE, 1978-1988*, pp. 316-322. General culture subject and specialized theory subject teachers at skilled worker schools are classified at four levels: senior lecturer, lecturer, assistant lecturer, and instructor. Field-practice training teachers [*shengchan shixi ke jiaoshi*] are ranked from the top to bottom as: senior filed-practice supervising teacher, level one field-practice supervising teacher, level two field-practice supervising teacher, and level three field-practice supervising teacher.

On 26 June 1986, the National Education Commission (MOE) issued another document entitled “A Few Suggestions on Strengthening Development of Teaching Staff of VTE Schools”, addressing issues of qualification standards of secondary VTE teachers, including teachers of vocational schools. Having recognised the shortage of teachers in vocational (technical) schools, especially in highly demanded and highly specialized fields of training, the national government suggested schools to employ skilled workers and specialized personnel with fourth grade skill certificate as field-practice supervising teachers. It allowed vocational schools to employ specialized subject teachers who had only a specialized school certificate [*zhuan ke xue li*] if they had many years of teaching and professional experience, and had good teaching outcomes [*jiao xue xiao guo jiao hao*]. However, the government added, in-service training should be provided to those teachers.⁴¹

On 31 October 1993, the Fourth Session of the Standing Committee of the Eighth People’s Congress passed “The Teachers Law of the People’s Republic of China”. Article 11 of Chapter 3 stipulates:

To obtain the status of a teacher in senior secondary school, and status as a general subject teacher or specialized subject teacher in secondary specialized schools, skilled worker schools and vocational senior high schools, one should possess a Bachelor’s degree from higher teacher training institute or from other universities or higher level of educational institutions. Education administration department of the State Council will be responsible to regulate (rules and requirements of) qualifications for field-practice supervising teachers in secondary specialized schools, skilled worker schools and vocational senior high schools.⁴²

In response to the Teachers Law, on 11 July 1996, the National Education Commission (MOE) issued regulations on academic qualification requirements for the field-practice supervising teachers in secondary vocational schools. The regulations, in consideration of the job/duty requirements of field-practice supervising teachers and the sources of such teachers, only require them to possess a minimum level of

⁴¹ See National Education Commission (1986, 26 June), “A Few Suggestions on Strengthening Development of Teaching Staff of VTE Schools” [Guanyu jiaqiang zhiye jishu xuexiao shizi duiwu jianshe de ji dian yijian], reprinted in *Selected Documents on VTE 1978-1988*, pp.335-339.

⁴² *Teachers Law of the People’s Republic of China* (passed on 31 October 1993), reprinted in *Policies and Regulations on Vocational Education, 1992-1996*, Beijing: Beijing Normal University, pp.61-69.

education certificates from secondary VTE schools or general senior high schools. For those who are especially skilled in specialized areas, local government can further lower the academic qualification requirements.⁴³ This was in fact only confirming what had been practised since 1986.

In July 1994, the State Council set a national goal of VTE teacher development. By year 2000 secondary specialized school teachers should by and large have met qualification standards and 60% of teachers from vocational senior high schools and skilled worker schools should have reached the required qualification standards.⁴⁴ In November 1997, the author visited 4 VTE schools in Tianjin, including one secondary specialized school, one vocational senior high school, and two skilled worker schools. All of these schools had reached the standards of staff qualification profiles, but they cannot be taken as representative of all the schools in China. China is a vast country with different levels of economic development, and teacher development also varied. For those economically advanced provinces and cities, the situations were positive, but there were many problems in the less developed and remote areas. A great number of teaching staff did not reach the required qualification standards. (See Table 6.6.)

Table 6.6
VTE Teachers with 4-year Tertiary Education or over (in percentage %)

Year	Secondary Specialised Schools*	Skilled Worker Schools	Vocational Schools
1985	48.1	--	19.3
1990	54.8	31.5	22.7
1993	60.4	35.4	26.0
1996	63.7	38.8	31.2
1999	69.93	--	40.53

*Not including teacher training schools.

SOURCES: Wu, Jichen & Li, Wenming (1995), "It's an Urgent Task to Strengthen Teaching Staff Development in Vocational Education" [Jiaqiang zhijiao shizi duiwu jianshe po zai meijie], *Chinese Vocational & Technical Education* (Beijing), No.12, pp.6-8. for 1985 figures; National Education Commission & Central Research Institute of VTE, *1996 Annual Report of VTE*, p.30, for 1990-1996 figures; *1997 Annual Report of VTE*, P 32, for 1997 figures and *1999 Annual Report of VTE*, p.36 for 1999 figures.

⁴³ National Education Commission (1996, 11 July), "A Notice of Regulations on Academic Qualifications for Field-practice Supervising Teachers in Secondary VTE Schools" [Guanyu qude zhongdeng zhiye xuexiao shixi zhidao jiaoshi zige yingdang jubei de xueli de guiding de tongzhi], reprinted in *Policies and Regulations on Vocational Education 1992-1996*, p.676.

⁴⁴ The State Council of PRC (1994, 3 July), "Suggestions on the Implementation of "Outlines of Chinese Educational Reform and Development" [Guowuyuan guanyu "Zhongguo jiaoyu gaige he fazhan gangyao" de shi shi yijian], reprinted in Department of VTE of National Education Commission (ed.), *Policies and Regulations on Vocational Education 1992-1996* [Zhiye jiaoyu zhengce fagui, 1992-1996], Beijing: Beijing Normal University Press, pp.103-122.

By 1999, 69.93% of secondary specialized school teachers had obtained a Bachelor's degree. In vocational (technical) schools only 40.53% of teachers had reached the same standards. There was no statistics of such for skilled worker school teachers, but according to 1996 figure, only 38.8% of teachers had reached government's qualification standards. Given the fact that over 90% of VTE teachers in secondary specialized schools and vocational (technical) schools, and about 75% of teachers in skilled worker schools were general subject and specialized theory subject teachers, staff's qualification level did not satisfy the government's regulations. Because there was such a high percentage of teachers who had not reached the required educational qualification or required specialty qualification levels, it was very hard to turn around the situation at a fast speed. It would take years to train these teachers in order to upgrade their qualifications. The training institutions did not have the capacity to train them quickly, nor could the schools afford to have them trained all at once. Some of these teachers may not be trainable, as they did not have the foundation of knowledge or skill for training.

One of the solutions to this problem could have been to replace these underqualified teachers with new university graduates or with those experienced engineers or specialized technical personnel who had been retrenched from the closed-down state enterprises. However brilliant the idea sounded, it was very difficult to practise. This was because the Chinese human resource management system for schools was stilled in the rigid planning system that did not give schools power in free management of teachers. In China, all full-time teachers had permanent positions, which were funded by the government, and the school principals did not have the power to sack any staff. Although some staff did not have the required academic qualification or updated knowledge for quality teaching, they could not be easily removed. The only way to solve the problem was to improve their qualifications and skills through training, or to re-allocate them to another job within the system. This old employment system, which was practised in the old centralised planning economy for 40 years, was unable to meet the demands of the market economy officially established in 1993.

6.5 Competence of VTE Teachers

Navaratnam and O'Connor argue that teachers are expected to have relevant and up-to-date technical expertise and teaching skills. Teachers cannot assume that industry and students will accept what they are teaching without question, and they need to improve teaching skills and qualifications continuously. Navaratnam and O'Connor emphasize that the contribution of individual teachers is crucial in producing quality learning outcomes.⁴⁵ The qualification profile should be not only whether an individual teacher has a tertiary degree but also whether the teacher has adequate knowledge and skills to teach in VTE. In developed countries VTE teachers must have previous specialized training and experiences.⁴⁶ This is particularly important for specialized subject teachers and field-practice supervising teachers. In China's case, serious problems were found in this area.

As we already know, a great number of vocational (technical) schools were converted from general high schools in the 1980s. Many specialized subject teachers in the schools were originally general subject teachers. Even though many of them had university degrees and teaching experience, they lacked experience in teaching VTE schools and more importantly did not have adequate knowledge and skills in teaching specialized subjects. Although the schools employed some specialists or master workers from enterprises and factories, who were equipped with specialized knowledge and had rich practical experience, they generally lacked theoretical knowledge of the specialized subjects and did not have teaching experience.⁴⁷ It was also noted that when some general high schools, which had poor academic performance, were converted into vocational (technical) schools, local educational authorities transferred highly qualified and competent teachers from these schools to other general senior high schools. The schools were therefore left with underqualified

⁴⁵ Navaratnam, K.K. & O'Connor, Rory (1993), "Quality Assurance in Vocational Education: Meeting the Needs of the Nineties", *The Vocational Aspect of Education*, Vol. 45, No. 2, pp.113-122 (p.116).

⁴⁶ Zhou, Qu & Si, Yinzheng (eds.)(1991), *Comparative Studies of Vocational and Technical Education in China and Overseas Countries* [Zhong wai zhiye jishu jiaoyu bijiao], Beijing: People's Education Press, pp.173-189; Smith, Erica (2000), "The Changing VET Environment" (Summary of presentation by Merylyn Childs and ensuing discussion at AVTEC Meeting 2000), <http://education.curtin.edu.au/avtec/meetings/2000/theme1.html>, accessed on 30/03/04.

⁴⁷ Wang, Wei (1988), "The Problems Needing to be Solved in the Development of Secondary Vocational Schools" [Zhongdeng zhi e xuexiao fazhan zhong yingdang zhuyi yanjiu jie jue de ji ge

and less competent staff. As a scholar aptly questioned it, “How can the school produce quality education and training, and how can the school win good reputation or acknowledgment from society when they cannot produce quality training?”⁴⁸ This problem once again demonstrates the unfair treatment of VTE by the government. Not only general education stream was given more funds, but also allocated with better teaching resources. This further supports the argument that secondary VTE did not have an equal status with general secondary education in the government’s policy and its implementation.

In the whole VTE teaching force, there was a serious shortage of field-practice supervising teachers. Even with the small number of them available in the schools, there was a problem of quality. The field-practice teachers were made up of former general subject teachers and skilled workers from factories or enterprises. The former lacked specialized knowledge and skills and the latter lacked teaching methodology and teaching experience. There was also a problem that most master workers who were invited to teach in the skilled worker schools were following the old-fashioned apprentice training method. Some of them still had the traditional mentality of “keep some skills for myself”.⁴⁹ A report in 1993 showed that about 20% of field-practice supervising teachers in skilled worker schools only had a junior level skill certificate.⁵⁰ While curriculums of skilled worker schools were aimed at training students to be intermediate level skilled workers, how can practical teachers with junior level skill certificate train students at intermediate level skills?

In fact, the under-qualified specialized subject teachers and field-practice teachers in the VTE schools suffered many disadvantages. They were treated as second-class citizens, receiving lower welfare benefit, overloaded with work, and hard to get promotion. This problem in turn caused instability of field-practice teaching

wenti], in Shouxin Li (ed.), *Studies on the Issues of China Education Development* [Zhongguo jiaoyu fazhan wenti yanjiu], Beijing: China Planning Press, pp.150-156.

⁴⁸ Qi, Aishui (1989), “We Must Rectify Three Unfair Treatment in the Development of Vocational Education” [Fazhan zhiye jiaoyu bixu gaibian san zhong bugongping daiyu], *Vocational Education Forum* [Zhijiao luntan] (Nanchang), No.4, p.32.

⁴⁹Han, Yuansheng (1993), “Investigation and Analysis in the Current Situation of Teaching Staff in Skilled Worker Schools of Shanxi Province” [Shanxi sheng jigong xuexiao shizi xian zhuang de diaocha he fen xi], *Vocational Education Research* (Tianjin), No.1, pp.12-13.

force. Many of them wanted to go back to teach general subjects or return to factory to work as a worker.⁵¹

6.6 Staff Training and Development

From 1983 to 1996, the Chinese central government issued documents every year on secondary VTE staff training and development. The training programs included short-term and overseas trainings for core teachers from leading schools, upgrading qualification courses for VTE teachers at tertiary institutions, and setting up VTE teacher training institutes and programs for future VTE teachers.

In the early years, apart from sending small numbers of VTE teachers to universities for training in specialized fields, another method was to send a number of core teachers abroad for training in newly emerged and highly demanded fields. From the early 1980s, the Chinese government began to send teachers, usually from tertiary education institutions, to study abroad.⁵² This was a part of the modernization and reform programs, as education was pinpointed to be playing a crucial role in training qualified talents for the economic development. In September 1986, the National Education Commission (MOE) issued a document on sending VTE school teachers for training in overseas countries.⁵³ The teachers to be selected for training were young and middle-aged specialized subject teachers who were engaged or to be engaged in teaching new and short-course subjects. They must possess a higher degree or sub-degree in the similar area of training, and must have at least two years experience in teaching at VTE schools. This program was on a small scale, and the length of training was one year. The trainees were expected to return to their original schools after completion of their training at a foreign institution, which could be a higher VTE institute, a secondary VTE school, a training centre, or an enterprise.

⁵⁰ Liu, Kang (1993), "Basic Views on Strengthening Teachers Development in Vocational Training" [Jiaqiang zhiye peixun shizi duiwu jianshe de jiben gouxiang], *Vocational Education Research* [Zhi ye jiao yu yan jiu] (Tianjin), No.3, pp.4-7.

⁵¹ Han, Yuansheng (1993), op.cit.

⁵² See Du, Ruiqing (1992), *Chinese Higher Education, A Decade of Reform and Development (1978-1988)*, New York: St Mary's Press, p.95.

⁵³ Department of VTE of National Education Commission (1986, 7 September) "Announcement on Selecting VTE School Teachers for Training Overseas" [Guanyu xuanpai zhiye jishu xuexiao jiaoshi chuguo jinxiu de tongzhi], reprinted in *Selected Documents on VTE 1978-1988*, Beijing: San Lian Bookshop, pp.340-342.

Apart from training core teachers in small numbers in tertiary institutions and overseas, the government set up specific tertiary institutes from the end of 1970s to train specialized teachers for VTE schools. The National Education Commission (MOE) approved the establishment of 11 independent VTE teachers training institutes.⁵⁴ However, the training rate could not meet the demand of fast growth of secondary VTE schools. To address this problem, a strategic plan was drawn to set up various training programs in tertiary education institutions for training VTE teachers. The National Education Commission (MOE), National Planning Committee and Ministry of Finance together issued a document in 1984 to call on general tertiary education institutions [*pu tong gao deng xue xiao*] to run degree courses [*ben ke ban*] and diploma courses [*zhuan ke ban*] for teachers of all kinds of schools at the secondary level.⁵⁵ Following this, the Office of the National Education Commission (MOE) issued a document in 1985 regarding VTE teacher training in higher educational institutions in 1986.⁵⁶ This document called on higher educational institutions at all levels to get actively involved in running degree and diploma courses for VTE teachers. The trainees were required to be under 40 years of age, with more than five years of teaching experience. For degree course studies, the trainees should have a secondary specialized school graduate certificate [*zhuan ke bi ye wen hua cheng du*] or the equivalent, and for diploma course studies, candidates should have a senior secondary school certificate or equivalent. The trainees should return to their original schools to teach after graduation.

In 1986 the national government further expanded VTE teacher training programs. Its document stated:

⁵⁴ Wang, Jiping (2002), "Strengthen the Construction Work of Teacher Training Bases, Try to Establish a High Quality Secondary VTE Teaching Force for Enforcing Competence Education" [Da li jia qiang shi zi pei xun ji di jian she gong zuo, nu li jian she yi zhi quan mian tui jin su zhi jiao yu de gao zhi liang de zhong deng zhi jiao shi zi dui wu], *Chinese Vocational and Technical Education* (Beijing), No.1, pp.9-14. The "independent" means the institutes do not attach to any university. They are individual administration entities.

⁵⁵ The lack of qualified teaching staff was a serious problem at all level and all types of schools in China, including the main stream secondary schools. Detailed discussions can be seen in Liu Shurong (1988) "On Issues about Strengthening the Development of Teacher Contingent" [Tan jia qiang shi zi dui wu jian she wen ti], in Li Shouxin (ed.) *Issues of Education Development in China* [Zhong guo jiao yu fa zhan wen ti yan jiu], Beijing: China Planning Press, p.166

⁵⁶ Office of National Education Commission (1985, 25 October) "Announcement about Arranging Teachers from Agricultural Schools, Vocational High Schools and Secondary Specialized Schools (not

Teaching resources at vocational and technical schools should come from various sources. Theory subject teachers should be trained mainly by various types of general higher education institutions. Tertiary education institutions in relevant fields should plan to set up VTE teacher training class, section or department. They should include enrolments of these programs in their recruitment plan each year, to train teachers for vocational and technical schools.⁵⁷

The recruitment in these tertiary courses was from the successful candidates of national general tertiary entrance examination candidates. They received the same treatment as students in general normal universities. However, these courses did not have large enrolments. In 1987, the National Education Commission (MOE) issued a policy that general tertiary education institutions should enroll a small number of graduates from secondary VTE schools. This was to “satisfy the needs of specialized subject teachers and field-practice supervising teachers in VTE schools.”⁵⁸ The enrolment of graduating students from secondary VTE schools was controlled within 1% of the total graduating VTE school students of the year. Candidates must be recommended by school principals and reviewed by tertiary education institutions. This practice shows that students from secondary VTE schools did not have the equal opportunity of continuing study at tertiary level.

From 1989, the National Education Commission (MOE) approved 8 universities under its direct governance to set up an affiliated VTE teacher training institute within the university.⁵⁹ In the same year, the World Bank loan came to effect in China’s VTE development. One of the projects under this program was to facilitate 12 VTE teacher training institutions across the country. These institutions carried the

including teacher training schools) to Attend Training Programs in Higher Education Institutions in 1986”, reprinted in *Selected Documents on VTE 1978-1988*, Beijing: San Lian Bookshop, pp.328-334.

⁵⁷ Department of Planning of National Education Commission (1986, 19 November), “A Notice of the Implementation of 1987 Recruitment Plan for Tertiary Education Institutions to Train VTE School Specialized Subject Teachers” [Guanyu luoshi 1987 nian xuyao lieru gao xiao zhaosheng jihua peiyang zhiye jishu xuexiao zhuanke ke shi zi de tongzhi], reprinted in *Selected Documents on VTE 1978-1988*, Beijing: San Lian Bookshop, pp.342-344 (p.342).

⁵⁸ National Education Commission (1987, 24 March), “A Notice of Temporary Regulations on the Recruitment of A Small Number of Graduating VTE School Students in General Tertiary Education Institutions” [Guanyu yinfa “putong gaodeng xuexiao zhaoshou shaoshu zhiye jishu xuexiao ying jie biye sheng de zan xing guiding], reprinted in *Selected Documents on VTE 1978-1988*, Beijing: San Lian Bookshop, pp.351-354.

⁵⁹ Wu, Jichen (1998) “A Brief Review of the Achievements of VTE Teacher Training Bases under the Direct Administration of the Ministry of Education” [Bu Shu Zhi Jiao Shizi Peoxun Jidi Chengguo Gai Lan], in *Chinese Vocational and Technical Education* (Beijing), No.9, pp.16-17

tasks of training existing secondary VTE teachers, supervisors, managers and administrative staff to upgrade their academic credentials and skill competence. Under the requirement of the World Bank loan, they had a responsibility to train VTE teachers from remote and poorer areas.⁶⁰

Considering the limited space in formal universities and colleges, the government recommended in its 1986 document that informal tertiary education forms, such as evening universities, radio and television universities, and correspondence training programs, should provide in-service training or off-service training for the existing teachers to upgrade their academic qualifications.⁶¹ This type of informal tertiary programs was very popular in China in the 1980s, and it was an avenue for young and middle-aged people to obtain tertiary education qualifications that was impossible to get through the formal education channel (see more discussions in Chapter 3).

The national Ministry of Labour also initiated plans for training field-practice teachers for skilled worker schools. In 1989, the Ministry of Labour and Ministry of Human Resources issued a document on teacher training. The training programs were usually for one year or one and a half year on a full-time basis. The aim of training was to produce teachers, who were able to both teach specialized theory subject and supervise field-practical training.⁶²

All these programs show the national government's efforts to improve the quality of teaching force in the VTE sector. By the end of the 20th Century, the Chinese government claimed that a comprehensive network of VTE teacher training

⁶⁰ National Education Commission (1989, 29 August), "Suggestions Regarding VTE Teacher Training Institutes (Departments) under the World Bank Loan Project to Train Specialized Subject Teachers for Remote Regions" [Guojia jiaowei guanyu shijie yinhang daikuan zhiye jishu jiaoyu xiangmu zhi ji shiyuan (xi) wei bian yuan sheng (qu) peixun zhuan ye shi zi de yijian], reprinted in *Policies and Regulations on VTE 1989-1992*, Beijing: Beijing Normal University, pp.298-300.

⁶¹ National Education Commission (1986, 26 June), "A Few Suggestions on Strengthening Development of Teaching Staff of VTE Schools" [Guanyu jiaqiang zhiye jishu xuexiao shi zi dui wu jianshe de ji dian yijian], reprinted in Department of VTE of National Education Commission (ed.), *Selected Documents on VTE 1978-1988* [Zhiye jishu jiaoyu wenjian xuanbian 1978-1988], Beijing: San Lian Bookshop, pp.335-339.

⁶² Ministry of Labour & Ministry of Human Resources (1989, 1 July), "Methods of Training Production Field-Practice Supervising Teachers" [Guanyu peiyang shengchan shixi zhidao jiaoshi de shishi banfa], reprinted in *Policies and Regulations on VTE 1989-1992*, Beijing: Beijing Normal University, pp.197-200.

programs had been set up and been functioning. The majority of provinces and regions had set up VTE teaching programs. According to incomplete statistics, there were over 200 training bases [*ji di*] in tertiary education institutions, and another 90 or over in secondary VTE schools for training field-practice teachers.⁶³ In addition, there were another 200 or so training centres set up by industrial departments of the government at different levels.⁶⁴

Although a comprehensive network of VTE teacher training system had been set up in the country, because there were so many different specialized subjects or study areas, it was impossible to train specialized subject teachers for all areas through the formal training channels. There were still shortages of specialized teachers in those newly emerged specialized fields. Even though the government made an effort to send teachers to overseas countries to receive training and to invite overseas professionals and experts to run training courses in China, for most of the schools it was up to individual schools and departments to train or find their teaching staff, and the quality of teaching could not be guaranteed.

6.7 Dual-Accreditation Programs

To develop a competent teaching force, the Chinese government began to introduce dual accreditation programs [*shaung zheng shu*] around 1990. This dual accreditation is an academic degree or diploma and skill grade certificate [*lao dong ji shu deng ji zheng shu*]. Specialized teachers were expected to go through training to obtain dual accreditations. One of the examples was Harbin No.2 Vocational Senior High School in the North East China. From 1992, the school requested teachers to obtain dual accreditations. There were 98 specialized subject teachers in the 10 specialized study areas in the school. Between 1992 and 1997 the school spent more than ten thousand yuan on staff in-service training, and 70% of the specialized teachers had reached

⁶³ Wang, Jiping (2002), "Strengthen the Construction Work of Teacher Training Bases, Try to Establish a High Quality Secondary VTE Teaching Force for Enforcing Competence Education" [Dali jiaqiang shizi peixun jidi jianshe gongzuo, nuli jianshe yi zhi quanmian tuijin suzhi jiaoyu de gao zhiliang de zhongdeng zhi jiao shizi duiwu], *Chinese Vocational and Technical Education* (Beijing), No.1, pp.9-14.

⁶⁴ Lao Dong (1997), "The First National Forum on VTE Teacher Development Opens in Qingdao" [Quan guo zhiye jiaoyu shizi duiwu jianshe gongzuo zuotanhui zai Qingdao zhaokai], *Chinese Vocational and Technical Education* (Beijing), No.12, p.9.

required qualifications by 1997. Their specialized skill certificate would qualify them to be employed by business companies as managers, directors, or supervisors. It means that not only were they qualified to teach at VTE schools but also had reached a professional or skill level as medium level professional, technical, or managerial personnel. The school regarded these teachers as the core teaching staff of the school.⁶⁵ In the southern part of China, such as Zhongshan City, Guangdong Province, the "dual accreditation" program was very much emphasized by the Education Committee of the provincial government. In 1993, it started to experiment this program by organising 55 teachers in home electrical appliances and electrical engineering to be trained and examined by the Bureau of Labour. All the trainees passed the examinations and obtained Grade 5 worker skills certificate.⁶⁶ In 1994, the Education Committee adopted a policy that all the specialized subject teachers in vocational senior high schools under the age of 45 must take examinations for at least grade 5 worker skills certificate.⁶⁷

The national government endorsed and publicised this model by calling upon various VTE teacher training institutions to follow this model of training.⁶⁸ Meanwhile VTE teacher training colleges and institutes that trained would-be VTE teachers also adopted this model. When students graduated from the college, they were awarded dual accreditations - a tertiary academic degree or diploma and a worker-skill certificate (usually grade 4 or 5). They were able to teach both specialized theory subjects and field-practice courses.

6.8 Emphasizing Qualities/Competence of VTE Teachers

In the second half of 1990s, China began to emphasize the importance of all-round qualities/competence education [*su zhi jiao yu*]. In 1996, the national VTE education

⁶⁵Fan, Shusheng & Liu, Suyan (1997), "Pay Great Attention to Specialized Teacher Development" [*Zhua hao zhuan ye shi zi dui wu jian she*], *Chinese Vocational & Technical Education* (Beijing), No.6, pp.32-34.

⁶⁶In China, there are 8 grades of worker skills. Grade 8 is the highest.

⁶⁷Education Committee of Zhongshan City, Guangdong Province (1997), "The Implementation of and Reflection on the Dual-Accreditation System for Specialized Teachers" [*Shi xing zhuan ye jiao shi "liang zhong zheng shu" zhi du de zuo fa he ti hui*], *Chinese Vocational & Technical Education* (Beijing), No.1, pp.34-36.

conference was held in Beijing. Wang Mingda, Deputy Director of the National Education Commission (MOE), made a closing speech, in which he addressed the importance of shifting education focus from aiming at academic examination results to developing students' all-round qualities and competence.⁶⁹ In June 1999, the Central Committee of the CCP and the State Council issued a benchmark document entitled "Decisions on Deepening Educational Reform and Promoting Qualities/Competence Education on a Full Scale" [*Zhonggong zhongyang, guowuyuan guanyu shenhua jiaoyu gaige quanmian tuijin suzhi jiaoyu de jueding*].⁷⁰ The document stressed the importance of *suzhi* education for improving the nation's quality and competence. The *suzhi* education consists of 5 aspects: moral education, intellectual education, physical education, aesthetic education and working skill development. The document considers the quality of teaching force as the essential condition for promoting *suzhi* education.

In fact, the qualities/competence of teachers was not a new topic of discussion in China's education reform and development. In 1978, when Deng Xiaoping addressed the national education work conference, he already pointed out that "(w)hether a school can train qualified talents for socialist construction, and whether it can produce workers with all-round quality in moral, intellectual and physical aspects as well as with socialist consciousness and culture, the key is the teachers."⁷¹ What are the essential qualifications of VTE teachers then? Zhang Fuzhen, Wang Zhiyi, et al. summarize as follows:

1. Must have high political and moral standard and professional ethic;
2. Must love their job and be devoted to people's vocational and technical education;

⁶⁸Liu, Kang (1993), "Basic Views on Strengthening Teachers Development in Vocational Training" [*Jiaqiang zhiye peixun shizi duiwu jianshe de jiben gouxiang*], *Vocational Education Research* [*Zhiye jiaoyu yanjiu*] (Tianjin), No.3, pp.4-7.

⁶⁹ Wang, Mingda (1996, 20 June), "Summary Speech at the National Conference of Vocational Education Work" [*Zai quanguo zhiye jiaoyu gongzuo huiyi shang de zongjie jianghua*], reprinted in Department of VTE of National Education Commission (ed.), *Policies and Regulations on Vocational Education 1992-1996* [*Zhiye jiaoyu zhengce fagui 1992-1996*], Beijing: Beijing Normal University Press, pp.189-206.

⁷⁰ Issued on 3 June 1999, <http://www.edu.cn/20012121/19629.shtml>, accessed on 24/02/2004.

⁷¹ Deng, Xiaoping (1978, 22 April), "Speech at the National Conference on Educational Work" [*Zai quan guo jiaoyu gongzuo huiyi shang de jianghua*], *Comrage Deng Xiaoping on Education* [*Deng Xiaoping tongzhi lun jiaoyu*], Beijing: People's Education Press, 1990, pp.58-66.

3. Show loving care and set high standards on students;
4. Must have profound professional knowledge, broad foundation of knowledge, and high intellectual competence;
5. Field practice supervising teachers must have high professional/technical skills and competence;
6. Must enrich themselves by studying education theory, grasping the (natural) law of education and improving teaching skills (methodology);
7. Must be a competent speaker;
8. Must have good skills of organising, administration, coordination and communication.⁷²

In short, teachers should be high quality all-rounded individuals.

Some people argued that as China's economic development was progressing rapidly and China was under a great pressure to catch up with the developed countries, senior secondary vocational school students should expand their knowledge on humanities, social sciences, literature, arts, etc. in addition to learning their specialized subjects. Only in this way were they able to develop their capacities to adapt to the work requirements in future. Teachers should change their opinion that "specialized education is the most important at school", and they should nurture students' qualities as individual human beings. They must not see their job as only passing their specialized knowledge onto the students, but instead, they should teach students to love their profession, and to teach them to know how to work as well as how to be a good citizen.⁷³ To achieve this goal, teachers must love both their profession and their students.⁷⁴

Another writer (Ma Zhiyun) supports this argument by claiming that education is for human development, and that teachers should not be after materialism and fame because they are regarded as noble-minded people.⁷⁵ Ma considers this to be very

⁷² Zhang, Fuzhen, and Wang, Yizhi (eds.) (1991), *Applied Pedagogy of Vocational and Technical Education* [Yingyong zhiye jishu jiaoyu xue], Tianjin: Nankai University Press., pp.242-248.

⁷³ Zhu, Xiaobin (1996), "A Project for the New Century in Vocational Education" [Zhiye jiaoyu de yixiang kua shiji gongcheng], *Education and Occupation* [Jiaoyu yu zhiye] (Beijing), Sept, pp.6-7.

⁷⁴ Fan, Qiu'er & Zhao, Xinhua (1998), "My Views on the Accomplishment of Teacher's Ethics" [Shi de xiuyang zhi wo jian], *Chinese Vocational and Technical Education* (Beijing), No.10, pp.28-29.

⁷⁵ Ma, Zhiyun (2000), "Teacher's Ethics, Vocational Education and Human Quality" [Shide, zhijiao, renwen suzhi], *Chinese Vocational & Technical Education* (Beijing), No.4, pp.26-27, 44.

important especially for China's vocational education that was still looked down upon in society. It may sound very ideal, but it was difficult to achieve. The reason is that when China shifted from a politically oriented planning economy to a market economy, the values of the society changed accordingly. Money and material rewards began to occupy people's minds.⁷⁶ It was hard for teachers not to look at the monetary and material returns of their job, apart from having a sense of achievement in career. In fact, monetary returns began to be regarded as a standard for assessing a person's achievement in career.

6.9 Welfare of VTE Teachers

The Chinese tradition is to value teachers as noble-minded and highly competent professionals, however, teaching was not on the popular job list especially during the 1980s and early 1990s. Keith Lewin and Xu Hui, et.al. observed that it was attributed to teachers' low salaries, shortage of housing, deterioration in access to medical services, and even difficulties of finding a spouse (usually for rural teachers).⁷⁷ In fact, this kind of situation was common in the entire educational establishment, from kindergarten to university. Even in the most prestigious universities such as Beijing University, academic salary was not high enough to sustain the living costs. It was noted that Japanese called Chinese professors as "water-drinking professors", which was a satirical description. It means that in China, professors were treated as second to none class from the bottom of social strata. The reason was that professors' income was even lower than a blue-collar worker.⁷⁸

The statistics of Tianjin (the third largest city in China) shows that teachers' income level was below the average income level of the city in the 1980s, and was second from the bottom among the 12 groups of industries in the national economy. It was only above agricultural, forestry and fishing industries. (See Table 6.7.) The 1994 statistics of Jiangsu Province gives another example. (See Table 6.8.) Although rated

⁷⁶ Xiao, Tong & Du, Li (1997), *1978-1996, the Chinese Ordinary People's Mentality during the Transition Period* [Long Li 1978-1996, zhuanxing qi zhongguo laobaixing xin ji lu], Beijing: Gaige [Reform] Press, pp.387-389.

⁷⁷ See Lewin, Keith M.; Xu, Hui; Little, Angela W. & Zheng, Jiwei (1994), *Educational Innovation in China, Tracing the Impact of the 1985 Reforms*, Essex, England: Longman, pp.109-111.

⁷⁸ Bo, Ren (1992), "The 'Water-Drinking Professors' in China" [Zhongguo de "shui tun jiaoshou"], *Cheng Ming* [Zheng Ming] (Hong Kong), November, pp.34-36.

above the average income level, education was only higher than services, hospitality, retailing, manufacturing, mining, agricultural, fishing and horticultural industries. Workers in these industries usually had comparatively lower level of education than teachers. In another word, workers in these industries were normally “blue-collars”. Compared to government offices and social organizations, research institutions or finance and high technology industries, teachers' average income was well below. In addition, those higher income industries or professions also had higher extra income such as bonus and subsidies or fringe benefits. (See Tables 6.9.) Many professionals or technical personnel from these higher income-earning industries graduated from the same or similar universities or colleges as the teachers. In another word, their academic credential backgrounds were the same or similar, but their income could be far different. In 1998, the national statistics of average salary standards in the 8 professions/industries [*hang ye*], which consisted of the majority of highly educated people, showed that education was second from the bottom.⁷⁹

Table 6.7
Average Annual Salaries in Tianjin (RMB yuan)

	1985	1988	1989
Average	1,250	1,975	2,262
Geological survey & prospecting	1,372	2,381	2,838
Transportation & communication	1,395	2,218	2,566
Building	1,539	2,094	2,278
Manufacturing	1,097	1,826	2,141
Trade, Catering, Supply & marketing of goods & materials, & Storage	1,104	1,842	2,114
Public health, Sports & public welfare	1,130	1,876	2,098
Scientific research, & Comprehensive technology services	1,179	1,833	2,091
Finance & insurance	1,135	1,835	2,005
CCP & government organizations, & Social organizations	1,104	1,693	1,989
Real estate, Public utilities, Community & Councelling services	1,144	1,731	1,958
Education, Arts & culture, Radio & TV broadcasting	1,153	1,697	1,921
Agriculture, Forestry, Animal husbandry, & Fishing	1,178	1,604	1,774

SOURCE: *Tianjin Statistics Yearbook 1990*, p.366.

Table 6.8
Average Monetary Salary of Workers in Jiangsu Province (1994) (RMB yuan)

⁷⁹ Yan, Zhimin (ed.) (2002), *Studies of the Current Social Classes and Stratums in China* [Zhongguo xian jieduan jieji jiecheng yanjiu], Beijing: CCP School, p.176.

Industries	Total average	State-owned workplace	Collective-owned workplace	Others
Average	4,974	5,491	3,728	5,827
Finance & insurance	7,875	8,266	6,757	7,652
Utilities	7,668	7,738	5,645	10,180
Scientific research & comprehensive technology services	7,235	7,256	6,334	9,084
Real estate	6,475	6,507	5,642	7,756
CCP & government office & social organizations	6,166	6,184	5,377	
Others	5,940	6,876	4,303	4,975
Public health, sports & social welfare	5,859	6,078	5,414	5,872
Education, arts & culture, broadcasting, film and TV	5,603	5,965	3,151	6,599
#Education	5,575	5,945	3,051	
Geological surveying, hydropower management	5,499	5,583	3,742	
Transportation, storage, post & telecommunications	5,419	6,323	3,627	5,573
Excavating (eg mining)	5,416	5,589	2,881	2,994
Building	5,325	6,166	4,212	6,853
Social services	5,311	5,680	4,376	6,506
Manufacturing	4,660	5,096	3,699	5,647
Wholesale, retail & catering	4,000	4,506	3,231	7,160
Agricultural, horticultural, animal husbandry & fishing	3,641	3,654	3,439	2,780

SOURCE: 1995 Jiangsu Province Statistics Yearbook, p.53

Table 6.9
Average Extra Income of Workers in Jiangsu Province (1994) (RMB yuan)

Industries	Total workers average salaries	Bonus & over-the-quota pay	Allowance & subsidies	Total income
Average	4,974	903	1,187	7,064
Finance & insurance	7,875	907	3,614	12,396
Scientific research & comprehensive technology services	7,235	909	2,433	10,577
Utilities	7,668	1,315	1,383	10,366
Real estate	6,475	1,193	1,812	9,480
CCP & government office, & social organizations	6,166	729	1,803	8,698
Public health, sports, & social welfare	5,859	606	1,946	8,411
Others	5,940	1,049	1,303	8,292
Geological surveying, hydropower management	5,499	483	2,146	8,128
Excavating (e.g. mining)	5,416	1,062	1,448	7,926
Transportation, storage, post & telecommunications	5,419	985	1,454	7,858
Education, arts & culture, broadcasting, film and TV	5,603	473	1,801	7,877
#Education	5,575	455	1,791	7,821
Social services	5,311	1,016	1,430	7,757
Building	5,325	1,234	1,024	7,583
Manufacturing	4,660	1,040	894	6,594
Agricultural, horticultural, animal husbandry & fishing	3,641	378	999	6,151
Wholesale, retail & catering	4,000	733	818	5,551

SOURCE: 1995 Jiangsu Province Statistics Yearbook, p.54

Teachers of VTE schools not only had the common problems as their counterparts in other sectors of education, but also had more problems and difficulties. It was difficult to attract young people to go into teaching profession and existing teachers tried to change jobs or go moonlighting. The instability in the VTE teaching force was very serious. There were four major factors contributing to these problems. Firstly, teachers' living conditions were not up to standard. In urban China, a work unit, such as a factory, a school, a government department, a research institution, a hospital or a shop, was a small society. This system remained unchanged until the 1990s when market economy had taken shape. Under the old system, each employee's welfare was arranged by the employer, and in most of the cases, the employer was the government. This is called "public ownership system" [*quan min suo you zhi*]. The employer should pay salaries and provide housing, medical benefit, pension, childcare facilities, etc. Apart from the public ownership system, there was another system called "collective ownership system" [*ji ti suo you zhi*]. This system mainly existed in the townships [*cheng zhen*]. The government was not responsible for providing welfare to workers in this system, although the government might provide some subsidies. The Chinese government showed its intention to improve teachers' welfare benefits. It was included in the "Teachers' Law" and emphasized in the "Outlines of China's Educational Reforms and Development". However, many VTE schools lacked funding, and they did not even have enough money to meet the basic expenses, let alone improve teachers' working and living conditions. Many schools had difficulty providing housing to staff. Teachers had to wait for years before they could be allocated with a reasonably sized room or flat of a reasonable condition. The deterioration in free medical services was described by Lewin and Xu. Under the old centrally planning economy, all government employees enjoyed free public medical services. From the end of the 1980s, schools (as well as other government institutions and government-owned enterprises) started to adopt the new policy of asking employees (teachers) to pay out of their own pockets for medical care once the expenses exceeded a maximum amount. Many schools even had problems to reimburse teachers' medical expenses within the quota limit that they were entitled to

due to the shortage of funds.⁸⁰ Teachers in the collective ownership system [*ji ti suo you zhi*] had much poorer access to medical services.⁸¹

Secondly, VTE school teachers had lower income than professional or technical personnel in many other professions and industries. They earned less than their counterparts in other industries or former university classmates who were in other occupations. Take teachers in finance and accounting for example, they earned less than an accountant in a factory or a business company. Employees in business companies, factories and so on were able to get a lot of extra income, such as bonus. VTE school teachers would not get much extra income unless the schools made profits from their sideline production or services. Some people describe that their income was more or less the same as what a blue-collar worker earned.⁸²

Thirdly, VTE school teachers felt disadvantaged in career development. They had fewer opportunities for further study. Many teachers in secondary specialized schools used to be outstanding students [*gao cai sheng*] at elite universities before the “Cultural Revolution”. If they were in other professions or occupations, they would have had many opportunities to go abroad for further study or research work after China opened its door to the West in 1980. They would also have many opportunities to attend overseas conferences.⁸³ Many teachers wished to have chances to improve and update their knowledge, and to conduct research in curriculum reform and development. Very often their needs could not be met, because there was a lack of research facilities and funding.⁸⁴

Fourthly, vocational school teachers felt being treated as second-class citizens when it came to promotion. In the secondary education system, all teachers, whether in general high schools or vocational schools, belonged to one administrative system. They were all under the administration of Education Department. There were no

⁸⁰ Lewin, Keith, Xu, Hui, et.al. (1994), op.cit.

⁸¹ Li, Xiaosan (1990), “Vocational School Teachers have ‘Seven Wishes’” [*Zhiye xuexiao jiaoshi you ‘qipian’*], *Vocational Education Forum* (Nanchang), No.1, p.24.

⁸² Qian, Zhuo (1993), op.cit.

⁸³ Qian, Zhuo (1993), “A Brief Discussion on the Current Situation and Development of VTE Teachers” [*Qiantan zhijiao shizi duiwu de xianzhuang ji jianshe*], *Vocational and Technical Education* (Changchun), No.8, p.7.

⁸⁴ Li, Xiaosan, (1990), “Vocational School Teachers Have ‘Seven Wishes’” [*Zhiye xuexiao jiaoshi you ‘qipian’*], *Vocational Education Forum* (Nanchang), No.1, p.24.

separate guidelines for vocational school teachers in promotion. They competed with general high school teachers based on the guidelines for general high school teachers, and the promotion committee members were usually from general high schools.⁸⁵ This put vocational school teachers, especially specialized subject teachers into a disadvantaged position. In some areas, the traditional idea of favouring general education was still dominant in the authorities' minds. As there was a limited quota for promotion, vocational school teachers had less chance.⁸⁶ Seeing less benefits of being a VTE teacher, some of them wanted to go back to their original jobs. Teachers who used to teach general subjects wanted to resume their original position or go to teach in general high schools, and teachers who used to be specialists or engineers wanted to go back to their former workplace.⁸⁷

The Chinese government recognised these problems and issued documents on improving teachers' working and living conditions. The "Teachers' Law" stated that teachers' average income should not be lower than, or should be higher than the average income level of the country's public servants [*guo jia gong wu yuan*], and should be improved gradually.⁸⁸ The "Outlines of China's Educational Reforms and Development" affirmed that teachers' average income should be higher than the average income of the employees of the public ownership system. It should be at the middle or upper level of the income among the 12 industries of the country's national economy.⁸⁹ Both documents addressed other issues such as housing, medical benefits, retirement pension, and so on. The documents emphasized that teachers should be given priority and discounts in renting and buying houses. Medical benefits and retirement pension should be on the same level as public servants. The importance of improving teachers' quality in teaching and living had been repeatedly addressed by the Chinese government for two decades, however, by the end of the 20th Century, there were still serious problems in these areas, and the problems were still repeatedly discussed.⁹⁰ In September 2000, the national conference on secondary

⁸⁵Qian, Zhuo (1993), op.cit.

⁸⁶Wu, Jichen & Li, Wenming (1995), "It's an Urgent Task to Strengthen Teaching Staff Development in Vocational Education" [Jiaqiang zhijiao shizi duiwu jianshe po zai meijie], *Chinese Vocational & Technical Education* (Beijing), No.12, pp.6-8.

⁸⁷Li, Xiaosan (1990), op.cit.

⁸⁸Article 25 of Chapter 6, "Teachers' Law", 31 October 1993.

⁸⁹See "Outlines", Section 5, 1993.

⁹⁰Wang, Bing (1997), "Reflections on Strengthening the Development of Teaching Force in Vocational Schools" [Guanyu jiaqiang zhiye zhongxue shizi duiwu jianshe de sikao], *Chinese*

VTE teacher development was held in Kunming. Huang Rao, Director of Department of Vocational Education and Adult Education of the Ministry of Education (MOE), gave a report on VTE teacher development. He summarized problems as follows:

In summary, the (VTE) teaching resources in our country is lacking in number, low in quality, inadequate channels for training, short of leading figures in teaching development and research. Compared to general education stream, (vocational education) lags far behind in teacher training, recruitment and selection, as well as in school construction.⁹¹

Vocational & Technical Education (Beijing), No.8, pp.19-21; Huang, Rao (1999), "Deepen the Reforms of Teaching in Vocational Education, Promote Qualities/Competence Education on a Full Scale, Strive to Develop High Quality Workers for the Modernization Construction in the 21st Century" [Shenhua zhiye jiaoyu jiaoxue gai ge, quanmian tuijin suzhi jiaoyu, wei peiyang 21 shiji xiandaihua jianshe xuyao de gao suzhi laodongzhe er fendou], *Chinese Vocational & Technical Education* (Beijing), No.9, pp.11-17.

⁹¹ Huang, Rao (2000), "Strengthen VTE Teachers Development, Try to Build a VTE Teaching Force with High Quality and Competence" [Da li jiaqiang zhi jiao shizi duiwu jianshe, nuli zaojiu yi zhi gao suzhi de zhi jiao shizi duiwu], *Chinese Vocational and Technical Education* (Beijing), No.10, pp.11-14.

CHAPTER SEVEN

TEACHING

7.1 Aims of Education

In any country and for any government, education basically is for two major purposes: to develop human capital for social, political and economic needs of society; and to impart knowledge and skills to the individuals and assist them to realise their potential. In ancient China, education was strongly influenced by Confucius educational thought.¹ Confucius believed education had two major functions in society: to influence politics and economy, and to develop individual's human nature.² Confucianists believed that all individuals were born with similar qualities, only education and environment would make them different. Mencius,³ a leading Confucianist in ancient China, advocated that the purpose of education was to nurture gentlemen with high moral standards. He believed that a country should be governed by morality, and a family should be managed by morality. Only with high moral standards can a family achieve harmony and a country be united. This high moral standard could only be achieved through education.⁴ This view dominated China for more than two thousand years. Education was focused on morality and ethics, and little attention was given to science and knowledge. Since the Tang dynasty (618 – 907 A.D.), the purpose of schooling was to pass imperial examinations, which aimed at selecting high achievers to be officials of the imperial government.

¹ Confucius (551 B.C - 479 B.C) was a great thinker and educationist in ancient China. His famous works was *The Analects*, the records of his talks with his students. He was the founder of Confucianism, one of the dominant schools of philosophy in China. After he died, his students and followers developed his theory further, and thus the school of Confucianism was formed.

² Mao, Lirui (ed.) (1984), *A Brief History of Chinese Education* [Zhongguo jiaoyu shi jianbian], Beijing: Education Science Press, pp.235-243.

³ Mencius (372 B.C. - 289 B.C.) was one of the prominent figures in Confucianism. He developed Confucius ideals to a higher level. His theory was regarded as the orthodox of Confucianism around the turn of the first century. Mencius followed Confucius theory of education. He also believed that loyalty and filial piety were crucial for the stability of the country. This could only be achieved through education. This theory of his had a great influence on education in feudal China.

⁴ Mao, Lirui, op.cit., p.153.

At the turn of the 20th Century, China experienced "The 1911 Revolution", which aimed at overthrowing the feudal imperial system and to establish a democratic republic. Activists in this moment tirelessly promoted a new education to strengthen China. In 1927, the Nationalist Party (KMT) established its government in Nanjing, and an education policy was adopted at the Third National Congress of KMT in 1929. The aims of education were declared as:

Based on the Three People's Principles (Nationalism, Democracy, the People's Livelihood), education in the Republic of China aims at enriching people's life, fostering society's survival, developing people's means of livelihood, and continuing the nation's life. It will promote national independence, universal civil rights and people's livelihood development, so as to promote universal harmony in the world.⁵

The Congress also adopted 8 principles for meeting the aims of education. In summary, the principles were to combine education of the "Three People's Principles" with all curriculums at schools; to promote moral education; to provide social studies so as to foster people's sense of responsibility for protecting public interest and environment; to support the old and help the poor; to develop people's livelihood skills and ability for national production; to promote equality between men and women; to develop national sports; and to develop agriculture.

In 1949, the Chinese Communist Party (CCP) established the People's Republic of China. CCP Chairman Mao Zedong declared

Our educational policy must enable everyone who receives an education to develop morally, intellectually and physically and become a worker with both socialist consciousness and culture.⁶

Deng Xiaoping, the supreme leader in China who launched the economic reform from the late 1970s, supported Mao Zedong's viewpoint on education. He addressed the national education conference on 22 April 1978:

⁵ Mao, Lirui (ed.) (1984), op.cit., p.427.

⁶ Mao Zedong (1957, 27 February), "On the Correct Handling of Contradictions among the People" in *Selected Readings from the Works of Mao Tsetung*, Peking (Beijing): Foreign language Press, 1971, pp.432-479 (p.459).

Our schools are places to train talents. Are there any standards on the training? Yes. This is what Comrade Mao Zedong had addressed, to enable the students to develop morally, intellectually and physically so as to become workers with socialist consciousness and culture.⁷

Deng Xiaoping also extended his view to suit the needs of China's economic and social development. On 1st October 1983, Deng Xiaoping addressed a school in Beijing that "education should be oriented to modernization, the world and the future"⁸. This "Three orientations" [*san ge mian xiang*] later was frequently and extensively quoted in China's newspapers and government documents on education. In 1995, the Education Law of the People's Republic of China was passed. The fifth clause of Article One states:

Education must serve the construction of socialist construction, must be combined with production and labour. It is to foster the constructors and successors of the socialist undertakings, who are comprehensively developed in the areas of moral, intellectual, physical, and etc.⁹

This "and etc." was explained in the National Education Committee document issued on 28 March 1995 as aesthetic standards, labour skills and attitudes.¹⁰

7.2 Chinese Tradition in Moral Education

Moral education has always been given a prominent position in China's education. This is not only the case under the CCP government, but was also in the imperial and republic China. Both Confucius and Mencius were "primarily interested in building an ideal society, and their program was predicated on the education of individual;

⁷ Deng, Xiaoping (1978, 22 April), "Speech at the National Conference on Educational Work" [Zai quan guo jiaoyu gongzuo huiyi shang de jianghua], *Comrade Deng Xiaoping on Education* [Deng Xiaoping tongzhi lun jiaoyu], Beijing: People's Education Press, 1990, pp.58-66 (p.58).

⁸ Deng, Xiaoping (1983, 1 October), "Inscription for Beijing Jing Shan School", *Comrade Deng Xiaoping on Education* [Deng Xiaoping tongzhi lun jiaoyu], Beijing: People's Education Press, 1990, p.132.

⁹ "Education Law of the People's Republic of China" [Zhong hua ren min gong he guo jiao yu fa], passed on 18 March 1995, reprinted in *Policies and Regulations on Vocational Education 1992-1996*, pp.3-18.

¹⁰ Office of National Education Commission (1995, 28 March), "Notice of Promoting Outlines for 'Education Law of the People's Republic of China'" [Guojia jiaowei bangongting guanyu yinfa "Zhonghua renmin gongheguo jiaoyu fa" xuanchuan tigang de tongzhi], reprinted in *Policies and Regulations on Vocational Education 1992 - 1996*, Beijing: Beijing Normal University Press, pp19-29.

personal moral perfection was the foundation of a good society.”¹¹ The essence of Confucianist educational theory was to focus on moral and ethics education.¹² At the turn of the 20th Century, as China was moving into modern era following “The 1911 Revolution”, a “New Culture Movement” after 1919 was critical of Confucian values and Confucian educational ideas. It generated many educational theories at that time. They were the “strengthen moral quality” theory [*Jian quan ren ge jiao yu*] represented by Cai Yuanpei, Chen Duxiu and Lu Xun; the scientific education [*ke xue jiao yu*] advocated by Chinese overseas scholars who had returned from America; the vocational education [*zhi ye jiao yu*] promoted by Huang Yanpei, Cai Yuanpei and Lu Feikui; and the military education to civilians [*jun guo min jiao yu*].¹³ As China developed further into modern society, education incorporated more practical elements.

More areas of focus in education as it might have been, moral and political education was always a very important part of education under any government. In February 1912, Cai Yuanpei, the general director of education in the Nationalist government in Nanjing, published “Views on Education Principles”. His views became a guiding principle for the education reforms during that time. In the article, he put forward an education policy with five elements, which included military education to civilians [*jun guo min jiao yu*], utilitarian education [*shi li zhu yi jiao yu*], public moral education [*gong min dao de jiao yu*], world outlook education [*shi jie guan jiao yu*] and aesthetic education [*mei gan jiao yu*]. He argued that all these five parts were equally important. In July of the same year, the government held a preliminary meeting on education and adopted its aims of education: stressing on moral education, applying utilitarian education and military education to civilians as support, and providing aesthetic education to achieve moral education.¹⁴

The CCP government also stressed the importance of moral education in schools. In 1957, Mao Zedong highlighted the ideological and political education as

¹¹ Lee, Thomas H.C. (2000), *Education in Traditional China, A History*, Leiden, Bosten, Köln: Brill, p.3.

¹² Mao, Lirui (ed.) (1984), *op.cit.*, p.131.

¹³ Li, Guilin (ed.) (1989), *A History of Chinese Education [Zhongguo Jiaoyu Shi]*, Shanghai Education Press, pp.365-367.

¹⁴ Mao, Lirui (ed.) (1984), *op.cit.*, p.459.

follows:

*Both students and intellectuals should study hard. In addition to the study of their specialized subjects, they must make progress both ideologically and politically, which means that they study Marxism, current events and politics. Not to have a correct political point of view is like having no soul. All departments and organizations should shoulder their responsibilities in ideological and political work. This applies to the Communist Party, the Youth League, government departments in charge of this work, and especially to heads of educational institutions and teachers.*¹⁵

The importance of political and moral education was repeatedly emphasized in the CCP and government documents on education. In 1985 and 1988 the Central Committee of the CCP issued exclusive documents on strengthening and reforming ideological and political education in schools.¹⁶ In 1995 and 1996 political and moral education was included in the Education Law and the Vocational and Technical Education Law.¹⁷

The emphasis on political and moral education may always have been strong, but the actual practice in schools depended on the macro situation of the country. For instance in the 1980s as economic reforms developed further and the pressure on the CCP to have political reforms increased, there was no strict control on political education in schools. But after the Tian An Men Incident in 1989, the CCP and Central government started to emphasize the importance of political and moral education again and called on educational institutions at all levels to strengthen political education. On 23 March 1989, Deng Xiaoping talked about education problems during his meeting with the prime minister of Uganda. He said: "We have

¹⁵ Mao Zedong (1957, 27 February), "On the Correct Handling of Contradictions among the People", *Selected Readings from the Works of Mao Tsetung*, Peking (Beijing): Foreign language Press, 1971, pp.432-479 (pp.458-459).

¹⁶ See Central Committee of CCP (1985, 1 August), "Notice of Reforming Ideological and moral education and Political Theory Subjects in Schools" [Guanyu gaige xuexiao sixiang pinde he zhengzhi lilun kecheng jiaoxue de tongzhi], reprinted in Department of VTE of National Education Commission (ed.), *Selected Documents on VTE 1978-1988*, Beijing: San Lian Bookshop, 1989, pp.22-36.

¹⁷ Article 6 of Chapter 1, "Education Law of the People's Republic of china" says: "Education on patriotism, collectiveness, socialism is to be carried out to the educated. Education is to be carried out on ideals, morality, discipline, law, national defence, and unity of nationalities."

Article 4 of Chapter 1, "Vocational Education Law of the People's Republic of china" says: "To carry out vocational education, (we) must carry out ideological and political education to the educated, impart onto them knowledge, develop their vocational skills, provide them with career guidance, and improve the qualities of the educated comprehensively."

made very good development in the past ten years. Our biggest mistake was in education. Ideological and political education became weak. Education development was not enough.”¹⁸ On 9 June in the same year, Deng Xiaoping addressed the same issue at the meeting with military officers in Beijing. He said:

*I said to the foreigners that our biggest mistake in the past 10 years was education. What I meant was ideological and political education. It was not only about schools and youth students, but also referred to education to the people of the whole nation. ... (We) must grasp with both hands. On the one hand we must carry out reforms and open-door policy, on the other hand we must seriously crack down economic crimes, including carrying out ideological and political education. ... Looking back, there was a very obvious lacking. One hand was hard, but the other was too soft. One hard and one soft were not compatible. They were not coordinated well. Talking about this issue may be helpful for our policy making in future.*¹⁹

In 1991 the Ministry of Transportation and Communication was the first to start the project of developing curriculum outlines on political and moral education. In 1993 the National Education Commission (MOE) started reforms in political study subjects in secondary VTE, and to organise the writing of curriculum outlines and textbooks for this area. By 1994, the textbooks had been produced and used in schools.²⁰ In 1994, the CCP issued a document to reinforce the importance of political and moral education. It emphasized the pressing importance to overcome "one hand hard and one hand soft" and the tendency to neglect moral education.²¹

Moral education in schools basically included two parts: ideological and political education [*si xiang zheng zhi jiao yu*] and moral character education [*dao de pin zhi jiao yu*]. The former carried the objectives of “carrying out education centred

¹⁸ Deng, Xiaoping (1989, 23 March), “The Biggest Mistake in the Past Ten Years is in Education” [Shi nian zuida de shiwu shi zai jiaoyu fangmian], *Comrade Deng Xiaoping on Education* [Deng Xiaoping tongzhi lun jiaoyu], Beijing: People’s Education Press, 1990, p.176.

¹⁹ Deng, Xiaoping (1989, 9 June), “Address to the Officers at the Rank of General and Above in Command of the Troops Enforcing Martial Law in Beijing” [Zai jiejian shoudu jieyan budui jun yishang ganbu shi de jianghua], *Comrade Deng Xiaoping on Education*, Beijing: People’s Education Press, 1990, pp.177-184 (p.182).

²⁰ China National Education Commission & Central Research Institute of VTE (1995), *Research Report on the Ninth “Five-Year Plan” Projects in Vocational and Technical Education* [Zhiye jishu jiaoyu “Jiu Wu” guihua xueke diaoyan baogao], Beijing, p.45.

²¹ Central Committee of CCP (1994, 31 August), “Suggestions on Further Strengthening and Improving Moral Education Work in Schools” [Zhong gong zhongyanng guanyu jin yi bu jiaqiang he gaijin xuexiao deyu gongzuo de ruo gan yijian], reprinted in *Policies and Regulations on Vocational*

around Marxism-Leninism and Mao Zedong Thought, and Deng Xiaoping's theory on constructing socialism with China's characteristics; fostering student's scientific outlook on the world, life and value, as well as beliefs in socialism; educating students to adhere to the "Four Cardinal Principles" [*si xiang ji ben yuan ze*] (the socialist road, the people's democratic dictatorship, Marxism-Leninism and Mao Zedong Thought, and the leadership of the CCP), to love their socialist country, to love people, and to serve the people with heart and soul." The latter included "education on socialist morality, Communist morality, social morality, family morality, and traditional Chinese morality. Professional ethics was a very important part of moral education at VTE schools."²²

7.3 Ideological and Political Education [*si xiang zheng zhi jiao yu*]

The ideological and political education basically includes:

- 1) Basic principles of Marxism, Leninism and Mao Zedong Thoughts;
- 2) Theories on building socialism with Chinese characters;
- 3) The CCP's basic political line, general principles and specific policies;
- 4) Patriotism. To teach students to love their country and their course of socialist undertakings;
- 5) Labour. To develop students' hard working spirit and their devotion to the cause of building a strong country and enriching people's life;
- 6) Law and discipline;
- 7) Sense of collectiveness. To develop students' sense of responsibility towards collective group and the country;
- 8) Moral and character. To nurture students' lofty character, the ability to differentiate kind from evil, beauty from ugly, lofty from mean.²³

Ideological and political education was carried out in the forms of classroom teaching of political theory subjects, studies of political situations and policies either in classroom or as political activities outside classroom teaching times, production

Education 1992-1996, Beijing: Beijing Normal University, pp.627-636.

²² Meng Guangping (ed.) (1994), *An Introduction to Chinese Vocational and Technical Education* [Zhongguo zhiye jishu jiaoyu gailun], Beijing: Beijing Normal University Press, p.139.

labour, supervision by home group teacher [*ban zhu ren*], activities organised by the CCP and the Communist Youth League,²⁴ as well as other extra curriculum activities.

For every student, political subjects were compulsory in their curriculums. Every school had full-time teachers in politics, and the central government had specific requirements on politics subjects. In 1986 the National Education Commission (MOE) issued specific instructions on the implementation of the CCP's 1985 document that was to reform and strengthen ideological and political education in secondary specialized schools.²⁵ Schools were required to offer the following subjects to students:

- ◆ Basics of Marxism
- ◆ Fundamental Issues of Chinese Revolution and Construction
- ◆ Introduction to Communist Ethics
- ◆ Political Economy
- ◆ Dialectical Materialism and Historical Materialism

In 1993, the National Education Commission (MOE) issued instructions on curriculum design of political studies in secondary vocational and technical schools.²⁶ The document required secondary VTE schools to offer the following subjects:

- ◆ Economics and Politics (66-72 class hours)
- ◆ Theory and Practice of Constructing Socialism with Chinese Characteristics (66-72 class hours)
- ◆ World Outlook and Outlook on Life (36 to 72 class hours)

²³ Meng, Guangping (ed.) (1994), *ibid.*, pp.140-144.

²⁴ The Communist Youth League of China was founded under the guidance of the CCP. It is a political organisation of youths in China, which aimed at assisting the CCP to implement its policies and achieving its goals.

²⁵ National Education Commission (1986, 30 August), "Suggestions on the Implementation of 'Notice of Reforming Ideological, Moral and Political Theory Curriculums in Secondary Specialized Schools and Teacher Training Secondary Schools' Issued by the Central Committee of the CCP" [Guanyu zai zhongzhuan, zhongshi guanche "Zhong gong zhongyang guanyu gaige xuexiao sixiang pinde he zhengzhi lilun kecheng jiaoxue de tongzhi" de yijian], reprinted in *Selected Documents on VTE 1978-1988*, pp.195-202.

²⁶ National Education Commission (1993, 9 October), "Suggestions on Curriculum Design in Politics Studies at Secondary Vocational and Technical Schools" [Guojia jiaowei guanyu zhongdeng zhiye

- ◆ Law (32-36 class hours)
- ◆ National conditions and situations [*guo qing*] (32-36 class hours)
- ◆ Professional Ethics (34-40 class hours)
- ◆ National Conditions and Situations (32-36 class hours)

Not only did the national government require schools to offer the same subjects throughout the country, but it also issued textbooks for all these subjects. By the end of 1994, textbooks and reference materials for the subjects defined in the 1993 document had been published. In principle, all secondary VTE schools were required to use these textbooks and teaching materials.²⁷

Political studies was not only carried out in classroom as a subject, but also embedded throughout the school life. In every school there was a branch of Communist Party, and its duties were to carry out ideological and political education and the development of the CCP in schools. These CCP branches worked to guarantee that the CCP's policies carried out effectively at the school. Therefore, it was very common that each school had two heads, one for political education and administration -- the CCP Committee Secretary, and the other for academic work-- the school principal. Sometimes one person was wearing two the hats. Under the direction of the CCP, the schools had a complete political education system. Two other political organisations -- the Communist Youth League and the students union also existed in schools, and they were under the direct guidance of the CCP. In each grade there was a political supervisor-teacher [*zheng zhi fu dao yuan*] and in each class there was a class supervising teacher/home group teacher [*ban zhu ren*]. The secretary of the Youth League, and political supervisor-teachers for each grade were full-time positions, while home group teachers for classes were usually part-time positions held by full-time general subject or specialized subject teachers.

The class supervisor-teacher model was a common practice throughout

jishu xuexiao zhengzhi ke kecheng shezhi de yijian], reprinted in *Policies and Regulations on Vocational Education 1992-1996*, pp.641-643.

²⁷ Department of VTE of the National Education Commission (1994, 12 January), "Notice of Using the New Politics Course Textbooks in Secondary VTE Schools" [Guojia jiaowei zhiye jishu jiaoyu si guanyu shiyong xinbian zhongdeng zhiye jishu xuexiao zhengzhi ke jiaocai, zuo hao youguan zhengding faxing gongzuo de tongzhi], reprinted in *Policies and Regulations on Vocational Education 1992-1996*, pp.643-644.

Chinese schools. Class supervisor-teachers, who were similar to home group teachers in Australian schools, were responsible for students' ideological and moral development. Meng Guangping summarized class supervisor-teachers' responsibilities in the following five areas:

- ◆ Getting to know each student well, so as to carry out education to students in depth and comprehensively;
- ◆ Carrying out ideological education to students;
- ◆ Educating students to study hard in science and knowledge as well as skills;
- ◆ Providing guidance to class committee and the Youth League branch in their work;
- ◆ Providing induction education to new students and career guidance to graduating students, and carrying out annual assessment work on students' behaviour and performance.²⁸

The class supervisor-teachers were regarded as the direct supervisor for students at school. They were encouraged to establish a close rapport with students, showing love, concern and care in both their study and their everyday life. The teacher's love and care were supposed to produce powerful impact on students' mental, intellectual and physical health development.

Political and moral education was considered as a very important part of schools' work. Teachers who had made outstanding achievements in this area were recognised and praised by the government. Their experience was popularized at local and national levels. In 2000, 10 political and moral education workers at secondary vocational education schools were awarded as national models. Most of them were Party secretaries or principals in their schools, while some were career teachers. The report of these teachers' experience praised them not only for doing an outstanding job in student moral education work, but also setting high requirements and standards on themselves. They were the role models for both staff and students.²⁹

²⁸ Meng, Guangping (ed.) (1994), *An Introduction to Chinese Vocational and Technical Education*, Beijing: Beijing Normal University, pp.156-158.

²⁹ "Outstanding Deeds of National Models of Moral Education Work in Secondary Vocational Education Schools" [Quan guo zhongdeng zhiye xuexiao deyu gongzuo biaoqing shiji], *Chinese Vocational & Technical Education* (Beijing), No.8, 2000, pp.11-13.

All of these activities assisted the CCP branch of the school to carry out political and ideological education that ranged from studying CCP principles and political affairs to how to become a good citizen in the society. For example, in 1990, the CCP initiated a campaign in the whole country to “Learn from Lei Feng”. Lei Feng was a Chinese soldier who died in an accident at work in February 1962. Mao Zedong praised him highly for his outstanding services to the people and his selfless devotion towards revolutionary work. On 5 March 1963, Mao inscribed “Learn from Comrade Lei Feng” for the army and the whole country.³⁰ In 1990, this campaign was called on again in response to Deng Xiaoping’s comment in 1989 that the biggest failure in the previous ten years was in education. It was particularly aimed at restoring the social order from the 1989 students’ democratic movement, which was cracked down by the CCP’s army. In 1991 the National Education Commission (MOE) issued a document on carrying out “Learn from Lei Feng and Serve the People” movement in VTE.³¹ The document instructed all schools to organise “Learn from Lei Feng” activities in March every year, and it designated the days from 4 May to 10 May each year as “Lei Feng Week”. All the educational departments in the country should organise large-scale activities. The “Lei Feng Week” was to provide services to the communities, including cleaning-up streets, parks or other public places, and providing services to the public. It was reported that during the first “Lei Feng Week” in 1991 about 500,000 VTE school students participated in the activities.³²

The aim of political and ideological education was to develop students’ devotion to the CCP and the construction of the country, and to nurture their collective, selfless, and hardworking spirits.³³ Political and ideological education was carried out among students through student activities. The CCP branch and the

³⁰ *Ci Hai* (reduced format edition), Shanghai, Shanghai Dictionary Press, 1989, p.2243.

³¹ Office of National Education Commission (1991, 27 March), “Notice of Carrying Out ‘Learn from Lei Feng and Serve the People’ Activities in the VTE System”, reprinted in *Policies and Regulations on VTE 1989-1992*, Beijing: Beijing Normal University, pp.76-78.

³² Department of VTE of the National Education Commission (1992, 21 March), “Notice about Continuing the Activities of ‘Lei Feng Week’ in the VTE System” [Guojia jiaowei zhiye jishu jiaoyu si guanyu zhiye jishu jiaoyu xitong jin yi bu kaizhan “xue Lei Feng wei min fuwu zhou” huodong de tong zhi], reprinted in *Policies and Regulations on Vocational Education 1992-1996*, pp.639-641.

³³ Central Committee of the CCP (1994, 31 August), “Suggestions on Further Strengthening and Improving Moral Education Work in Schools”, reprinted in *Policies and Regulations on Vocational*

Communist Youth League branch encouraged students to apply for membership of their organisations. To qualify for the membership, especially for the membership of the CCP, students had to prove that they were politically active, adhering to the Party's principles and be morally high. Only those who met the requirements would be admitted. For individuals, being a CCP member meant the person was politically active and trustworthy, and was qualified for any position or job. For an institution such as a school, having many CCP member staff and students would demonstrate its outstanding work in political education and would indicate that the school had a high quality staff and students profile. A case in point is the report of an investigation team in Beijing on the development of secondary specialized school teachers. Presented at a conference of Beijing VTE Association in 1995, the report listed profiles of 1,212 young and middle-aged teachers from 82 schools in the categories of gender, academic position level, age, academic qualification, administration duty, and political affiliation. The report said:

Among the 1,212 teachers surveyed, 26% were CCP members. Most of the schools have come to a conclusion through daily observation and especially through the test of 1989 riot³⁴ that about 96% (of the teachers) support the "Four Cardinal Principles" and the CCP's reform and open-door policy. In ideology, they are devoted to their duty and demonstrate sound professional ethics.³⁵

Another example shows how schools emphasized the importance of having student CCP members. Anhui Textile School reported that from its re-establishment in 1985 to 1995, 95 student leaders were admitted into the CCP, and 80% of the CCP student members in the school became backbone workers in production, technology and management a few years after graduation. Some of them became managers or directors of companies or factories, and some of them were awarded by the provincial government for their innovations in work and contributions to the economic development of the country.³⁶

Education 1992-1996, Beijing: Beijing Normal University, pp.627-636.

³⁴ This is referred to the "Tian An Men Incident", or Tian An Men Massacre" as some Western countries defined.

³⁵ Research Group of Beijing Secondary Specialized School Teacher Development (1995), *Investigations in and Reflections on the Problems in the Development of Young and Middle-Aged Teachers*, *Selected Papers of the First Conference of Beijing Vocational and Technical Education Association*, Beijing, pp.62-69 (p.63).

³⁶ CCP Committee of Anhui Textile School (1996), "Strengthen Students' Spare-Time Political Studies

7.4 Moral Character Education [*dao de pin zhi jiao yu*]

Moral character education was related to political and ideological education. Apart from education in socialism and communism, it also included education on public morals, family morals, traditional Chinese morals, as well as professional ethics. Some parts of this education was integrated into political and ideological education. At VTE schools, the focus of moral education was on professional ethics,³⁷ which was conducted in the forms of classroom teaching, and extra curriculum activities.

Professional ethics education in Chinese VTE schools mainly included the five major aspects: 1) Establishing healthy vocational/occupational outlook ; 2) Serving the people with heart and soul; 3) Hardworking and ambitious for advancement in their specialized fields; 4) Developing sound habits to follow codes of conduct in their profession; and 5) Developing student's adaptability and self-esteem to respond to the development of market economy.³⁸ Both the government and educationists stressed the importance of educating students to love their future occupation, especially for secondary VTE students who studied in those fields that were regarded "low" in social status, such as agriculture, coal mining, and some service industries. VTE was not usually as popular as general senior secondary education among parents and students when it came to deciding on the post compulsory education learning. This was because secondary VTE was considered as a dead-end education as students would have no chance for further study. Most of the secondary VTE students did not have a good academic record at junior high schools and usually did not achieve high marks in the unified senior secondary education entrance examinations. Therefore they were streamed into the VTE track. This situation made both society and students themselves believe that secondary VTE was inferior to general senior secondary education, which aimed at leading students to university education.

Students' state of mind was considered to be a crucial factor for their

Program" [Jiaqiang xuesheng de yeyu dangxiao de gongzuo], *Chinese Vocational & Technical Education* (Beijing), No.1, pp.38-39.

³⁷Professional ethics education is to provide training to the individuals, who are in employment or preparing to be employed, in specific professional thinking and codes of conduct - See Meng, Guangping (ed.) (1994), op,cit., p.150.

development of professional ethics. Generally speaking, students who failed the academic senior secondary entrance examinations had no other alternatives but to go to VTE or enter employment. These students were likely to have negative views of themselves with a sense of failure, and they would be looked down upon by their peers, scolded by their school teachers, and blamed by their parents. Thus their self-esteem got hurt, and felt inferior to others.³⁹ Professional ethics education at VTE schools aimed to teach students to recognise the importance of their specialized study and training and to establish correct outlook towards their future occupation. They were expected to recognise that every walk of life could be extraordinary and produce outstanding individuals.⁴⁰

“Serve the people with heart and soul” was always advocated by the CCP. Mao Zedong had a famous article entitled “Serve the People”,⁴¹ and it was very well known to the Chinese people especially during and after “Cultural Revolution”. The former Chinese premier Zhou Enlai was always seen wearing a badge engraved with this slogan. Within the CCP, every member was educated to devote themselves to the interest of the Party, the country and the people. In the Chinese society, every citizen was educated to dedicate their life to the cause of the CCP and the national construction. Individual’s personal interests should be sacrificed for the collective and national interests. This seems to be relevant and essential for secondary VTE, especially in the fact that many of the training areas would not lead students to higher social status or higher paid occupations.

Apart from addressing the importance of students’ attitudes towards their specializations, professional ethics education also stressed the importance of students working hard in their study. Modern technology and communication skills had become an essential part of every day life. To educate students to understand science and technology had become the most important factor for modern society's

³⁸ Meng, Guangping (ed.) (1994), p.151-152.

³⁹ Guo, Manlu (1995), “Looking at the Problems that Affect Skilled Worker Education from the Survey of Our School’s Students’ Ideological Situation” [Cong woxiao xuesheng sixiang zhuangkuang diaocha kan yingxiang jigong jiaoyu de ruogan wenti], *Selected Papers of the First Conference of Beijing Vocational and Technical Education Association*, Beijing, pp.73-78.

⁴⁰ Meng, Guangping (ed.) (1994), op.cit., p.151.

⁴¹ See *Selected Readings from the Works of Mao Tsetung*. Peking: Foreign Languages Press, 1971, pp.310-342.

development. Schools were expected to nurture their students to become modern professionals or specialized personnel with confidence, competence and ambition.⁴²

Moral education was conducted in combination of classroom teaching and extra curriculum activities. Schools offered professional ethics subject to students, usually at senior level (third or fourth year). The National Education Commission (MOE) issued a document in 1986 on political and moral education. This document stipulated that in secondary specialized schools, the subject of "Introduction to Communist Ethics" was to be offered at the fourth year level. This subject mainly focused on Communist ideals, life outlook, codes of conduct and behaviour, professional ethics and social public ethics. It aimed to develop students' lofty ideological morality and sound professional ethics.⁴³ Moral and professional ethics education was more often incorporated in students political and extra curriculum activities organised by school. One typical method was to organise students in skill demonstration or competition activities. Sometimes these activities were shown to the public. On 31 December 1989, "Tianjin Daily" reported Tianjin Yu Cai Vocational Specialized School students' photography exhibition of their own works.⁴⁴ This activity not only promoted the school's reputation but also promoted students' morality and self-esteem. Skill competitions were organised by government, business companies and professional or trade societies at different levels. For instance, the national secondary vocational schools "Monita Cup" hair dressing and beauty saloon skills competition attracted thousands of people's attention. It was reported in the "Chinese Vocational and Technical Education" that contestants from 19 provinces of the country participated the third "Motani Cup" competition in May 1996. This competition was sponsored by the Department of VTE and Adult Education of the Chinese Ministry of Education (MOE). National and local government officials and director of the Monati Company in Hong Kong attended the closing ceremony and handed awards to the winners.⁴⁵ The purpose of such activities was to emphasize the

⁴² Zhang, Fuzhen, and Wang, Yizhi (eds.) (1991), *Applied Pedagogy of Vocational and Technical Education*, Tianjin: Nankai University Press, p.229-231.

⁴³ National Education Commission (1986, 30 August), "Suggestions on Implementing 'Notice of Reforming Ideological, Moral and Political Theory Curriculum in Secondary Specialized Schools and Teacher Training Secondary Schools' Issued by the Central Committee of the CCP", reprinted in *Selected Documents on Vocational and Technical Education 1978-1988*, pp.195-202.

⁴⁴ *Tianjin Daily*, 31 Dec. 1989.

⁴⁵ Fang, Xing (1996), "The Third National Secondary Vocational School 'Motani Cup' Hair Dressing

importance of specialized skills and thus to promote vocational and technical education.

Figure 7.1
The National Secondary Vocational Schools "Monita Cup" Hair Dressing and Beauty Saloon Skills Competition (8-10 May, 1999)



SOURCE: Front cover of *Chinese Vocational and Technical Education* (Beijing), No.6, 1999.

The Youth League and students union also actively organised activities such as speech contests in ideological and patriotic themes. Topics such as “Love my profession and love my home country”, “The spirits of pursuing (in career)”, “Competition mentality”, “The road to become a specialized talent” etc. were popular in schools.⁴⁶ These activities aimed at nurturing students' devotion to their profession/vocation and kindling their patriotism. Such activities also helped to improve student's writing skills and oral expression, and helped their personal development.⁴⁷

In professional ethics education, many schools adopted a “role model” approach. Schools invited successful professionals or workers to address students

and Beauty Saloon Skills Competition Successfully Closed”, *Chinese Vocational & Technical Education* (Beijing), No.6, pp.38.

⁴⁶ Meng, Guangping (ed.) (1994), *Introduction to Chinese Vocational and Technical Education*, p.154; Kou, Huiying (1990), “Strengthen Moral Education and Develop Competent Talents in Photography” [Jiaqiang deyu, peiyang hege de sheying rencai], in Zhentang Sun, Furong Wang and Yimin Hu (eds.), *Yucai Vocational Specialized School is Marching On* [Yu Cai zhizhuan zai qianjin], Tianjin: Yucai Vocational School (internal publication), pp. 199-204.

about their experience in their career life. A good effective method was to invite the successful alumni of the VTE schools to address students about their experience. In the late 1990s, the Education Committee in Qingdao City Shangdong Province compiled a book named “Stars of Entrepreneurship”. This book recorded 72 successful stories of VTE graduates. Each story was a success in its own right, and these stories set good examples for the VTE students. Professional moral education in VTE schools seems to have focused on patriotism and dedication to the professions that the students’ training would lead them to. However, these teachings were not backed up by reality. A Chinese academic pointed out:

The (economic) reforms had promoted the development of productive force, and people’s living standards have improved. ... The reality is that after graduation (from vocational schools) they do not get high salary and income. The majority of vocational school students agree and admire the professional morality of “All for me and I for all”. However, ... fake medicine, fake cigarettes, fake trade marks, robbing-style business management, and even bribing and cheating, and the like are frequently seen in some government and CCP organizations, government institutions, factories, and business enterprises. ... Students believe that reality is far from the “ideals” that teachers teach them. This has produced a special psychological effect.⁴⁸

This cruel reality produced passive attitudes towards moral education. Students did not see the connection between what was taught to them in school and what they saw in the society. Since China was opened up to the world and economic development was the focus of the country, people’s sense of value had shifted toward “high income and high consumption” especially in the 1990s. According to a survey of 353 students from 9 vocational schools in 1987, 53% of the students agreed that vocational education should be “oriented toward money”, and “focusing on material benefit and aiming at earning big money”.⁴⁹

This contradiction between schools’ moral education and social reality grew

⁴⁷ Kou, Huiying (1990), op.cit.

⁴⁸ Wu, Changsheng (1989), “The Causes for Vocational School Students’ Passive Attitudes towards Professional Ethics Education” [Zhixiao xuesheng dui zhiye daode jiaoyu taidu xiaoji de yuanyin], *Vocational Education Forum* [Zhi jiao lun lan] (Nanchang), No. 3, pp.15-16, reprinted in China RENDA Social Sciences Informational Centre, *Occupational and Technical Education*, 5, 1989, pp.29-30.

⁴⁹ Wu, Changsheng (1989), op.cit.

larger in the 1990s. Xiao Tong and Du Li wrote:

Facing with the reality of desire orientation in the past 20 years, ordinary people strongly feel discontented, and deeply worried for it (reality): corruption, profiteering, fictitious transaction, swindling and robbery, abduction and drug trafficking, murder, prostitution, drug taking, killing endangered animals, wasting public money, etc. The magic power of money is leading China into a state where there is no distinction of what is right and wrong, where there is a big setback of moral standard, and where there is no conscience any more. This is the bitter pill that we are not able to swallow today, and this is the reality that we are facing today.”⁵⁰

These problems may not be preventable in a society that underwent drastic changes from one economic system to another, but ordinary people did see that immoral behaviour and corruption were able to produce wealth, and this wealth could make a huge difference in life. In the 1990s, the gap between the rich and the poor widened in China. Secondary VTE school graduates were unable to get any high-paid job, except that they could run private business, but they were not trained for that purpose.⁵¹ Therefore it became obvious that without a higher degree meant little or no chance of getting a high-income-earning job. Hedonism emerged and grew fast. People admired and pursued easy jobs with high income and high social status. This type of life outlook produced negative effect on moral education.

7.5 Aesthetics Education

Aesthetics education was an important part of Chinese educational reforms, and it was regarded as an important section of education for individuals to develop their all-round qualities. In 1991, the National Education Commission (MOE) issued the third round syllabuses of 17 disciplines of studies for full-time general secondary specialized schools. Among these syllabuses, there were one for general knowledge of aesthetics, one for music appreciation, and one for visual arts appreciation. All these

⁵⁰ Xiao, Tong & Du, Li (1997), *1978-1996, A Record of Chinese Ordinary People's Mentality during the Transition Period*, Beijing: Reform Press, p.121.

⁵¹ According to a 1993 national survey to 1440 private business owners, only 1.7% had graduated from vocational schools and another 6.9% from secondary specialized schools and skilled worker schools. 17.2% had tertiary education qualifications or above. Over 60% had general secondary education background (36.1% junior, 26.3% senior). – See Yan, Zhimin (ed.) (2002), *Studies of the Current Social Classes and Strata in China*, Beijing: CCP School, p.201.

three syllabuses were designed for students in all fields of study. This means that general cultural studies contained aesthetics and arts studies. However, such subjects were not found in many schools' curriculum plans. They were not considered to be compulsory for all students, and the offering of the subjects depended on the field of training. For example, students in tourism and hospitality school would need to learn dancing, that would help them to learn how to stand or sit when they work as hotel attendants or tourist guides. Although not listed as compulsory subject in school's teaching plan, aesthetics education was generally regarded as supplementary subjects or activities at schools. Some schools offered such subjects as electives, and other schools included such types of studies in their extra curriculum or what was called the "second classroom" [*di er ke tang*] programs. The content of aesthetics education usually included singing, dancing, calligraphy and painting, photography, drama, and so on. Every year, schools would hold concerts or variety shows performed by their students. Very often there were singing contests or similar kinds of activities among schools. Through such activities, students could develop their self-esteem and confidence as well as knowledge and skills in art.

Figure 7.2
Etiquette Training



SOURCE: Front cover of *Chinese Vocational and Technical Education* (Beijing), No.3, 1998.

It is interesting to note that aesthetics education was treated as a part of political and ideological education. In 1991 the National Education Commission (MOE) issued assessment and evaluation criteria for general secondary specialized schools. Aesthetics education was included in the section of political and ideological education, under the subtitle of “extra curriculum activities” [*ke wai huodong*]. It was specified that in assessing a school’s ideological and political work, if aesthetics education was included in school’s course plan, the school would obtain 8 points; if only included in the “second classroom” activities, only 3 to 5 points would be given.⁵²

Although the government paid increasing attention to aesthetic education, the author observes that aesthetics education was not treated equally important as physical education in Chinese schools. Physical education has always been a compulsory subject for all Chinese students, but aesthetic subjects, such as music and art, are not. In developed countries such as Australia, music and art are accepted as equal value of physical education and health subject. They are treated as full credited subjects both in high schools and universities. This has provided students with all options for education, which can provide better chance and outcomes of all-round education for individuals.

7.6 Government’s Control on Curriculum Management and Development

Curriculum design and development was always controlled by the central government ever since the 1950s. The National Education Commission (MOE) and various ministries of industries under the State Council issued regulations for secondary specialized schools. The Ministry of Labour decided specialized training fields at skilled worker schools. The central government provided guidance to vocational schools on school operation and curriculum development, but it gave each province and city the autonomy to decide on the fields of training based on the needs of the communities. For curriculum development of VTE schools, the central government

⁵² Office of National Education Commission (1991, 13 March), “Notice of Proposed Evaluation System on School Performance Standards of General Secondary Specialized Schools” [Guojia jiaowei bangong ting guanyu yinfa “putong zhongdeng zhuan ye xuexiao ban xue shuiping pinggu zhibiao tixi”(shixing) de tongzhi], reprinted in *Policies and Regulations on VTE 1989-1992*, Beijing Normal University Press, pp.105-161 (p.143).

provided guidance by issuing three important documents: catalogue of study fields [*zhuan ye mu lu*], teaching plan [*jiao xue ji hua*] and syllabuses [*jiao xue da gang*].

The catalogue of study fields [*zhuan ye mu lu*] came into practice from the 1950s. As China was applying a planning system in economic and personnel management, study fields in VTE schools were centrally planned. The catalogue was aimed at meeting the needs of the planned economy and training qualified and suitable talents within a short period of time. In the 1950s, China's secondary specialized education system adopted the former Soviet Union model (see Chapter 2), and the study fields were established in narrow scopes. In 1959, the National Ministry of Education (MOE) reclassified them into 17 categories [*lei*] with 336 training fields. Among these, there were 13 types of engineering studies [*gong ke*] with 237 study fields [*zhuan ye*]. This was because the national economy focussed on industrial construction during that time.⁵³ In 1963, there was another national readjustment. Each specialized field of training covered broader areas. (See details in Chapter 2.)

When the "Cultural Revolution" came to an end in 1976, secondary specialized education started to resume. In 1980, the MOE issued an announcement to urge all government departments to revise the catalogue of study fields for their secondary specialized schools. In 1985, the MOE issued a new catalogue of study fields, listing 10 faculties with 607 specialized fields of training, 332 of which were engineering studies.⁵⁴ In 1992, the National Education Commission (MOE) issued a notice of revising the catalogue of study fields for secondary specialized schools. The reason given in the documents stated:

Currently the establishment of study fields is not standardised enough, and their structure is not rationalised enough. Some fields of training are not identified and named scientifically enough, and the content of courses is not clear enough. Some fields of training are too narrow in spectrum and cannot meet the demands of the socialist construction. (This problem) also brings about difficulties to the establishment and management of courses.⁵⁵

⁵³ Meng, Guangping (ed.) (1994), op.cit., p.108.

⁵⁴ Ibid.

⁵⁵ National Education Commission (1992, 27 January), "Notice of Revising Study Fields Catalogue for Secondary Specialized Schools" [Guojia jiaowei guanyu xiuding putong zhongdeng zhuan ye xuexiao zhuan ye mulu de tongzhi], reprinted in Department of VTE of the National Education Commission

In 1993, a revised catalogue was produced. It contained 9 disciplines with 49 categories, which included 518 specialized fields of training. The 9 disciplines were engineering, agriculture, forestry, medical and public health, finance, administration, political and law, arts, and sports. Compared with the 1985 catalogue, this 1993 catalogue reduced the number of training fields by about 15%. There were 289 study fields under the engineering category.⁵⁶ The production of this catalogue aimed at laying broader foundation of knowledge and skills to develop students' adaptability for future employment requirements.⁵⁷ Although some progress was achieved in this regard, there were problems found in practice. Du Min'er, a teacher from a finance and commerce school, highlighted the problems that schools made decisions mainly on subjective views and did not show a real understanding of social requirements when readjusting their study fields following the new catalogue. Some new courses lacked adequate preparation, and schools did not have sufficient resources for teaching these new courses.⁵⁸ Yang Jin also identified similar problems in his studies.⁵⁹

Apart from the over 500 study fields for secondary specialized schools, skilled worker schools and vocational schools offered around 400 specialized fields respectively.⁶⁰ The three types of schools had different focuses on training. Yang Jintu, Director of Vocational and Technical Education of the National Education Commission (MOE) explained these differences. Secondary specialized education is classified as technical education [*ji shu jiao yu*], skilled worker school education belongs to vocational education [*zhi ye jiao yu*], and so is the majority of vocational

(ed.), *Policies and Regulations on VTE 1989-1992*, Beijing: Beijing Normal University, pp.184-187 (p.185).

⁵⁶ National Education Commission (1993, 23 March), "Notice of the Release of Study Fields Catalogue for Secondary Specialized Schools", Jiaozhi [1993] No.8 Document [Guojia jiaowei guanyu banfa "Putong zhongdeng zhuan ye xuexiao zhuan ye mulu" de tongzhi, Jiaozhi [1993] 8 hao], Beijing.

⁵⁷ Yang, Jintu (1992), "On Revision Work of Study Fields Catalogue for Secondary Specialized Schools" [Yang Jintu sizhang tan zhongzuan zhuan ye mulu de xiuding gongzuo], *Vocational and Technical Education* (Beijing), No.6, pp.4-6 (p.6).

⁵⁸ Du Min'er (1996), "Strengthen Research on the New Problems in the Adjustment of Study Fields" [Jiaqiang dui zhuan ye tiaozheng zhongxin wenti de yanju], *Chinese Vocational & Technical Education* (Beijing), No.1, pp.24-25.

⁵⁹ See Yang, Jin (1996), *The Interaction between the Socialist Market Economy and Technical and Vocational Education and Training in the People's Republic of China*, (Ph.D. thesis), UK: University of Manchester, p.191-192.

senior high school education. Although the differences between technical and vocational education are blurred and sometimes they overlap each other, there are distinctions in focus of training. Skilled worker education is more skill-specific and to prepare the trainees for the specific job tasks, therefore high standards on skill mastery are required. Secondary specialized school education concentrated more on the development of trainees' knowledge of specialisation and ability to analyse and solve problems in their specialized fields. For skilled worker education, technical skill is more concentrated than theoretical knowledge, and for secondary specialized school education, the focus is on theoretical knowledge than specific technical skill.⁶¹

Vocational senior high schools were intended to provide fields of training that the other two types of VTE schools did not offer, or were not able to train enough skilled personnel for social demands. Vocational senior high school graduates could be employed as skilled workers and could also be employed as specialized cadres. Therefore, it was up to the individual schools to focus their training either on technical skills or on theoretical knowledge. The majority of the schools provided fields of training required by the newly emerged and fast developing tertiary industries, such as finance and accounting, tailoring, cooking, computing, business management, office work and management, tourism and hotel management, and so on. Take Tianjin for example, 80% of courses offered by vocational schools of the city were for the tertiary industries.⁶² Although the central government had general regulations on schools' curriculum planning and school textbooks, it did not produce a centralised catalogue of study fields until 2000. This catalogue was produced through consultation with other ministries of the central government, provincial departments of industries and education advisory committees of 33 professions and trades. The catalogue included 13 specialized categories with 270 study fields.⁶³ The Ministry of Education claimed

⁶⁰ See Yang, Jin (1996), op.cit., p.191. In 1995, the Ministry of Labour issued "Catalogue of Specialisations (Types of Work) for Skilled Worker Schools".

⁶¹ Yang, Jintu (1992), "On Revision Work of Study Fields Catalogue for Secondary Specialized Schools" [Yang Jintu sizhang tan zhongzuan zhuanye mulu de xiuding gongzuo], *Vocational and Technical Education* (Beijing), No.6, pp.4-6 (p.5).

⁶² See *Guidebook of Vocational Schools* [Zhiye xuexiao zhinan], Tianjin: Tianjin Education Press, 1989, p.55.

⁶³ Ministry of Education of the PRC (2000), *Catalogue of Study fields for Secondary Vocational Schools*, Beijing: Higher Education Press. These 13 categories are: agriculture and forestry, natural resources and environment, energy, civil engineering and irrigation works, processing and manufacturing, communications and transportation, information technology, medical and public health, commerce and tourism, finance and economy, cultural arts and sports, social public affairs, and others.

that this catalogue complied with the standard level of secondary vocational education and was suitable for the classification and development of national industries and vocational education. The study fields were designed on a broad base of specialized professions, but with combination of broad and narrow scopes. The catalogue was realistic and pro-active. The names of the study fields were accurate, scientific and normalised.⁶⁴

Teaching plan [*jiao xue ji hua*] was another policy produced by the central government. It was to provide the general guidance on teaching aims and teaching activities in schools. Teaching plans for different types of schools may differ, but they normally included: length of courses, aims of training and standards of training, course arrangements, and so on. The National Education Commission (MOE) issued general policy and rules on the writing and revising of teaching plans for secondary specialized schools, and the State Council commissioned the relevant ministries of industries to compile the specific plans according to the specific requirements of the specified professions. For vocational senior high schools, it was also the MOE that outlined the general guidelines, and the education departments in individual provinces and cities that organised the production. The Ministry of Labour and other departments concerned were responsible for producing teaching plans for skilled worker schools.

In April and June 1986, The National Education Commission (MOE) issued regulations on drawing up teaching programs for 4-year secondary specialized schools and 3-year vocational senior high schools respectively. Both documents issued guiding principles on aims of teaching, curriculum design, teaching hours, and course management. Each training course would include both general culture subjects and specialized subjects. The general subjects usually included 7: politics, Chinese language, physical education, mathematics, foreign language plus physics and chemistry or humanity subjects depending on specific course requirement. For secondary specialized schools, general subjects, foundation subjects and specialized subjects should be in the ratio of 45:35:20. This ratio was basically set for engineering courses. Other courses were required to use this ratio as a basis and make necessary

⁶⁴ Ministry of Education of the PRC (2000), *Catalogue of Study fields of the Secondary Vocational*

adjustment.⁶⁵ For vocational senior high schools, general subjects and specialized subjects were set at 4:6 for engineering/technical studies [*gong ke*] and 5:5 for liberal arts studies [*wen ke*].⁶⁶

In 1990 the National Education Commission (MOE) issued another document on teaching plan for 3-year vocational senior high schools. According to this document, vocational senior high schools should offer 3 major types of studies in each course/training program: political and general subjects, specialized subjects, and field practice. The document specified the ratio of the three areas of studies to be 3:3:4 for engineering, agriculture and medical training, 4:3:3 for liberal arts fields, and 2.5:2.5:5 for those fields with higher emphasis on specialized skills.⁶⁷ For skilled worker schools, the National Ministry of Labour specified regulations on designing teaching plans. Curriculum arrangement for skilled worker schools basically contained two types of studies/training: general cultural subjects and other 7 specialized theory subjects, and field practice. The general principle for the ratio of these two parts of curriculum is 50:50, or 40:60.⁶⁸

If the teaching plan is regarded as a national official document providing general guidelines on teaching and training arrangement at schools, syllabuses were a national official document providing specific requirements on teaching activities at schools. Syllabus, the Chinese term is “teaching outlines” [*jiao xue da gang*], was a guiding document for teachers and teaching activities in schools. It was more specific in designating the content of learning, the detailed requirements of each subject and teaching hours for each specialisation course. It was also the standards for measuring

Education, Beijing: Higher Education Press, p.1.

⁶⁵ National Education Commission (1986, 12 April), “Notice of Issuing ‘(Proposed) Suggestions on Making and Revising Teaching Plan for (4-year) Full-Time Secondary Specialized Schools’” [Guojia jiaoyu weiyuan hui yinfa “Guanyu zhiding hexiuding quanri zhi putong zhongdeng zhuan yu xuexiao (si nian zhi) jiaoxue jihua de yijian (shixing) de tongzhi], reprinted in *Selected Documents on VTE 1978-1988*, Beijing: San Lian Book Shop, pp.167-173 (p.170).

⁶⁶ National Education Commission (1986, 5 June), “Suggestions on Implementing the Proposed Teaching Plan for (3-year) Vocational Senior High Schools” [Guojia jiaoyu weiyuan hui banfa shixing guanyu zhiding zhiye gaoji zhongxue (san nian zhi) jiaoxue jihua de yijian], reprinted in *Selected Documents on VTE 1978-1988*, Beijing: San Lian Book Shop, pp.173-176 (p.174).

⁶⁷ National Education Commission (1990, 31 December), “Notice of Issuing ‘Suggestions on Making Teaching Plan for (3-year) Vocational Senior High Schools’” [Guojia Jiaowei guanyu banfa “Guanyu zhiding zhiye gaoji zhongxue (san nian zhi) jiaoxue jihua de tong zhi], reprinted in *Policies and Regulations on VTE 1989-1992*, Beijing: Beijing Normal University, pp.254-258 (p.255).

⁶⁸ Meng, Guanping (ed.) (1994), *An Introduction to Chinese Vocational and Technical Education* [Zhongguo zhiye jishu jiaoyu gailun], Beijing: Beijing Normal University, pp.116, 119.

teaching quality, compiling teaching materials and providing teaching facilities. As it was a very important document, it was usually the duty of the National Education Commission (MOE) and other relevant departments to organise its writing. The draft would then be assessed and approved by the departments in charge of the specific professions or fields and the authority group usually composed of the reputable and highly regarded professionals and experts.

In 1986, the MOE established 12 national curriculum teams for secondary specialized schools.⁶⁹ They were mathematics, physics, chemistry, Chinese language, cartography [*zhi tu xue*], metal technology [*jin shu gong yi*], mechanical principle and machinery parts [*ji xie yuan li, ji xie ling jian*], mechanics [*li xue*], foundation of electrical engineering [*dian gong ji chu*], electrical engineering [*dian gong*] and industrial electronics [*gong ye dian zi*], foundation of applied computer science [*ji suan ji ying yong ji chu*], and foundation of electronic technology [*dian zi ji shu ji chu*]. Each of these teams consisted of 5 to 7 teachers and academics from different schools across the country. These teams were under the direction of the National Education Commission (MOE), and their duties included writing and revising syllabuses, setting guiding principles for the selection and compilation of teaching materials, promoting teaching material development, and organising and conducting research in curriculum development. They were also the consultancy groups for the MOE on relevant issues. In 1991 the MOE issued syllabuses for 47 study fields of 17 disciplines in secondary specialized schools⁷⁰. Some of these syllabuses were for all disciplines, and most of the others were for engineering fields.

7.7 Curriculum Reform

For a long time secondary VTE schools were following the traditional way of

⁶⁹ National Education Commission (1986, 28 January), "Notice of Establishing 12 National Course Teams for Seondary Specialized Schools" [Guojia jiaoyu weiyuanhui guanyu chengli quanguo zhongdeng zhuan ye xuexiao 12 men xueke kecheng zu de tongzhi], reprinted in *Selected Documents on VTE 1978-1988*, Beijing: San Lian Book Shop, pp.159-167.

⁷⁰ Department of VTE of the National Education Commission (1991, 9 August), "Notice of Issuing the Third Round Syllabuses for Full-Time General Secondary Specialized Schools Published by the National Education Commission" [Guojia jiaowei zhiye jishu jiaoyu si guanyu yinfa guojia jiaowei banbu de quanri zhi putong zhongdeng zhuan ye xuexiao yong di san lun jiaoxue dagang mulu de tongzhi], reprinted in *Policies and Regulations on VTE 1989-1992*, Beijing: Beijing Normal University, pp.181-184.

teaching. Students learned theoretical knowledge and skills from teachers in the classroom and undertook field practice in factories or specialized work place. The following description of Qiao Fuyuan and others about teaching and training at secondary VTE schools in Tianjin is representative of the overall situation in the country.

All types of secondary VTE schools (in Tianjin) offer courses based on their specialized fields. The courses are divided into three major types.

General subjects: politics, Chinese language, mathematics, physics, chemistry, foreign language, physical education, etc. These are compulsory common subjects for the courses that enrol junior high school graduates. They aim at laying a foundation for students to learn specialized theory knowledge. Senior high school graduates shall study advanced mathematics, applied physics, and applied chemistry. Specific content of studies in these subjects could vary according to the requirements of specific specialized courses. These subjects are to provide students with foundations for studying specialized theory subjects.

Skills subjects: also called “foundation skills course” in general secondary specialized schools. These subjects play a role of linking up general subjects and specialized subjects. They are to provide common and broader foundation for theoretical knowledge and skills. Different specialized fields offer different foundation skills course.

Specialized subjects: The major contents of these subjects focus on practical skills and is decided by the specialized field of training. Students study specialized subjects on the basis of studying general subjects and foundation skills subjects.⁷¹

The following is a plan for the finance and accounting course offered by Tianjin Yu Cai Vocational Specialized School. The school offered another 4 major courses. Course planning for these courses were more or less the same. This school was in 1989 named by the Education Committee of Tianjin municipal government as a demonstration vocational school. Therefore, this school’s curriculum was regarded as a model for other schools in the sector.

⁷¹ Qiao Fuyuan, et al. (1990), *Vocational and Technical Education in Tianjin*, Tianjin: Tianjin Social Science Academy Press, pp.217-218.

Table 7.1
Course Plan for Finance and Accounting, Tianjin Yu Cai Vocational Specialized School (1990)

Course	Subjects	Class hrs	% of Total	Class hours per week							
				Grade 1		Grade 2		Grade 3		Grade 4	
				Sem 1	Sem 2	Sem 1	Sem 2	Sem 1	Sem 2	Sem 1	Sem 2
Gen culture	Chinese language	408		4	4	4	4	4	4		
	Mathematics	408		4	4	4	4	4	4		
	Physical Education	238		2	2	2	2	2	2		
	Political economy	102		3	3						
	History	68		2	2						
	Philosophy	68				2	2				
	Geography	68						2	2		
	Outlook on life	68									
	Professional ethics	34								2	
	Total	1428	37.7%	15	15	12	12	12	12	6	
Skills	Calligraphy	187		2	2	2	2	1	1	1	
	Calculation	187		2	2	2	2	1	1	1	
	Accounts	In class									
	Counting money notes	17			1						
	Computer	736		2	2	2	2				
	Total	527	13.9%	6	7	6	6	2	2	2	
General theory & Specialized theory	Principles of accounting	102		3	3						
	Principles of statistics	102		3	3						
	Specialized English	204		4	4	2	2				
	Industrial accounting	272				8	8				
	Industrial statistics	136				4	4				
	Financial management	102						3	3		
	Economic movement analysis	102						3	3		
	Business management	170						5	5		
	Business accounting/budgeting	171						5	5		
	Finance & banking	63							2		
	Economy Law	35								5	
	Auditing	34								2	
	Rules & regulations for accountants	34								2	
	Bank accounting/bank deposit	136								4/4	
	Flexible	119								7	
Total	1836	48.4%	10	10	14	14	13	13	24		
Teaching hrs /wk	228		31	32	32	32	32	32	32		
Subtotal	3791	100%									
Field practice	720									720	
Total	4511										

SOURCE: Sun, Zhentang, et.al. (eds.) (1990), *Yucai Vocational Specialized School is Marching On* [Yu Cai zhizhuan zai qianjin], Tianjin: Yucai Vocational School (internal publication), pp. 22-23.

According to this plan, students would usually have to learn about 11 subjects in each semester. During the first 3 years of schooling, they would learn general culture subjects, skills subjects, and general theories subjects. As students moved into higher level of schooling, more and more specialized subjects were offered to them. Students were also required to take one semester of field practice in the fourth year before graduation.

Many people criticise this curriculum model.⁷² Their arguments can be summarized in the following:

- 1) The VTE school curriculums stressed systematic studies of the subjects, overlooking the practicality of training. It was not flexible for meeting job requirements of the labour market.
- 2) The content of the course was usually very theoretical, abstract, and based on secondary data and experience. Students lacked hands-on skills and experience. Although students had field practice training, it was often arranged in the last semester of the course after students had completed study of all the subjects at school and they did not get any feedback from the experience at the end of this program. In a way, it was an isolated experience and not very meaningful to students.
- 3) Because the curriculum was arranged on the basis of independent subjects, it was not providing comprehensive and coordinated learning and training. Specialized subjects were treated as independent subjects and were not related to other subjects, so it was very hard to train and develop students' comprehensive knowledge and skills. Moreover, the subjects usually covered narrow scope, and

⁷² Huang, Kexiao (1993), "Discussing Curriculum Reforms in Vocational and Technical Education" [Lun zhiye he jishu jiaoyu de kecheng gaige], *Vocational Education Forum* (Nanchang), No.2, pp.4-7; Zhu, Xinheng; Ma, Jianfu; & Chen, Zhiwei (1993), "The Problems and Their Causes in the Current Curriculum Arrangement in Vocational Schools" [Dangqian zhizhong kecheng shezhi zhong cunzai de wenti ji yuanyin], *Vocational Education Research* (Tianjin), No.3, pp.13-16; Zhu, Peixin (1995), "Preliminary Views on How Curriculum Arrangement in Skilled Worker Schools Should Fit in with the Needs of Market Economy" [Guanyu jixiao zhuanYe shezhi ruhe shiying shichang jingji chu tan], *Information of Social Science and Economy* (Nanning), No.10, pp.10-12; Qiao, Fuyuan (ed.) (1990), *Vocational and Technical Education in Tianjin*, Tianjin: Tianjin Social Science Academy Press, pp.219-220; Zhan, Honghong (1996), "Some Views on Curriculum Design for Accounting in Vocational Schools" [Zhiye zhongxue caikuai zhuanYe kecheng shezhi de ruogan sikao], *Chinese vocational and Technical Education* (Beijing), No.6, pp.41-44; Zhu, Xinheng & Sha, Qiren (1996), "Some Preliminary Views on Curriculum Models in Vocational High Schools" [Zhiye zhongxue kecheng moshi chutan], *Nanjing University Journal, Science Edition*, No.1, pp.49-52.

the content was sometimes, if not often, out-dated and irrelevant to actual job requirements. Such kind of training could not lead students to obtain ability and skills to adapt to specific job requirements when they went into employment.

This model was not problematic under the old planning economic system in China, as there were not many changes in job requirements. A worker was assigned to a job post and was usually staying in the job for the rest of his/her life. When China adopted a market economy system from the beginning of the 1990s, the job market changed substantially. VTE needed to respond to the new changes and reform accordingly. Researchers and teachers as well as the government began to look at curriculum models around the world. Experiences and models from developed countries were introduced into China.

The first model was Germany's "Dual System" model. This model "presupposes the joint responsibility and co-operation of all those involved: employers, employees, state and education authorities cooperate at all levels, bearing joint responsibility. Such co-operation is subject to legal regulations and has proved to be successful."⁷³ The training was divided between two locations: the enterprise and the part-time vocational school. The former provided on-the-job training, and the latter was responsible for theoretical training in the classroom. The trainee was both apprentice in the enterprise and student at school. On-the-job training provided by the enterprise was skill based and was in accordance with the general training outlines designated by the specific profession or trade organisations. Training at school was basically theory based and was "regulated by the school laws of the individual länder"⁷⁴. The "Dual System" took place to a large extent on the premises of private or public enterprises, sometimes supplemented by interplant training centres, rather than in schools. It was legislated by the German government and universally practised in Germany. The dual system traineeship prepared trainees for employment in the state-recognised traineeship occupations, and it was the main access to skilled

⁷³ Tutschner, H. (1996), "Standards in vocational Training _ Development of Vocational Curricula in Germany", in UNESCO (ed.), *Establishing Partnership in Technical & Vocational Education, Co-operation between Educational Institutions & Enterprises in Technical & Vocational Education, a seminar for key personnel from Africa & Asia*, Berlin, Germany, 02-12 May 1995, pp.114-117 (p.116).

⁷⁴ Tutschner, H. (1996), *ibid.*, (p.114).

employment in the occupational fields below higher education level.⁷⁵ The German model was generally regarded as exemplar in international vocational training circles in the late 20th Century.⁷⁶

This collaborative model of training was promoted by the UNESCO.⁷⁷ Enterprises' involvement in vocational and technical training was not only found in Germany, but also practised in other developed countries. For example, in Japan, technical and vocational education was the task of individual industrial enterprises. The majority of Japanese enterprises provided training according to their own ideas and needs. The Japanese government did not need to intervene in the technical and vocational training, as technical and vocational training was an integral part of enterprise activities.⁷⁸ This model produced effective outcomes as the training was closely related to the job requirements.

The Germany's "Dual System" model was introduced into China in the early 1980s. The government carried out pilot programs in some specialized areas. One good example was the nursing school branches in hospitals. In the 1980s, China was in great shortage of nurses. For every four patients, there were 1.2 doctors but only 0.5 nurses. There were estimated a shortage of 200,000 nurses in the country, but only 30,000 nurses could be produced each year from schools. In this situation, some large nursing schools in big cities, which had good facilities and teaching resources, set up joint programs with hospitals. General subjects and theoretical studies were taught at schools, while some of professional courses and practice training were conducted in hospitals. The teaching in the hospital was carried out mainly by doctors and experienced nurses; examinations and assessments were set by the central school but conducted in the hospitals. This kind of operation not only trained more nurses within

⁷⁵ Tutschner, H. (1996), op.cit., (p.115).

⁷⁶ Greinert, W.-D. (1996), "A Comparison of the Main Types of Vocational Training Systems", in UNESCO (ed.), *Establishing Partnership in Technical and Vocational Education – Co-operation between Educational Institutions and Enterprises in Technical and Vocational Education, A Seminar for Key Personnel from Africa and Asia*, 02-12 May 1995, Berlin, Germany, pp.105-111 (p.110).

⁷⁷ See UNESCO (ed.)(1996), *Establishing Partnership in Technical and Vocational Education – Co-operation between Educational Institutions and Enterprises in Technical and Vocational Education, A Seminar for Key Personnel from Africa and Asia*, 02-12 May 1995, Berlin, Germany.

⁷⁸ Georg, Walter (1989), "The Japanese Market Model - A Comparison of Japanese Qualification Strategies with Those of Other Countries", in Hans Krönner (Federal Ministry of Education and Science) (ed.), *Innovative Methods of Technical & Vocational Education 2/89, Report of the UNESCO*

shorter period of time, but also helped alleviate shortages of nursing staff in the hospitals. The hospitals involved in the training had the first priority of employing the nursing graduates, and the government was responsible for covering the cost of training.⁷⁹

In order to promote this model, the Chinese government welcomed German funds and experts to come to China and set up pilot projects of “dual-system” training programs. By 1996, over 30 dual-system VTE school projects were jointly set up by Germany and China.⁸⁰ According to a survey conducted by the Central Research Institute of VTE, these projects were successful in training outcomes. The survey claimed that such “dual-system” programs focussed on broad foundation of training and developed comprehensive ability of the trainees, who were able to meet the requirements of labour market and employment system reform.⁸¹

A number of schools adopted the German “Dual-System” model by following similar training curriculums in Germany. For example, in 1993, a contract was signed between Shanghai VTE Research Institute, China Textile Machinery Pty Ltd, and its school--Shanghai Textile Mechanical and Electrical Engineering School to experiment the German dual system model. This training program followed Germany’s model closely in specialisation, teaching arrangements and assessment methods.⁸² These experiments provided experience for other schools. More schools began to adopt the “dual system” model. One example was Shandong Pingdu City No.2 Vocational Senior High School’s experience. The school cooperated with Qingdao Tonghe Cooperate Ltd to run training programs, in which the company

International Symposium, Hamburg, June 5-9, 1989, Bonn: Federal Ministry of Education and Science, pp.19-22.

⁷⁹ Meng, Guangping (1989), “Learning in School-Run Enterprises”, in Hans Krönner (Federal Ministry of Education and Science) (ed.), *Innovative Methods of Technical and Vocational Education, Report of the UNESCO International Symposium, 2/89, Hamburg June 5-9 1989*, Bonn: the Federal Ministry of Education and Science, pp.46-49.

⁸⁰ Yu, Zuguang (1996), “Achievements and Perspectives of China and Germany Cooperation in Vocational Education”, *Chinese Vocational and Technical Education* (Beijing), No.12, pp.32-34.

⁸¹ Liu, Junfang (1996), “Comparative Studies in the Problems during the Pilot Courses of ‘Dual-System’” [“Chuang Yuan Zhi” shidian jiaoxue guocheng ruogan wenti de duibi yanjiu], *Chinese Vocational and Technical Education* (Beijing), No.12, pp.35-37.

⁸² Xu, Ying (2000), “Follow-Up Report on Graduates from CTM ‘Dual-System’ Pilot Program” [CTM “shuang yuan zhi” dianxing shiyan biyesheng genzong diaocha baogao], in *Research in Vocational Education Toward the New Century* [zou xiang xin shiji de zhiye jiaoyu yanjiu], Shanghai: Shanghai University Press, Nov., pp.216-222.

provided funding and materials, while the school recruited students and offered specialisation training according to the company's needs and development goal. The company employed graduates from the school based on their marks and performance at school. It was reported that the school was very successful in producing qualified skilled workers for the company, and graduates' employment rate was high.⁸³

Experimental results proved that the "dual-system" model was ideal for effective training outcomes. As the German "Dual-System" training adopted competence based training methods and aimed at developing students' broad range of knowledge and skills, graduates from such schools were able to adapt to the job requirements more easily and with confidence. For example, the Shanghai Mechanical and Electrical Engineering School with Shanghai VTE Research Institute undertook a follow-up survey on graduates of three years from the German-model training program of the school. The results showed that graduates' immediate employment rate was 90%. Compared with graduates from traditional training methods, graduates from German training methods were better in the areas of breadth of knowledge, single skills, comprehensive skills, adaptability and competitive ability. 30% of the graduates surveyed thought they were weaker than traditional method students in single skills, but only 16% of the graduates surveyed said they were less competitive than traditional students.⁸⁴

The German model showed that learning should be taking place through practice. Many curriculum developers and VTE teachers welcomed this idea. For example, Jinzhou Electrical Technology School, Shi Jia Zhuang Electrical Engineering School innovated their curriculums by reforming the old way of classroom-centred teaching into practice-based training. They attempted to focus training on students' ability development rather than knowledge from textbooks and classroom studies. They established cooperation partners with enterprises, which would employ graduates from the school. One serious problem occurred during the practice of this model was that practice-centred training would require teachers to be competent in both theoretical knowledge and practical skills, but the schools did not

⁸³ Wang, Zaicheng (1998), "One Example of School-Enterprise Cooperation in Vocational Education" [Xiao qi lianhe banxue yili], *Chinese Vocational & Technical Education* (Beijing), No.3, p.59.

⁸⁴ Xu Ying (2000), op.cit.

have enough such qualified teachers.⁸⁵

Perhaps, one of the difficult problems for the Chinese was how to learn from the German experiences. Lei Zhengguang, a research director in Shanghai VTE Research Institute, argued that China should learn the “spirit” [*shen*] of the German model rather than the “form” [*xing*].⁸⁶ The German “Dual-System” model was a curriculum form, and the methodology applied in this curriculum form was the “spirit”. This “spirit” was very different from the Chinese traditional way of teaching. Very often when the Chinese schools adopted the German model, they lacked ability to apply the teaching methodologies that were commonly used in German schools.⁸⁷ Even though learning the “form”, the “dual-system” was not practised in a real and complete manner in China. The German “Dual-System” was more focused on the training provided by enterprises, and schools only played a role as an assistant in training. In China, it was the schools that played the major role in education and training. They designed teaching plans, decided training programs, and conducted actual teaching and training. The enterprises only provided funding and facilities. Therefore, it was still the schools that provided training, and it was the school teachers who played a major role in training as instructors. Thus curriculums were more discipline-based and focused more on theoretical studies than practice.⁸⁸

Although the German “Dual-System” model was actively advocated by the Chinese government and educationists, it was difficult to popularize. One of the reasons was that unlike the German system where there were vigorous government enforcements on policies and legislations on the cooperation of vocational and

⁸⁵ Liu, Jianhua (1996), “Experiment and Reflection on the Pilot Program of ‘Dual-system’ Model in Our School” [Wo xiao ‘shuang yuan zhi’ shidian de shijian yu sikao], *Vocational & Technical Education Circular* [[Zhiye jishu jiaoyu tongbao] (Beijing), No.3, pp. 17-20; Wang, Jinju (1996), “Summary Report of Pilot Program of Dual-System in RE ZI Specialisation Course” [Re zi zhuan ye shuangyuan zhi shidian gongzuo zongjie], *Vocational & Technical Education Circular* (Beijing), No.3, pp. 21-25.

⁸⁶Lei, Zhengguang, “Some Thoughts on the Continuous Implementation of the ‘Dual-System’ Experiment” [“Shuang yuan zhi” shiyan chixu kaizhan de silu], (unpublished).

⁸⁷ See Guo, Yang (2001), “The Application of German VTE New Methodology in Secondary Vocational Schools in Our Country” [Deguo zhijiao xin jiaoxuefa zai woguo zhongzhi xuexiao zhong de yingyong], *Vocational and Technical Education* (Changchun), No.16, pp.52-57.

⁸⁸ Lei, Zhengguang (1998), “Learn from the Experience of Germany’s ‘Dual-System’ Model, and Promote VTE Curriculum Reform in Our Country” [Jiejian Deguo “shuang yuan zhi” jingyan, cujin woguo zhijiao kecheng gage], in *Exploration towards Future, Experiments of VTE “Dual-System” in Our Country* [Mian xiang weilai de tansuo, “Suang yuan zhi” zhiye jiaoyu zai zhongguo de shijian], Beijing: Economy Science Press, pp.273-309 (p.288-289).

technical training, the Chinese enterprises and companies did not have to abide by law to participate in vocational and technical training. It usually depended on the individual business or enterprise to decide whether they would cooperate with schools to run vocational training programs. (See Chapter 5.)

Learning from overseas experience in VTE, the Chinese scholars attempted to introduce the teaching methodologies of advanced countries into China. One of the much-talked-about international models was MES (modules of employable skills). In the 1970s and 1980s, the International Labour Organisation (ILO) developed a flexible, employment-oriented vocational training approach, suitable for learner-based and instructor-led application. This approach “follows present trends whereby the structures and contents of vocational training programs are based on the competencies required to perform the tasks contained in a given job and/or national training specifications”.⁸⁹ Learning contents or instructional materials were prepared in *Modular Unit* (MU) based on “logical and acceptable divisions of work in the form of technical tasks”, and the “modular units performed within given jobs are grouped into modules of employable skills”.⁹⁰ Trainers could use these modules to design the essential components of efficient modular training, and could reinvest these concepts and structures in their future activities. This approach would “enable training authorities and industries to cope efficiently and effectively with fast-changing training needs.”⁹¹ It gave the Chinese scholars ideas in curriculum reforms.

Apart from MES, competency-based Education (CBE) was another inspiration for Chinese scholars. In some countries such as Australia, it is called competency-based Training (CBT). CBE/T first appeared in Northern America and later adopted by many OECD countries, such as United Kingdom, Scotland, New Zealand and Australia.⁹² The CBE/T was performance/standard-based and related to realistic workplace practices. It was focussed on what learners could do rather than on the

⁸⁹ Chrosciel, Eckhart (1989), “The Concept of Modules of Employable Skills (MES) Training”, in Hans Krönner (Federal Ministry of Education and Science) (ed.), *Innovative Methods of Technical and Vocational Education, Report of the UNESCO International Symposium, 2/89, Hamburg June 5-9, 1989*, Bonn: the Federal Ministry of Education and Science, p.41-42 (p.41).

⁹⁰ Ibid.

⁹¹ Ibid.

courses they had done. The performance of students was judged according to predetermined and objective industry standards rather than by comparison with the performance of other students.⁹³ CBE/T programs began with competency standards. They were fundamentally different from traditional programs, which tend to focus on content, be time-based and provider-led. CBE/T programs were developed from competency standards that focused on outcomes.⁹⁴ The content of learning in a CBE/T curriculum was prepared in modules according to the needs of occupational tasks. The modules were sequenced and arranged into preparatory courses, basic courses, and specialized courses. Learners could choose course modules to suit their own needs. The learning process was focussed on self-paced learning, assisted by instructors. Their studies were assessed on the basis of reached standards, rather than length/limit of time.⁹⁵

The Chinese researchers, curriculum developers and school teachers realised that it was impossible and impractical to completely copy other countries' models because China's system and conditions were different. They began to develop curriculum models to suit the Chinese situation. During this process, MES and CBE/T were very influential in the curriculum development. Several curriculum models were produced through the efforts. "Principle of Vocational and Technical education" edited by the Central Research Institute of VTE of the National Education Commission (MOE) introduced three course models that were developed respectively by three VTE schools around 1990.⁹⁶ The first model, developed by Shanghai Electrical Engineering Higher Specialized School, was called "Module-Based Comprehensive Model" [*mo kuai hua zong he ke cheng*]. This course model incorporated the theoretical content of general cultural subjects, skill foundation subjects and specialized subjects into one comprehensive course. These courses divided the learning content into different levels of modules according to the spiral

⁹² See Zhou, Qu, et.al. (1994), *Vocational and Technical Education in Overseas Countries*, Beijing: Beijing Normal University Press, pp.121-124; Shi, Weiping (2001), *Comparative Vocational and Technical Education*, Shanghai: East China Normal University Press, pp.294-297.

⁹³ Misko, Josie (1999), *Competency-Based Training*, Adelaide: NCVER, p.3-5.

⁹⁴ Harris, Roger (1996), *Getting to Grips with Implementing CBT*, Adelaide: NCVER, p.10.

⁹⁵ Meng, Guanping (ed.) (1994), *An Introduction to Chinese Vocational and Technical Education* [*Zhongguo zhiye jishu jiaoyu gailun*], Beijing: Beijing Normal University Press, p.124.

⁹⁶ Central Research Institute of VTE of the National Education Commission (1998), *Principle of Vocational and Technical Education* [*Zhiye jishu jiaoyu yuanli*], Beijing: Economy and Science Press, pp.148-150.

methods of course deliveries. These modules of learning content were offered in sequences across the entire length of schooling (3 or 4 years). The traditional field practice training subject was also changed into a comprehensive practical course, which was divided into several levels of modules and incorporated into all stages of learning/training at school. This course model broke away from the traditional 3 sections of teaching [*san duan shi*] at schools, which were general culture subject studies, basic skills subject studies and specialized subject studies. Instead, these three sections were combined wherever possible and delivered as modules.

The second curriculum model, that was developed by Liaoning Province Vocational Senior High School Early Child Education Curriculum Reform and Development Group, was “Multi-Combination Model” [*duo yuan zong he xing ke cheng*]. This model combined four original course models into one. The four original models were disciplinary model [*xue ke ke cheng*], comprehensive model [*zong he ke cheng*], activity model [*huo dong ke cheng*] and nuclear model [*he xin ke cheng*], therefore this course model was also called “Four-in-One” model. The “disciplinary model” was that the course was based on the disciplinary theories and principles, and the course content was delivered according to the logical and systematic order of the discipline. This model was universally practised in Chinese schools and universities. However, it was focussed too much on abstract theoretical studies of individual subjects, and was not helpful in developing learners’ practical skills. The “comprehensive model” was that the course was designed by combining two or more related disciplines together. It enabled students to learn on a broader basis and acquire knowledge in wider fields. Instead of offering a dozen of individual subjects, schools combined related subjects together and offered fewer subjects but on a broader basis. Such course model still had the nature of disciplinary course model, but the difference was each course or subject contained broader fields.⁹⁷

The “activity model” was focussed on students’ activities in learning. The content of the course focussed on acquiring knowledge and skills through direct hands-on experience in field practice activities. The teacher or instructor played a role

⁹⁷ Detailed description of this course model can be seen in Tan, Xinghua (1998), “On Reforms of Curriculum Structures, Teaching Content, and Course Models” [Tan kecheng jiegou, jiaoxue neirong, jiaoxue moshi de gaige], *Chinese Vocational & Technical Education* (Beijing), No.3, pp.30-31.

as an organiser and assistant in the process of learning. This course model had the characteristics of being practical, open, creative and independent. It helped to develop students' individuality and practical abilities. This model was very effective for field practice training. Some schools even developed the model further into a combination of teaching, production and marketing. For example, the Department of "Modern Interior Designing" of Wuxi Commerce School developed its own interior designing company and concurrently engaged in dealing construction materials. Students learned and practised in the company, and the learning process was in the real occupational world.⁹⁸ The "nuclear model" was developed on the basis of activity model. It focused on specific questions or problems to be solved. The contents of the course included all the knowledge and skills needed to solve the designated problems, and they were sequenced according to the procedure of problem solving in the course plan.

The "Four in One" course model included the basic part of disciplinary model course content, and incorporated the related and relevant knowledge and skills from the four course models. It took the disciplinary studies as the basic part of its curriculum, the comprehensive model course as the broader curriculum, the activity model course as the practice section, and the nuclear model course as the linking section. By combining these four course models together, the multi-combination course model was aimed at training multi-functional specialized personnel.

The third model was developed by Beijing Chaoyang District Vocational Education Centre. It was called "Broad Foundation and Flexible Modules Model" [*qun ji shi mo kuai ke cheng*]. The whole course was divided into two stages. The first stage was called "broad foundation stage" [*kuan ji chu jie duan*]. In this stage of the studies, students would learn basic knowledge and skills on a broad basis, which were adaptable to a broad range of related occupational work type [*zhi ye gong zhong*]. This stage would offer the four categories of studies - political and cultural studies [*zheng zhi wen hua lei*], tools and instruments studies [*gong ju lei*], public relations studies [*gong gong guan xi lei*] and specialized subjects studies for occupation groups [*zhi ye*

⁹⁸ Tan, Xinghua (1998), "On Reforms of Curriculum Structures, Teaching Content, and Course Models" [Tan kecheng jigou, jiaoxue neirong, jiaoxue moshi de gaige], *Chinese Vocational & Technical Education* (Beijing), No.3, pp.30-31.

qun zhuan ye lei]. This aimed at laying a broad foundation for future employment requirements. It also allowed students an opportunity to find their interest in a particular type of work in future employment, and they were able to choose which area of training they wanted to be for the second stage. The second stage, called “flexible modules stage” [*huo mo kuai jie duan*], was designed to study specific knowledge and skills for a specific type of work. Students chose special training programs to suit their own situation and needs.

Beijing Radio Industry School adopted this curriculum model. During the first couple of years, students were offered common modular courses for all specialized fields. In the later stage, students in different specialized training programs were offered to study specialized knowledge and skills for their designated training goals.⁹⁹ This model aimed at producing qualified workers with specialized skills to respond to the demands of labour market within a short period of time as well as enabling students to transfer their work posts successfully without or with minimal training when necessary.

7.8 Problems in Curriculum Development

Although overseas models were introduced into China, and new models of curriculums were developed in China, curriculum reforms and development progressed very slowly, and there were serious problems. Curriculum development was considered as academic activity, so usually only academics from universities and research institutes participated in the research and development. These academics did not have practical experience of teaching in VTE schools, and their research projects often lacked teachers’ opinions from teaching point of view, and they were also isolated from professional/technical personnel of enterprises.¹⁰⁰ Therefore curriculum development often concentrated on disciplinary and theoretical study subjects, and overlooked practical skills and specialized subjects.¹⁰¹ Their research products were often not satisfying the requirement of enterprises or employers.

⁹⁹ See Misko, Josie; Liu, Yufeng, et al. (2002), *Linkages between Secondary and Post-Secondary Vocational Education and Training in China and Australia*, Adelaide: NCVER, pp.46-47.

¹⁰⁰ Liu, Zhiping (2000), “On the Designing and Strategies of Vocational Senior High School Curriculums” [*Zhigao kecheng shezhi yu duice*], *Chinese Vocational and Technical Education* (Beijing), No.7, pp.18-19.

Some critics questioned the viability of “broad foundation and flexible modules”¹⁰² It was argued that the “broad basis” and “flexible modules” were contradictory. In vocational senior high schools, students were usually not as academic as general high school students, and their general knowledge level was comparatively low. To help them lay a solid foundation in broad knowledge, many hours would be required. By doing so, their time spent in studying and training in specialized knowledge and skills would be greatly affected. If enough hours were guaranteed for specialized studies and training, there would be not enough time for laying broad basis of general knowledge. In addition, there were no clear guidelines on the standards of broad basis, nor were there standards on flexible modules. As teachers had been used to the traditional methods of teaching, and they lacked training in methodology as well as knowledge and skills to apply new curriculum models, it was very difficult to promote the new models successfully.¹⁰³

The fact that new curriculum models could not be promoted on a large scale was due to three major reasons: funding, cooperation of enterprises, and teachers’ competence. In 1996, the Central Research institute of VTE conducted a survey of 19 secondary specialized schools of trade and commerce in the country. The response of the schools to the question of major difficulties for education and teaching reforms at school was: lack of material/monetary conditions – 57.89%; lack of teaching resources – 31.58%; lack of active cooperation from enterprises – 31.58%; lack of direction of goals – 15.79%, and lack of supervision of research and teaching – 15.79%.¹⁰⁴

The lack of funding was the major problem for curriculum reforms and development. It was usually with a supportive funding from the government or other sources, such as foreign aid or World Bank loan project could the school experiment the new curriculum methods. Some schools that took up new curriculum models were

¹⁰¹ Zhan, Honghong (1996), op.cit.

¹⁰² Liu Zhiping (2000), op.cit.

¹⁰³ Guo, Yang (2001), op.cit.

¹⁰⁴ Central Research Institute of VTE of the National Education Commission (1996), “The Pressing Need to Reform Teaching in Secondary Specialized Education” [Zengjia zhongzhuan jiaoyu jiaoxue gaige de jinpo gan], *Chinese Vocational and technical Education* (Beijing), No.11, pp.39-41.

usually the key VTE schools recognised by the national government, and they had better facilities and highly qualified teaching staff. However, most VTE schools were not key schools and did not have enough funding and qualified staff for curriculum reforms. By 1996, 14% of vocational senior high school across the country were classified as key schools. (There were 8,515 vocational senior high schools in the whole country in 1996. 296 vocational senior high schools were listed as key schools at the national level,¹⁰⁵ and 909 key vocation senior high schools at provincial level.¹⁰⁶) Even in large cities where economic standards were higher than the national average, the percentage of schools that had reached national or provincial key status was still low. Take Tianjin for example, there were 6 national key and 21 provincial key schools out of the total of over 100 vocational senior high schools. This means that about 75% of schools were not up to the standard level of facilities, teaching staff qualifications, curriculum development, teaching outcomes and other aspects. Many of these schools, therefore, did not yet have the ability to practise the new curriculum models.

Previously in this chapter, the author provided a detailed curriculum plan implemented by Tianjin Yu Cai Vocational School in the late 1980s and early 1990s. Ten years later, around 2000, the school had made changes to the curriculum based on the principle of broad basis and flexible modules. The new curriculum plan is presented in Table 7.2. Compared with the old curriculum plan, the new plan had reduced the number of general cultural subjects and broadened specialized subject coverage. It seemed to have responded to the national government's call of developing all-round quality education by including the subjects like art appreciation, environmental protection, and so on. However, this new curriculum still was in the old curriculum format. It was still what is called the "three-section" style.¹⁰⁷ This is a good example to support the argument in the previous pages that it was difficult for

¹⁰⁵ See National Education Commission (1996, 14 February), "Notice about Assessing and Approving National Key Vocational Senior High Schools" [Guojia jiaowei guanyu shenpi rending guojia ji zhongdian zhiye gaoji zhongxue de tongzhi], reprinted in *Policies and Regulations on Vocational Education 1992-1996*, Beijing: Beijing Normal University, pp.612-624.

¹⁰⁶ See National Education Commission (1995, 5 October), "Notice of Confirmed Provincial-Level Key Vocational Senior High Schools" [Guojia jiaowei guanyu rending jing fuping hege de di yi, di er pi ji di san pi "shengji zhongdian zhiye gaoji zhongxue" de tongzhi], reprinted in *Policies and Regulations on Vocational Education 1992-1996*, Beijing: Beijing Normal University, pp.572-609.

¹⁰⁷ The "three section" style is that general knowledge subjects are offered at the first stage of course, professional/technical subjects in the middle and field practice at last.

Chinese VTE schools to take fundamental changes in curriculum reform and development within a short period of time.¹⁰⁸

Table 7.2
Course Plan for Finance and Accounting, Tianjin Yu Cai Vocational School (2000)

Course	Subjects	Class hrs		% of Total	Class hours per week						
		Theory	Practice		Grade 1		Grade 2		Grade 3		
					Sem 1	Sem 2	Sem 1	Sem 2	Sem 1	Sem 2	
Cultural foundation subjects and Specialized Subjects	Moral education	194		39.1%	2	2	2	2	3		
	Chinese language	280			4	4	4	4			
	Mathematics	280			4	4	4	4			
	English	245			4	4	3	3			
	Basis of Applied Computer Skills	70	70		4	4					
	PE & Health	176			2	2	2	2	2		
	Sub-Total	1248	70		15	15	12	12	12	12	
Specialized subjects	Foundation of Accounting	70	35	25.7%	3	3					
	Principles of statistics	105					3	3			
	Business accounting	122					3	4			
	Basis of taxation	54							3		
	Financial management & analysis	54							3		
	Basis of Auditing	36							2		
	Business Law & Regulations	36							2		
	Basis of Finance & Banking	36							2		
	Business Accounting	54							3		
	Accounting English	54							3		
	Business Writing	36							2		
Sub-Total	692+170=862		3	3	6	7	20				
Field practice subjects	Practice in school	Counting skills & counting notes	50	55	26.8%	2	2	1	1		
		Calligraphy	50	55		2	2	1	1		
		Electronic accounting	35	55				2	2		
		Accounting simulated practice	35	36				1	1	2	
	Comprehensive practice	Graduation practice	720								4 dys/wk
		Subtotal	720+181=901			4	4	5	5	2	
Others	National defence education	35		6.3%	1	1					
	Arts Appreciation	53			2	1					
	Foundation of Science & Technology	53					2	1			
	Environmental Protection	35					1	1			
	Population & Employment	36							2		
	Sub-Total	212			3	2	3	2	2		
Flexible hours	70		2.1%	0	1	1	1	1			
Teaching hrs /wk				30	30	30	30	30			
Total	3360		100%								

SOURCE: The author obtained this Curriculum plan through private contact. It was an internal document and has not been published.

During the research for this dissertation, the author has also noticed that many

¹⁰⁸ Similar curriculum planning model can be seen in Zhan, Honghong (1996), "Some Views on Curriculum Design for Accounting in Vocational Schools" [Zhiye zhongxue caikuai zhuanke kecheng

Chinese academics and teachers discussed the problems such as over-emphasizing general and theoretical studies rather than practical skill training, and including too much and too comprehensive subjects in each course at VTE schools. However, the author has not found one article arguing for allowing flexible choice of subjects for students. It is very common that in Chinese schools, all the students in the same course were to learn the same subjects, without the freedom of choosing the subjects they liked. In comparison, in Australia all students from middle school and above can have choices in what subjects they wanted to study at school or university. The table below is the curriculum information of Windsor Gardens Vocational College in South Australia.¹⁰⁹ One can see that students were provided choices of subjects.

Table 7.3
Middle School Curriculum Patterns, Windsor Gardens Vocational College (2000)

Year 8		Year 9		Year 10	
Arts	<ul style="list-style-type: none"> • Art/Drama • Music • Media/Multi media 	Arts	<ul style="list-style-type: none"> • Art/Drama • Music • Media/Multi media 	Arts	<ul style="list-style-type: none"> • Art/Drama • Music • Media/Multi media
English	<ul style="list-style-type: none"> • English 	English	<ul style="list-style-type: none"> • English 	English	<ul style="list-style-type: none"> • English
Health & Physical Education	<ul style="list-style-type: none"> • Home economics • Health • Physical education 	Health & Physical Education	<ul style="list-style-type: none"> • Home economics • Health • Physical education • Outdoor education 	Health & Physical Education	<ul style="list-style-type: none"> • Physical education • Creative Cookery • Food & Fabrics • Understanding children • Health • Outdoor education
Languages other than English	<ul style="list-style-type: none"> • Ausian • German 	Languages other than English	<ul style="list-style-type: none"> • Ausian • German • Japanese 	Languages other than English	<ul style="list-style-type: none"> • Ausian • German • Japanese
Mathematics	<ul style="list-style-type: none"> • Mathematics 	Mathematics	<ul style="list-style-type: none"> • Mathematics 	Mathematics	<ul style="list-style-type: none"> • Mathematics
Science	<ul style="list-style-type: none"> • Science 	Science	<ul style="list-style-type: none"> • Science 	Science	<ul style="list-style-type: none"> • General science extensions • Manufacturing science • Environmental science
Society and environment	<ul style="list-style-type: none"> • Society and environment 	Society and environment	<ul style="list-style-type: none"> • Society and environment 	Society and environment	<ul style="list-style-type: none"> • Society and environment

shezhi de ruogan sikao], *Chinese vocational and Technical Education* (Beijing), No.6, pp.41-44.

¹⁰⁹ Generally speaking, vocational/technical schools in Australia were closed down in the 1970s. The majority of secondary schools are academic schools, but their curriculums include vocational subjects. However, there are a number of secondary schools that offer more vocational subjects than other schools and are more oriented towards vocational education. Most of the subjects that the schools offer are recognised by universities as legitimate subjects that can qualify students to enter tertiary educational institutions.

Technology	Yr 8 & 9 students will undertake studies in the following Technology subjects over a 2-year cycle. <ul style="list-style-type: none"> • Wood technology/Metal work • Plastics/Control technology • Electronics/Photography • Textiles • Information technology 	Technology	<ul style="list-style-type: none"> • Information technology • CAD • Personal computing • Metal • Furniture • Photography
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SOURCE: Windsor Gardens Vocational College, south Australia, Australia, 2000 Curriculum Information.

Year 8 and 9 students undertake studies in all eight areas of learning. They need to choose which language other than English they wish to study. They are able to make choices in the areas of Arts and Technology. Year 10 students can continue their study in English, mathematics, science, and society and environment. Languages other than English are available but not compulsory. Students are able to make choices in Arts, Health & physical education, and Technology.

Table 7.4
Senior School Curriculum Patterns, Windsor Gardens Vocational College (2000)

Year 11		Year 12	
Arts	<ul style="list-style-type: none"> ◆ Music ◆ Art ◆ Media 	Arts	<ul style="list-style-type: none"> ◆ Art ◆ Design/Craft ◆ Music ◆ Media
English	<ul style="list-style-type: none"> ◆ English A & B ◆ Vocational English ◆ English Studies ◆ English as a second language 	English	<ul style="list-style-type: none"> ◆ English Studies ◆ English ◆ Community studies ◆ English as a second language
Health & Physical Education	<ul style="list-style-type: none"> ◆ Physical education ◆ Peer support ◆ Food & culture ◆ Community studies ◆ Hospitality 	Health & Physical Education	<ul style="list-style-type: none"> ◆ Physical education ◆ Food ◆ Child studies
LOTE	<ul style="list-style-type: none"> ◆ German 	LOTE	<ul style="list-style-type: none"> ◆ German ◆ Japanese
Mathematics	<ul style="list-style-type: none"> ◆ Mathematics A,B & C ◆ Business mathematics ◆ General mathematics ◆ Vocational mathematics 	Mathematics	<ul style="list-style-type: none"> ◆ Mathematics 1 & 2 ◆ Business mathematics
Science	<ul style="list-style-type: none"> ◆ Biology ◆ Chemistry ◆ Physics ◆ Science pathways 	Science	<ul style="list-style-type: none"> ◆ Science ◆ Physics ◆ Chemistry ◆ Biology
Society & Environment	<ul style="list-style-type: none"> ◆ History ◆ Australian studies ◆ Geography ◆ Business studies ◆ Legal studies ◆ Tourism 	Society & Environment	<ul style="list-style-type: none"> ◆ History ◆ Business studies ◆ Tourism
Technology	<ul style="list-style-type: none"> ◆ Information technology A & B ◆ Personal information processing ◆ Desktop publishing ◆ CAD ◆ Metal design ◆ Furniture construction ◆ Photography 	Technology	<ul style="list-style-type: none"> ◆ Information technology ◆ Personal information processing ◆ Business documenting ◆ Desktop publishing ◆ Furniture construction
Practice Firm			

Building Certificate			
Community Services & Health			

SOURCE: Windsor Gardens Vocational College, South Australia, Australia, 2000 Curriculum Information.

In Australia, all school-aged students are required to stay at school until they finish year 10. Upon completion of Year 10, students could opt to enter work force or continue to study in senior high school, which is Year 11 and 12. Their studies in Year 11 & 12 are to prepare them to enter tertiary education institution. Students at this vocational school are required to study the same number of subjects as students in general senior high schools. Students in year 11 are required to study 6 subject which must include subjects that are pre-requisite to publicly examined subjects. In year 12, students are required to study 5 subjects of 2-unit sequences each. Four of the five subjects must be publicly examined subjects or publicly assessed subjects. The fifth could be a 2-unit school assessed subject. Students who pass the examinations can be accepted into universities. The curriculums in Windsor Gardens Vocational College provide students with a great variety of subjects to choose. This pattern of education enables students to choose their study according to their own interest, situation and needs. The availability of a great variety of subjects helps students to develop their all-round knowledge and skills.

In comparison, curriculums at Chinese schools provided few choices for students. This was a problem with the entire education system. However, secondary VTE school students carried more pressure because they had to learn all the general subjects offered in general senior high schools, and at the same time learn specialized subjects for their specialized training. This problem was partially due to the reason that in principle secondary VTE school students were allowed to sit tertiary entrance examinations that focus on academic knowledge, and the schools had to teach these subjects. Another reason could be that it was easier for schools to offer the same subjects to all students in the same field of studies. Otherwise, there would be more difficulties and problems in regard with teaching resources and facilities. It seems that China still has a far way to go before achieving the real all-rounded education in schools.

7.9 Field Practice Training

Field practice was regarded as a very important part in VTE, and it was included in schools' curriculums. Field training places were provided in several ways. In the early days, schools usually would try to find some enterprises, farms, shops, hospitals, or other places, which would accept students for related specialized field practice. For example, a foreign trade school would contact some import and export corporations to accept their students for 3 to 6 months. This kind of field training places did not provide schools with stable training ground, because it was all up to the availability and willingness of the enterprises, and the school was not in control. During the 1980s when China still practised a planning economy, most enterprises, especially large-sized enterprises, hospitals, department stores, and foreign trade companies, were controlled by the government, so it was not very difficult for schools to find a place for field practice. However, as the economic reforms went further, a market economy system was taking shape. Many enterprises had to find their own ways to survive. It became harder for schools to establish long-term field practice grounds outside school.

To solve the problem of shortages of field practice grounds, the national government encouraged schools to run school-attached enterprises. (See Chapter 5.1.) It could guarantee students of a practical training place while studying at the school, and schools' production or business activities were also able to provide services to local communities. For example, agriculture or forestry schools provided consultancy and help for farmers on farming technology. The impact of such activities was significant. On the one hand students learned hands-on knowledge and skills through the practice training, and on the other hand, farmers learned farming technology to enable them to become rich.¹¹⁰

Among the three types of secondary VTE schools, vocational schools were the fastest in school-run enterprise development. This is because vocational schools had the least guarantee of funding from the government and from the very beginning the government made it clear that vocational schools should find their ways for survival.

¹¹⁰ See details in Meng, Guangping (1989), *op.cit.*, p.48.

In the 1980s, China's economy took on a new look. Service industries became popular. Restaurants, hair saloons, tailor shops, and so on appeared like mushrooms. Chefs, hairdressers, tailors were in great demand. Many vocational schools were set up to train these specialized workers. Beijing Jinsong Vocational Senior High School was one of the popular schools of such type. This school specialized in training Chinese cuisine chefs, and it also run a public restaurant. There was no full-time professional chef in the restaurant. The third-year students of the school took turns to cook for the customers under the supervision of their teachers. The students were provided with real-life situation training, and it was very demanding, because they had to cook the dishes up to the professional standard. After one-year practice in this restaurant, most students would have mastered the required skills for being a professional chef. Therefore, they were able to find a job immediately after graduation. As the food in this restaurant was prepared and cooked by students, the quality of dishes could not be consistent, so the prices in this restaurant were generally lower than those in other restaurants of the same levels. This kind of practice was in fact similar to the TAFE colleges in Australia. The food in TAFE restaurants is generally much cheaper than others, but the dishes are usually of reasonably good quality. This restaurant run by Jinsong Vocational Senior high School was very popular, because patrons could have a good meal for a cheaper price. The profit from the restaurant was used to cover the expenses of the students' practice training.¹¹¹

Another example is Wuxi Commerce School, which developed an interior designing company to meet the demands of the "modern interior designing" course of the school.¹¹² This business not only provided students with hands-on practice opportunities, but also generated great profits for the school, because the building industry was a fast developing industry in China during the 1980s and 1990s, and so interior designing for buildings and houses was in great demand. Professor David Stern from U.C.Berkeley, director of NCRVE in America, led a small delegation from NCRVE to China looking at Chinese schools and colleges in the end of 1990s. He described his surprising discoveries as follows:

Every vocational-technical school or college we visited also operates

¹¹¹ Meng, Guangping (1989), op.cit.

¹¹² Tan Xinghua (1998), op.cit.

at least one substantial business. For example, the school for machining near Xi'an runs a factory that produces noncomputerised, multipurpose machine tools, some of which are exported to several countries including the United States. One school for food services owns two full-scale commercial restaurants that compete with many others on the busy street in Beijing where the school is located. On our last night in Nanjing, we were served an elaborate meal in a school-owned restaurant that is part of a school-owned hotel.¹¹³

It became clear that running a school-based enterprise or business was both beneficial for teaching/training, and profitable for the school. In China, the majority of schools had set up such types of enterprises or business. However, running effective training programs in these enterprises was a big challenge. For many schools, specialized teachers, especially field practice supervisors were in great shortage, and there was no guarantee for the quality of field practice. Although some schools had impressive school-run enterprises, most schools operated a small-scale factory or business. What students benefited from the school-run factories could be limited. There was also a problem that some schools tend to concentrate on making money out of the school-run enterprises while ignoring the quality of teaching and training. In another word, schools would be more interested in running enterprises as a source of revenue, especially the national education law explicitly encouraged schools to operate enterprises to generate income for their own expenses. The good example is that many prestigious universities such as Beijing University run big companies, which were purely commercial ventures and did not involve students at all.¹¹⁴

7.10 New Concept of Vocational Education and Training and Its Implications for China

Prior to the 1980s, technical and vocational education and training (TVET) in the international context was basically more skill-specific. It played an important role in revitalizing economy of OECD countries by training large numbers of skilled workers and personnel for the rapid changes in structures of work. From the 1980s, due to the globalization effect and lifelong learning concept, TVET was more concentrating on

¹¹³ Stern, David (1997), "Enterprise and Education: A View from China" (Executive Summary), in National Center for Vocational Education Research (NCRVE), Centre Work Volume 8, Number 2 (Summer 1997), <http://ncrve.berkeley.edu/CW82/ExecutiveSummary.html>, accessed on 07/05/2002.

¹¹⁴ Ibid.

competency-based training and aimed at developing learner/trainee's all-round abilities to adapt to the requirements of their job duties or future employment. It covers all ranges and forms of training from before-job training (both in comprehensive or general schools and TVET schools), to in-service training, as well as re-training for the unemployed. Training providers include schools, enterprises and community.¹¹⁵ Peter Kearns, et.al. argue:

(T)he impact of globalization, new information and communication technologies, major changes in the workplace and in the organization of work, the shift from an industrial and service economy to a knowledge-based economy, and shifts in social attitudes and values which, in their cumulative impact, have produced a context of radical discontinuity.

The exponential pace of change is producing a world of "blur", in which traditional boundaries are disappearing. This had profound implications for the work of vocational education and training."¹¹⁶

Charles Benson, director of the National Centre for Vocational Education Research (NCRVE) in the USA, describes the concept of "new vocationalism" that includes four elements.¹¹⁷ The first element is contextual teaching/learning, or the integration of academic and vocational studies. The process of study is the combination of theory and application drawn in block instruction, and contextual instruction encourages the application of material from related disciplines to solve real life problems. The second element is cooperative learning and teaching. Students are encouraged to study and build their contextualised projects in groups, rather than in isolated, individually competitive learning environment. The teacher shifts his/her functions from the initial information provider to a coach and observer. This cooperative learning/teaching fosters active learning of students and enable students gain confidence in their ability to pass information along in school and out. This sense of confidence is an important attribute of the successful worker in a high performance workplace.

¹¹⁵ Shi, Weiping (2001), op.cit., p.328.

¹¹⁶ Kearns, Peter, et.al. (1999), *VET in the Learning Age: The Challenge of Lifelong Learning for All*, Adelaide: NCVER, p.viii.

¹¹⁷ Benson, Charles S. (1993), "The New Vocational Education: Benefits, Costs, And Financing Mechanisms", in G. Burke, et.al. (eds.) *The Economics of Education 1992*, pp.1-7.

The third element is to establish a close connection between education and work, which gives status and higher social regard to vocational education. Students have opportunities to gain a sense of receiving “just in time” education and training, which empower them to solve problems in the workplace. This connection between education and work can be two-way beneficial. On the one hand local industries and labour groups provide knowledge and skills for the teaching/learning at school. On the other hand schools and colleges and their school-based enterprises provide technical support to small and medium-sized firms in the area, and produce and market products for local high tech enterprises. The fourth element is the continuum of the program from middle school through secondary school graduation through two years of an associate degree program in a community college, with opportunity for higher degree education.

Discussions in this chapter on the problems in the VTE curriculum reforms in China indicate that without changing the structure of VTE system, and without changing educational philosophy of the Chinese authority and educators, curriculum reform could only be like Chinese saying “*huan tang bu huan yao*” [the same medicine differently prepared], and the curriculums cannot meet the demands of the new market economy. China joined WTO in December 2001, and it means China has entered international competition arena. If education fails to produce qualified skilled workers for the competition, China will fall behind. Although China tried to learn from the experience of the advanced countries, especially Germany’s “Dual-System” model which “enjoys almost universal support in the literature”¹¹⁸, it was the content of education that did not produce the ideal result in China. As Marginson has pointed out that “it is important to recognize that this highly successful model (German “Dual System”) is specific to the German context. It cannot be successfully transplanted into other national settings unless its enabling conditions are present. One of those conditions is the relatively high status accorded to both vocationally specific training, and skilled blue-collar work.”¹¹⁹ In China, successful curriculum reforms and development depend on a large contingent of teachers who keep up with modern educational philosophy and continuously upgrade knowledge and technological and

¹¹⁸ Marginson, Simon (2000), op.cit., p.27.

¹¹⁹ Marginson, Simon (2000), ibid.

entrepreneurial skills as well as their ability to provide guidance and counseling.¹²⁰ They also depend on government's effective policies and measures on VTE. If VTE is always treated as secondary to general education (see Chapter 5), curriculum development is out of the question. Adversely, the poor curriculums will not produce good teaching outcomes, and thus will affect the reputation of VTE.

¹²⁰ The UNESCO 1999 Conference in Seoul identified these qualities of teachers and instructors are crucial for developing the range of skills required of a TVE graduate of the 21st Century. – “Innovating the Education and Training Process”, <http://www.unesco.org/education/educprog/tve/nseoul/docse/innovproe.html>, accessed 28 January 2005.

CHAPTER EIGHT

STUDENTS, PARENTS AND SOCIAL PERSPECTIVES

8.1 Backgrounds of Students in Secondary VTE Schools

“Individuals make their choices about further education and training within a political, cultural, educational and personal context.”¹ In the Chinese context, there were several reasons for students to choose secondary VTE schools. Apart from political and economic reasons, the major influencing factors included students’ socio-economic background, academic reasons, and employment opportunities.

It is understood that traditionally students made decisions of taking the VTE option based on their socio-economic situations. It is usually the case that students with higher socio-economic background would not choose to go to VTE stream. This is verified by some Australian studies. Richard James and others who conducted a study on the factors influencing Australian student’s choice for TAFE (technical and further education), university or work among Year 10 to Year 12 high school students found:

*Geographical location and family SES (socioeconomic status) have considerable impact on student attitudes and expectations. Young people in rural areas are more likely to be considering TAFE, as are students from lower or medium socioeconomic backgrounds. In addition, rural students and students from lower socioeconomic backgrounds appear considerably more inclined to leave school to take up available employment than their peers.*²

In China, urban students would usually choose to complete senior high school, which is equivalent to Year 10 to Year 12 in Australian school system, because they are not likely to get good jobs with only junior high school certificates. If they give up the chance to continue studying in senior high school, they would have to give up the

¹ Maxwell, G., Cooper, M., and Biggs, N. (2000), *How People Choose Vocational Education and Training Programs: Social, Educational and Personal Influences on Aspiration*, Adelaide: NCVER, p.5.

² James, R. (2000), *TAFE, University or Work? The Early Preferences and Choices of Students in Years 10, 11 and 12*, Adelaide: NCVER, p.16.

chance of further education for life, especially of university education. Without a senior high school certificate or equivalent, it would be difficult for an individual to find a proper job in cities. Therefore, students would move on to senior secondary education.

Generally speaking, most students aspire to become “white collar” workers, such as scientists, engineers, or public servants. As Lin Jing argues, “(t)he custom of looking down on skilled and manual labour, and looking up to prestigious intellectual positions is deeply rooted in the society.”³ She supports her arguments by quoting a survey statistics undertaken by Tong Nian, et.al. (See Table 8.1) The survey shows that at junior secondary education level, there is no great difference in the number of the students who desire to become mental or manual workers. However, when moving to senior secondary education level, the difference in number becomes larger. Only 31.14% of senior high school students intend to become factory workers, farmers, army soldiers and service workers, while 62.26% of the students aim at the professions of scientists, engineers, teachers and doctors.⁴

Table 8.1
Career Preference of Secondary Education Students

Junior high school students			Senior high school students		
Occupation	Percentage (%)		Occupation	Percentage (%)	
1	Industrial worker	22.10	1	Scientists	21.17
2	Scientist	14.6	2	Engineer	15.83
3	Army man	14.23	3	Industrial worker	14.77
4	Teacher	14.23	4	Teacher	13.70
5	Doctor	10.11	5	Doctor	11.56
6	Engineer	7.49	6	Army man	7.83
7	Service worker	6.74	7	Service worker	5.34
8	Farmer	2.3	8	Farmer	3.2

SOURCE: Tong Nian, et al. (1981), “An Investigation into the Current Ideology of Middle School Students” [Dangqian zhongxuesheng sixiang qingkuang de diaocha], *Educational Research* [Jiao Yu Yan Jiu] (Beijing), No.4, pp.36-40, 27.

However, one must face the reality that tertiary education entrance rate was rather low in the 1980s. (See Table 8.2.) Going to general senior high schools did not guarantee a place in tertiary educational institution. Only a small percentage of senior

³ Lin, Jing (1993), *Education in Post-Mao China*, Westport: Praeger, p.65.

⁴ Tong, Nian; Zhao, Ruixiang; and Yang, Xinyi (1981), “An Investigation into the Current Ideology of Middle School students” [Dangqian zhongxue sheng sixiang qingkuang de diaocha], *Educational Research* [Jiao Yu Yan Jiu] (Beijing), No.4, pp.36-40, 27.

high school graduates were able to get into university. Because senior high school students were not taught technical knowledge and skills at school, unsuccessful candidates would have difficulty in finding a proper job immediately. In comparison, most graduates from secondary VTE schools were able to secure a job straight away. Take Beijing for example, in 1989, only 63% of general senior high school graduates were admitted into tertiary educational institutions, compared to over 90% of graduates from vocational schools got jobs relevant to their specialized training.⁵ Many of these jobs were semi-professional or technical, and they were regarded as second best compared to professional positions occupied by tertiary qualification holders. For those who preferred to get into employment sooner, or did not have much chance to get into university, would choose to go to secondary VTE schools.

Table 8.2
National Average Percentage of Senior High School Graduates into Tertiary Education in the 1980s

Year	Senior high school graduates	Entrance into tertiary education (including 2-3 years diploma programs)	Percentage (%)
1978	6,827,000	401,000	5.9
1980	6,162,000	281,000	4.6
1982	3,106,000	315,135	10.1
1884	1,898,000	475,000	25.0
1986	2,240,000	572,000	25.5
1988	2,506,000	670,000	26.7
1989	2,432,000	597,000	24.5%

Source: Lewin, K., et.al (1994), *Educational Innovation in China, Tracing the Impact of the 1985 Reforms*, Essex, England: Longman, p.117.

In the 1980s, many students and parents considered the option of secondary VTE from an economic point of view. The chaotic ten years from 1966-1976 led China's economy to a sharp down-turn with declining living standard. Getting a job sooner would improve family's financial position. During the early 1980s, employment system in China was still very much centralised. The government adopted the principle of "high rate of employment and low level of income" [*gao jiu ye, di shou ru*], with minimum difference between degree and non-degree holders. People's living styles of all walks of life were more or less the same. Graduates from secondary specialized schools were assigned jobs by the government usually in government offices or state-run enterprises, and skilled worker school graduates became factory workers straight

⁵ Ma, Jinglan (1990), "Professional Education—An Undertaking with A Great Future" [Da you zuowei de shiye – zhiye jiaoyu], *Keji Daobao* (Beijing), No. 4, pp 57-59, reprinted in China RENDA Social Sciences Informational Center, *Occupational and Technical Education*, 1990, No.5, pp.4-7.

away after graduation. Moreover, the graduates were usually allocated jobs in the same city, which means that they did not have to leave home and family.⁶ The government was not responsible for allocating jobs to vocational senior high school graduates, however, the schools helped their graduates to obtain employment by contacting employers, and the majority of the graduates were able to find job easily as they were specialized in skills needed by the fast developing tertiary industries.⁷ For students in large cities, where economy was comparatively more advanced and living standards were higher than other provinces and cities, it was a good option for students to go to good VTE schools with an understanding that they would be guaranteed of a good job in the city. There were claims in the early 1980s, for example, that some people in Shanghai would rather keep their children remaining in Shanghai by going to secondary VTE school or finding a job rather than going to university or college in other cities or provinces, because Shanghai people regarded their life in Shanghai to be the best in China.

For secondary specialized schools and skilled worker schools, another attraction in the early 1980s was that students were given living allowance while studying at school. There were no school fees charged to students. This was an old system carried down from the 1950s, and it was beneficial to students with lower socio-economic background. However, this privilege was removed from the late 1980s or early 1990s as secondary VTE was not regarded as compulsory education and tuition fees began to be imposed upon students in post-compulsory education. This was certainly to make students to reconsider whether it was worth going to secondary VTE schools.⁸

Apart from socio-economic and financial reasons, there are academic factors for students' choosing the VTE stream. Studies on Australian TAFE students shows that TAFE was perceived "as a place for dropouts", and "teachers were inclined to

⁶ In the 1980s and even early 1990s, when university students graduated, they were usually assigned jobs by the government. Some of them were sent to other cities or provinces, and sometimes could be far away from home, and they might have to stay in that job for the rest of their life.

⁷ One example is an article in *China Tourism News* (Zhongguo luyou bao) (Beijing) on 21 March 1992, which reported 5 years of graduates (a total of 1300) from Xi'An Tourism Vocational School had 100% employment rate, and they were booked long before graduation.

⁸ See Guo, Jun (1990), "Why Secondary Specialized Schools Charge High Fees" [Zhongzhuan gao shoufei ruhe], *Chinese Youth News* [Zhongguo Qingnian Bao], 12 June, p.3, reprinted in China RENDA Social Sciences Information Centre, *Vocational and Technical Education*, 1990, No.4, pp.24-25.

view TAFE as a second-best alternative to university.”⁹ The studies also indicate that there has been a perception over time that VET (vocational education and training) is for people who “don’t quite make it”, and that “TAFE is for people who are not academically competent and university is for those who are”. This argument is supported by some teachers’ observation that “secondary schools indicate their success by advertising the number of graduating students who gain university entrance.”¹⁰ Such views on VET are actually common in the international arena, whether in developed countries or in developing countries. Kenneth King points out that “(i)t is frequently the case that the vocational school recruits at an allegedly lower level of ability than the technical, and both the vocational and technical at lower levels than the academic or general secondary schools. But this tendency was traditionally reinforced by there being no possibility of continuing with further tertiary level of education from the vocational school.”¹¹

The description above can be borrowed here to describe the situation in China. The only clarification is that in China the order of ranking from lower to higher level in secondary VTE stream would be vocational (senior high) school, skilled worker school and specialized secondary school. This is a general description. There are special circumstances that some vocational or skilled worker schools enjoyed higher reputation and more appealing than some specialized schools because of their specialty training programs, which led to good jobs and good income. It is a common understanding and practice that students with poor academic performance or lower-level abilities in academic studies would be streamed into VTE schools in senior secondary education.

Observations on the intake of junior high school graduates into senior secondary level schools indicate that the order of ranking from top to bottom is secondary specialized schools, secondary teacher training schools, key general senior high schools, ordinary general senior high schools, and vocational senior high schools

⁹ See Maxwell, G., Cooper, M. & Biggs, N. (2000), *How People Choose Vocational Education and Training Programs; Social, Educational and Personal Influences on Aspiration*, Adelaide: NCVER, p.9.

¹⁰ Maxwell, G. et.al. (2000), op.cit., p.67.

¹¹ King, K. (1993), “Technical and Vocational Education and Training in an International Context”, *The Vocational Aspect of Education*, Vol 45, No. 3, pp.201-216 (p.209).

based on the unified senior secondary education placement examination result.¹² According to this information, specialized senior secondary schools would have the first priority to enroll students with the highest academic levels. However, the author would argue that most high score achievers from junior high schools would choose to go into general senior high schools, or to be exact, into key senior schools, from where they aimed at getting into universities three years later. This is because secondary VTE schools were perceived as terminal education, which means that their graduates were not able to move on to tertiary educational institutions.¹³ Therefore, most academically high-achieving students would choose general senior high schools. This argument is supported by Yan Hou's article, which said:

For several years, secondary specialized schools did not fulfill the enrolment plans. In 1986, the national recruitment was planned at 711,000 new students, but in fact only 677,000 were enrolled. In 1988, the national plan was 770,000, but the total new enrolments planned by local government and departments were only 725,000, and this figure would be reduced further in the actual recruitment process.¹⁴

In the mid 1980s Chinese government upgraded a considerable number of secondary specialized schools into tertiary vocational education colleges. This means a large number of good-quality secondary specialized schools, which had the best teaching resources and facilities in secondary specialized schools, were taken away from the sector. This would have given people an impression that secondary VTE was second class. In addition, tertiary education enrolments began to increase from the early 1990s. (See Table 8.3.) Apart from formal university courses (usually of 4 to 5 years), there were many short-cycle courses that were called “*da zhuan*” (tertiary diploma courses of 2 or 3 years). These courses were offered by formal tertiary education institutions, such as universities and colleges, and were given tertiary

¹² Qi, Aishui (1989), “We Must Rectify Three Unfair Treatment in the Development of Vocational Education” [Fazhan zhiye jiaoyu bixu gaibian san zhong bugongping daiyu], *Vocational Education Forum* [Zhijiao luntan] (Nanchang), No.4, p.32.

¹³ Although the government allowed VTE school graduates to sit in tertiary entrance examinations, it was very difficult for them to pass the examinations, which were very academic-focused, because they were not academically prepared as general senior high school student. As a result, there was slim chance of success.

¹⁴ Hou, Yan (1988), “Current Situation, Problems and Countermeasures of Secondary Vocational and Technical Education” [Zhongdeng zhiye jishu jiaoyu de xianzhuang, wenti ji duice], in Shouxin Li (ed.), *Studies on the Issues of China Education Development* [Zhongguo jiaoyu fazhan wenti yanjiu], Beijing: China Planning Press, pp.136-149 (p.141).

education status. Students graduating from these courses would receive a tertiary education certificate.

Table 8.3
Percentage of Senior High School Graduates into Tertiary Education in the 1990s
(including both full-degree and diploma courses)

Year	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Percentage	27.3	28.7	34.9	43.3	46.7	49.9	51.0	48.6	46.1	63.8	73.2

SOURCE: Department of Development Planning of Ministry of Education, "Year 2000 Brief Statistical Report on China Education Development" [2000 nian zhongguo jiaoyu shiye fazhan tongji jian kuang], <http://www.edu.cn/20011219/3014655.shtml>, accessed 18/12/2002.

As higher education was made more available to young people, high score achievers usually would not choose to go to VTE schools. Therefore, VTE students' academic levels were getting lower, and this situation became worse towards the end of the 20th Century. Huang Kexiao, an academic and expert in VTE, discussed the problem in Shanghai. In 1997, the cut-off mark for entrance in secondary VTE schools was 300, but this mark dropped to 270 in 1998, to 250 in 1999, and to 200 in 2000.¹⁵ Chen Danhui, a researcher in Beijing Academy of Education confirmed the similar problem in Beijing (See Table 8.4).¹⁶ Although this survey was conducted in 2001, the report pointed out that this situation was similar to the previous years. As the majority of vocational school students had low academic levels, a few problems arose; they included low level of basic knowledge, low self-esteem and low motivation of study. The problems made teaching difficult for teachers.

Table 8.4
Academic Levels of New Students in Vocational Senior High Schools in Beijing

Type	Level of Basic Knowledge (entrance score out of 100 marks)	Percentage (%)
A	60 and above	Less than 30%
B	40-60	35%
C	20-40	25%
D	Below 20	20%

¹⁵ Huang, Kexiao (2001), "We Should Think over the Tactics about the Deteriorating Quality of New Students in Secondary Vocational Schools" [Ying dui zhongzhi xiao shengyuan zhiliang xiajiang zhi celue sikao], *Vocational Education Report* [Zhijiao Tongxu] (Changzhou Technical Teacher Training Institute Journal), July, pp.4-6, reprinted in China RENDA Social Sciences Information Centre, *Vocational and Technical Education*, 2001, No.6, pp.29-31.

¹⁶ Chen, Danhui (2001), "Research of the Study Characteristics of Vocational High School Students" (internal research project), Institute of Vocational Education and Adult Learning, Beijing Academy of Education, (unpublished).

Note: In the Chinese school marking system, 60 is the passing mark out of 100 marks.

SOURCE: Chen, Danhui (2001), "Research of the Study Characteristics of Vocational High School Students" (internal research project), Institute of Vocational Education and Adult Learning, Beijing Academy of Education, (unpublished).

Chen's survey result was not isolated but universal. Huang and Huang described similar problems:

Most vocational senior high school students are "failures" in the placement examinations for general senior high schools and specialized secondary schools. ...Some survey results show that vocational senior high school students have the following problems:

- 1) Low desire for learning. Lack of motivation in study.*
- 2) Low self-discipline. Strong "rebellious" attitudes towards teachers and school.*
- 3) Lack of self-esteem. No confidence for future.*
- 4) Lack of ability to judge themselves. Negative opinions towards others.*
- 5) Lack of ability to communicate with others.*
- 6) Poor ability to adapt to new situations. Likely to hide from reality.¹⁷*

Such problems were also common among skilled worker school students. Due to several reasons, including the expansion of higher education enrolments, closing down of many state-owned manufacturing plants and highly paid jobs in the tertiary industries -- finance, real estates, IT, and others -- fewer and fewer students applied for skilled worker schools. In 1996, Shenyang No.1 Machinery Skilled Worker School, which offered good training programs, recruited two classes of new students. Some of the students' total score of entrance examination (out of 5 subjects) were only 50 marks.¹⁸ If the school rejected students with such low marks, then they could not fill the enrolment quota. Shenyang No.3 Machinery Skilled Worker School had the similar problem, and the school had to accept anyone who applied.¹⁹ These problems led skilled worker schools to have low quality students. Zhao Huilan, a skilled worker school teacher, described her students as:

¹⁷ Huang, Xiaodong & Huang, Hua (2000), "Psychological Problems Should Be Cured with Heart" [Xin bing yao yong xin yao yi], in Editor Department of "Chinese Vocational & Technical Education" (ed.), *Explore, Reform and Innovate* [Tansuo, gaige he chuangxin] — Year 2000 Selected Essays on Vocational Education in China, Beijing: Higher Education Press, pp.304-310.

¹⁸ Each subject examination usually had a full mark of 100 to 120.

¹⁹ Zhu, Jiayong (1996), "Hope Is in Front of Us, but Problems Are Coming Along" [Xiwang zai qian, kunnan xiang sui], *Vocational Education Forum* [Zhi jiao lun tan] (Nanchang), No.4, pp.8-9.

- 1) *Strong sense of inferiority.*
- 2) *Low morality.*
- 3) *Lack of legal knowledge and awareness.*
- 4) *Lack of self-motivation in studies.*
- 5) *No desire for social commitment and lack of ambition.*²⁰

These examples of secondary VTE students' low self-esteem and lack of enthusiasm in learning once again confirm the argument in Chapter 5 that streaming in secondary education has psychological impact on the students. Not only students had low opinions about VTE, parents also had the same idea. It was noted that some parents kept their children in VTE schools just for a "threshold certificate" for employment.²¹ Those parents were able to find a job for their child through their social power or contacts. They put their child in the secondary VTE only to get a senior secondary education certificate for employment. There were also some parents who kept their children in VTE schools merely thinking they were too young to get into workforce. Both types of parents did not show concern about their children's study and personality development.²² George Bereday points out:

I have written in favour of an open educational system that would not bar access to education at any level to anyone who desires it, "however humble". An educational system can, indeed, be discussed from the point of view of how it serves economic development. But it should not be discussed in such a way that other types of development, purposeful and purposeless, active or contemplative, be pushed out of focus by materialistic concerns alone... If the process of education does not "catch on" and people who undergo it do not get "hooked" on the pursuit of self perfection, if the thrust to learn more and more does not follow the first taste of education, then what happens is so much waste motion, an idle exercise designed merely to keep the kids

²⁰ Zhao, Huilan (2000), "Moral Education and Students' Ideological Problems in Skilled Worker Schools" [Xin xing shi xia jixiao xuesheng de sixiang zhuangkuang ji deyu cuoshi], in Editor Department of "Chinese Vocational & Technical Education" (ed.), *Explore, Reform and Innovate* [Tansuo, gaige he chuangxin] — *Year 2000 Selected Essays on Vocational Education in China*, Beijing: Higher Education Press, pp. 434-438.

²¹ A "threshold qualification", is a term used by the OECD as "the minimum level of certification required to have a reasonable chance of gaining employment or access to further study, such as "completing a full upper secondary education with a recognized qualification for either work, tertiary study or both". See OECD (1999) *Thematic Review of the Transition from Initial Education to Working Life*, Brussel. P. 6, quoted by Curtain, R. (2001), op.cit., p.8.

In Chinese cities, a "threshold qualification" is understood to be including upper secondary education, even though it is not so specified in government's policy. A person would need to go through formal education at a higher level than junior secondary education in order to obtain a decent job in cities.

²² Hu, Qiguo (1992) "Analysis and Measures about the Causes for Poor Students in Vocational Senior High Schools", in *Vocational Education Research* (Tianjin), No. 1, pp.18-19

*off the street, a parroting game, the social cost of which in terms of boredom of the young who must live as if they have been imprisoned has not yet been estimated.*²³

Bereday's description/prediction truly happened in China in the 1990s and onwards.

8.2 Parental Perceptions and Expectations on Children's Career Future

Reagor and Rehm have aptly summarized results of some research studies on factors influencing students' choice in America, and pointed out that "parents have an important influence, perhaps the single most important influence, on the career and job choices their children make."²⁴ In their studies of the influences on Australian secondary students' choice for further study, Hannan, et.al. found that parents accounted for 57% of the influence on student's decision.²⁵ Studies on TAFE students by Maxwell, et.al. also indicated that "parent or guardian is the second most influential factor, and for the majority of people this factor features at least to some extent in decision-making".²⁶ Moreover, Maxwell et.al. conducted a survey among the existing TAFE students, of whom at least 20% were in full-time employment already. If not including adult/mature-age students and those who were already in full-time employment, parental influence could have been dominant among all the factors. In China, parental influence was always the most important factor in the choice of students' future career. It was partially because of the tradition of filial piety that children must respect and obey parental guidance, and partially because children were brought up in a culture that parents arranged everything for them and they did not have to make decisions for themselves. "I study for my parents" is a very common mentality and attitude among secondary school students in China.²⁷ This attitude is supported by a survey conducted in 1999. (See Table 8.5.)

²³ Bereday, George Z.F. (1970) "Education and Economic Development" in *Contribution to Education No. 40*, P.28

²⁴ Reagor, J.D. and Rehm, M.L. (1994), "Perspectives on Work from Rural Parents with Different Levels of Education", *Journal of Vocational & Technical Education*, Vol.11, No.2, <http://scholar.lib.vt.edu/ejournals/JVTE/v11n2/reagor.html>, accessed on 15/05/2002.

²⁵ Hannan, B., et. al. (1995), *Charting A Course: Students' Views of Their Future*, Canberra: Australian Government Publishing Service, p.57.

²⁶ Maxwell, G., et. al. (2000), *ibid*, p.73.

²⁷ Interview with Li Zhang, Tianjin, 13/09/2002.

Table 8.5
Occupation Choices of Graduates from a Nurse School in Nanjing (1999)

Occupation	%
Follow parents opinion	80.4
Follow own opinion	11.2
Follow former fellow schoolmates (graduated)	4.3
Other reasons	4.1

SOURCE: Wang, Lei (2000), "A Few Issues for Attention in the Employment Counselling for Graduating Students from Secondary Specialized Schools" [Dangqian zhongzhuan xiao zai biyesheng jiuye gongzuo zhong yingguan zhuyi de ji ge wenti], *Medical Education Research* [Yi jiao yanjiu], Vol.20, No.2, pp.35-36 (p.35).

The Chinese tradition has been that the more education one receives the better career future one could have. "Xue er you ze shi" [A good scholar will make an official] was dominant in people's minds for a long time. Parents expect their children to receive tertiary education, and from a very young age, they would encourage their children to study hard and to become a scientist or professional when they grow up. The Chinese people value education not only because it will give a person a bright professional career, but also because they believe higher education will lead a person to a higher level of moral standard and social status. This is why in the late 1980s when a sense of "uselessness of study" [*du shi wu yong lun*] prevailed, the majority of parents still expected their children to go to university.²⁸ Table 8.6 shows a survey conducted at this time about parental expectations on children's education level.

Table 8.6
Parental Expectations on Children's Educational Level

Expected level	Number of parents	Percentage
Senior high school	9	3.3
Secondary specialized & vocational high school	26	9.7
Tertiary diploma (2-3 years college)	21	7.8
University bachelors degree	181	67.3
Masters degree	4	1.5
Doctoral degree	18	6.7
Others	10	3.7
Total	269	100

(Note: "Others" means that parents did not have specific expectations, as their children's academic levels were low. They would accept whatever level their children could reach.)

SOURCE: Xu, Miaofa, et.al. (1987), "A Survey of Educational Backgrounds of Urban Families" [Chengshi jiating jiaoyu xianzhuang kaocha], in Ying Liu & Suzhen Xue (eds.), *Studies of Marriages and Families in China* [Zhongguo huanyin jiating yanjiu], Beijing: Social Science Documents Press [Shehui kexue wenxian chubanshe], cited in Yang, Hesong (1991), *Chinese Chitchat*, Beijing: Beijing University Press, p.141.

²⁸ See Chapter 8.3 for detailed discussions of "Uselessness of Study".

Western researchers claim that parental expectations on children's education level depended on parents' age, occupation, education level, experience as well as the family's economic situations. James in his study of Australian school students states:

The most striking differences in student attitudes are related to their socio-economic backgrounds. Recalling that the study uses parental education as proxy for SES, it is apparent from the findings that the level of parental education is the single most (influential) factor in determining the attitudes of students towards life after school and the possibility of tertiary education. The students from higher socio-economic backgrounds — that is, those having a parent or parents who have completed an undergraduate degree or higher —tend to stand out. For these students with university-educated parents, TAFE is far less likely to be a consideration.²⁹

In the Western countries such as Australia, socio-economic status is often related to the individual's educational background. In China, situation was different. Not only those highly educated parents had high expectations of their children's education, but also those parents who had missed the chance of going to university were keen to see their children receive tertiary education. One may also find that some working class and rural parents also hoped that their children could go to university. Many stories have been told about poor parents borrowing money from relatives and friends to support their child going to university. Even poverty-stricken rural parents tried to support their child's university education by risking their own life, such as frequently selling blood.³⁰ This was not only due to the Chinese tradition of valuing knowledge and education, but also because that only through tertiary education could a rural young person get a job in a city, which could change his/her poor living standard and low social status as a peasant. It was a common belief that tertiary education would give a person the possibility of having a bright career future and a good life. Parents, regardless of their backgrounds and financial positions, expected their children to do better than them in career and life.

²⁹ James, Richard (2000), *TAFE, University or Work? The Early Preferences and Choices of Students in Years 10, 11 and 12*, Adelaide: NCVER, p.17.

³⁰ One example is reported by *Ban Yue Tan* internal edition, entitled "Le Du: Over a Thousand Households of Farmers Support Their Children's Education by Selling Blood" [Le Du: qian yu hu nongmin mai xue gong zinu shangxue], http://news.xinhuanet.com/banyt/2004-11/04/content_2177508.htm, assessed 06/01/2005.

8.3 Career Opportunities for Secondary VTE Graduates in the 1980s

Although the majority of parents had high expectations of their children's education, they had to consider the reality. In the 1980s, Chinese University intakes each year accounted only around 4% of the candidates from the senior high school graduates. In this situation, parents regarded secondary specialized and technical education as an option.

During the 1980s, China was in a transitional stage from the old planning economy to a market-oriented economy, but the reform of human resource system did not follow immediately. Human resource training and employment were still controlled by the government though there began to have a free labour market. Secondary specialized schools and skilled worker schools had been planned and controlled by the government from the 1950s, and this pattern of governance was still kept when educational reforms started in the 1980s. During the early years of the reforms, students had no problems in getting jobs with the help of the government.

Secondary specialized school graduates were able to get jobs straight away, because the government planned enrolment quotas of these schools and assigned jobs to the graduates. These graduates would usually be employed as "cadres", who would have chance for promotion to higher administrative/managerial positions in future. Tertiary education qualification holders were all categorized as cadres in employment. This means secondary specialized school graduates would have access to job security, status, promotion and good earnings. With the highly competitive quota for entrance into university education, secondary specialized school graduates were regarded only second to the best.

In the early 1980s, graduates from skilled worker schools were allocated jobs by the government. Therefore enrolling in such schools meant guarantee of employment. In China, being a blue-collar worker is considered as of lower social status and economically disadvantaged. However, for the children of lower socio-economic background and those who were not academically advanced, it was a practical way to get employed early. In addition, the CCP had been promoting the social position of workers, peasants and soldiers since 1949 for the purpose of

consolidating its political power in China. Thus being a blue-collar worker was labelled as “glorious” [*guang rong*]. Until late 1980s, there was a slogan circulating among skilled worker schools that “(e)ntrance (into skilled worker schools) means getting into employment”. In fact many large plants or enterprises ran schools to train skilled workers for their own. One example is found in Min Weifang’s study in Beijing General Auto Industry Company’s worker school.³¹ Another example is Guangzhou Petrochemical General Plant that had set up its skilled worker school in 1985. In the early years of its establishment, the plant put forward a slogan: “Enrolment of new students means recruitment of new workers.” [*bian zhao gong wei zhao sheng*]. It recruited all of the new workers from its skilled worker school. Over the following 10 years, the plant recruited more than 30,000 new skilled workers in this way, with 85% of them at the first line of production in the plant.³²

Apart from skilled worker schools run by large plants, those schools run by industrial departments of the government were also able to help students with full employment. For example, Tianjin Electronic Technology Vocational School, Tianjin Bohai Vocational Technology School, Tianjin Industrial Chemical Technology School, Tianjin Metallurgical technology School, just to name a few, all these schools were reported to have 100% employment rate of their graduates.³³

In the 1980s, Chinese economy grew with a fast pace, and some manufacturing industries developed rapidly. VTE schools were in a good position to train skilled workers for these industries. For example, in 1984, a new wool mill was set up in Tianjin, which was an important pilot project of technology reform in the city. Vocational schools took this opportunity and offered suitable training programs. Within two years, the wool spinning plant recruited 1547 skilled workers from vocational schools. In some workshops, over 80% workers were from vocational

³¹ Min, Weifang (1987), *The Impact of Vocational Education on Productivity in the Specific Institutional Context of China: A case study*, (PhD thesis), USA: Stanford University), published by UMI, Ann Arbor, Michigan.

³² Liu, Wanyong & Li, Qingying, “The Difficult Situation of Skilled Worker Schools” [Jixiao de kunjing], *Chinese Youth News* [Zhongguo qingnian bao], <http://www.edu.cn/20020423/3025317.shtml>, accessed 05/05/2002.

³³ *Guidebook of Vocational Schools* [Tianjin zhiye xuexiao zhinan], Tianjin: Tianjin Education Press, 1989.

schools.³⁴ From 1980 to 1988, over 95% of the total 3,300 graduates from vocational senior high schools in Beijing Shijingshan District were reported to be successfully employed as middle-level technical, managerial or financial personnel, and early child educators³⁵ According to the Guidebook of Vocational Schools in Tianjin published in 1989, the majority of over 100 vocational schools had 100% employment rate among their graduates. Graduates from the rest of the schools were also reported as “very competitive in the labour markets”.

A specific example is Tianjin Yu Cai Vocational Specialized School. In 1988, the school conducted a survey of graduates for the past four years. All of the 496 graduates were fully employed. 39% of them were in manufacturing industries, 13% in trades and business, and 48% were in government or public sectors. 20% of the graduates became the backbone employees of work units [*dan wei*] after one year of work at the job.³⁶ Working in these industries and institutions as intermediate level technical, semi-professional, and administrative personnel was considered to be ideal for students who had slim chances of getting into university.

In the mid 1980s, another reason for parental and social belief in secondary VTE was the second wave of “Uselessness of (academic) Study” [*du shu wu yong lun*]. The first occurrence of “*du shu wu yong lun*” was in the Great Cultural Revolution. At that time, politics and ideology were over emphasized; academic study and professional/technological study were denounced. Evaluation and judgement of an individual was based on class background and ideological affiliation. Intellectuals were devalued as “Stinky No.9” [*chou lao jiu*]³⁷, and workers, peasants and soldiers lectured in the classroom. When universities resumed enrolment in the early 1970s, academic knowledge and study were treated as secondary to political and ideological attitudes. A well-known example is Zhang Tiesheng, a production team leader in a northeast China village, who submitted a blank paper in the university entrance examination that

³⁴ Qiao, Fuyuan (1990), *Vocational and Technical Education in Tianjin* [Tianjin zhiye jishu jiaoyu], Tianjin: Tianjin Social Science Press, p.42.

³⁵ Cao, Qing (1989), “A Brief Discussion on the Value of Devoting Major Efforts to the Development of VTE” [Qian tan dali fazhan zhiye jishu jiaoyu de jiazhi wenti], *Research of Education Management* [Jiaoyu guanli yanjiu] (Beijing), No.8, pp.49-51, reprinted in China RENDA Social Sciences Informational Center, *Occupational and Technical Education*, 1990, No. 2, pp.14-16.

³⁶ Sun, Zhentang, et.al. (eds.) (1990), *Yucai Vocational Specialized School is Marching On* [Yu Cai zhizhuan zai qianjin], Tianjin: Yucai Vocational School (internal publication), p.421.

³⁷ See 3.1 in Chapter 3.

included only very basic academic knowledge, and wrote a letter to the authority criticising the academic examination and expressed his revolutionary attitudes towards the CCP. His story was publicised by the “Gang of Four” as a role model for the young people in the whole country. This resulted in the avoidance of academic study and professional development. However, the Chinese tradition of respecting knowledge was deeply rooted in Chinese people’s mind, and it was only due to the political situation that people had to follow the trend. When the Cultural Revolution was ended and political situation changed, social norm began to readjust to normal. On 24 May 1977, Deng Xiaoping addressed the importance of respecting knowledge and talents. He emphasized that “(t)he key to achieving modernization is the development of science and technology” and the government must create conditions (both working and living) that would allow highly qualified scientists and technical personnel to devote their undivided attention to research. He pointed out that if they do their research work well and achieve results, “it will be helpful politically and will benefit China.”³⁸ From then on, intellectuals and professionals were gaining back their social status, and students’ and parents’ desire for education became high again.

The second wave of “*du shu wu yong lun*” emerged in the late 1980s, and it was different from the first one. The reason for losing interest in studying was not due to the outside political pressure, but instead it was due to the economic reasons and social and individual’s perception on the importance of wealth and monetary benefit. In 1978, Deng Xiaoping instructed that “we should allow some regions and enterprises and some workers and peasants to earn more and enjoy more benefits sooner than others.”³⁹ This was aimed at setting examples to help promote the national economy to advance wave upon wave and help economic reforms and open-door policy, and “put the Chinese onto the path of making wealth, respecting wealth and pursuing wealthy

³⁸ Deng, Xiapping (1977, 24 May), “Respect Knowledge and Respect Talents” [Zunzhong zhishi, zunzhong rencai], *Comrade Deng Xiaoping on Education* [Deng Xiaoping tongzhi lun jiaoyu], Beijing: People’s Education Press, pp.24-26.

³⁹ Deng, Xiaoping (1978, 13 December) “Emancipating the Mind, Seek Truth from Facts and Unite as One in Looking to the Future” (Speech at the closing session of the Central Working Conference which made preparations for the Third Plenary Session of the Eleventh Central Committee of the Chinese Communist Party that immediately followed. In essence, this speech served as the keynote address for the Third Plenary Session.), republished in *Selected Works of Deng Xiaoping, Vol II*, <http://english.peopledaily.com.cn/dengxp/vol2/text/b1260.html>, accessed on 08/01/2005.

life.”⁴⁰ The government began to allow people to set up private business. Hence, a new socio-economic group began to emerge. These people were called “*ge ti hu*” [self-employed]. They were normally the ones who did not have a proper job in the government work units, and the majority of them, if not all, did not have higher educational qualifications. They set up small business such as restaurants, hotels, grocery stalls, tailor shops, clothes shops, and so on.⁴¹ These tertiary industries were growing fast in the 1980s. The business owners and employees, who usually did not have tertiary qualifications, made more money than those mental workers with higher educational backgrounds, such as engineers, doctors, teachers, public servants. This caused negative views of university students and post-graduate students on their value. A 1986 survey of 2,553 people in 20 cities on the income system revealed that the least satisfied group was university undergraduate and postgraduate students.⁴² For a while there were sayings in the communities that “Ice blocks peddlers make more money than professors.” “Barbers are better off than surgeons.” “Boiled eggs sellers do better than atomic bomb makers.”⁴³ This phenomenon of “*nao ti dao gua*” [Manual workers earn more than mental workers] affected people’s views about value. People saw no use of going to school, especially to higher education. In the late 1980s, the serious “*nao ti dao gua*” syndrome set out what was called the second wave of “Uselessness of Study” [*du shu wu yong lun*].

During this time, the traditional value that an individual was judged by his knowledge and moral standard was being replaced by the new social value that the success of a person was judged by his wealth. This made intellectuals feel frustrated and devalued, even though Deng Xiaoping and the CCP government had urged the whole country to respect knowledge. As a result, students were not interested in study and teachers were reluctant to teach. University students, even postgraduate students,

⁴⁰ Lu, Nuo (2004, 27 August) “Making Wealth Thanks to Deng Xiaoping” [Zhifu bu wang Deng Xiaoping], *Yunnan Daily*, <http://www.yndaily.com.cn/html/20040827/news-82-670241.html>, accessed 07/10/2004.

⁴¹ Backgrounds of self-employed and private business owners in the 1980s and 1990s can be seen in Yan, Zhimin (ed.) (2002), *Studies of the Current Social Classes and Strata in China* [Zhongguo xian jieduan jieji jieceng yanjiu], Beijing: CCP School, pp.234-244.

⁴² Yang, Xiong (2000), “Looking Back Upon the Evolution of Youth Values during the Economic Reforms and Opening-Door Policy in the Past 20 Years” [Hui su 20 nian: Gaige kaifang zhong de qingnian jiazhi guan de yanbian], in Songxing Su & Zhenping Hu (eds.), *Differentiation and Conformity: Youth Values in Contemporary China* [Fenhua yu zhenghe: dangdai zhongguo qingnian jiazhi guan], Shanghai: Shanghai Social Science Press, pp.37-115.

who had got into postgraduate schools through difficult screening examinations, wanted to quit and go into business.⁴⁴ In this situation, some people perceived VTE to be more rewarding than going to university because vocational education could lead young people to employment in the fast growing and high profit tertiary industries. Keith Lewin and Xu Hui observed that in 1986 in Hangzhou, “major employers in the service sector were recruiting directly from vocational high schools. The most successful of those schools graduates were being offered several times typical university graduate salaries to work in joint venture companies.”⁴⁵ Such promising career out of secondary VTE would certainly attract students and parents.

The employment situations of secondary VTE school graduates were not always so rosy as above statistics have shown. Suzanne Pepper observed that some problems of placing graduates in employment existed. These problems included students who were trained in the specialties that were not needed by local work units, or there were no such factories or business in the area, and students who were not taught to master the complete skills for a trade such as garment-making. If they were unable to become self-employed or to find a job in the labour market, these students faced unemployment upon graduation,⁴⁶ and secondary VTE did not provide enough training for self-employment. Leslie Lo also argued that vocational high school graduates had to rely on their own contacts or families’ connections [*guan xi*] in their search for a desired job, and from various reports there were no dearth of employing units which would first select relatives of their own employees to fill vacant posts instead of hiring graduates from vocational high schools with relevant training.⁴⁷ Yang quoted a newspaper article criticizing the serious common problem of parents trying to

⁴³ Wu, Jiping & Xu, Ying (1997), *Who am I: The Social Positions of Contemporary Chinese People* [Wo shi shui: dangdai zhongguo ren de shehui dingwei], Huhehaote: Nei Menggu People’s Press, p.251.

⁴⁴ See Yang, Xiong (2000), op.cit.; Xia, Weidong (1990), “Analysis of the two waves of ‘Uselessness of education’” [Liang ci ‘Du shu wu yong lun’ sichao bianxi], *Chinese Youth Studies* [Zhongguo qingnian Yanjiu], No.6, cited in Zhenjie Li, Changgeng Gong, and Xiangong Liu (eds.), *Current Topics about China* [Dangdai zhongguo huati], Beijing, Beijing Language Institute Press, (1993) pp.381-386; Wei, Qi (1996), “In the Vast ‘Sea’, Who’s in Control” [Cangmang da ‘hai’, shui zhu chen fu], in Dongtao Zou & Zhongzhen Tan (eds.), *China in Transition* [Zhuangui de zhongguo], Beijing: ReformPress, pp.98-118.

⁴⁵ Lewin, Keith and Xu, Hui (1989), “Rethinking Revolution, Reflections on China’s 1985 Educational Reforms”, *Comparative Education*, Vol. 25, No.1, pp.7-17 (p.11).

⁴⁶ See Pepper, S. (1990), *China’s Education Reform in the 1980s: Policies, Issues, and Historical Perspectives*, Berkeley, Institute of East Asian Studies, p.107.

⁴⁷ Lo, Leslie N.K. (1993), “The Changing Educational System: Dilemma of Disparity”, in Joseph Y.S. Cheng, and Maurice Brosseau (eds.), *China Review 1993*, Hong Kong: The Chinese University of Hong Kong, p. 22.1-42 (p.24).

get their children into ideal employment posts through connections and contacts. This problem affected the application of true talents and skills in the necessary job posts, and thus was in danger of weakening students' motivation for training.⁴⁸ Many reports and papers indicate that the government's policy of "training before employment" [*xian pei xun, hou jiu ye*] was not effectively implemented.

8.4 Parental and Social Perceptions on Secondary VTE in the 1990s

The second wave of "Uselessness of Study" phased out from the early 1990s when globalization started to affect China. Information technology began to dominate Chinese economy, and computer industry and trade developed very fast. China-overseas joint-venture companies were established one after another in China, and more and more foreign business came into China. Higher qualifications were essential for securing highly paid jobs in such business, and people began to see the importance in obtaining higher qualifications in relation to their future career. Social value changed accordingly, and the expectation of parents and students on jobs had also been raised to a higher level. More and more parents hoped their children could go to university.

One of the reasons for this problem is the Chinese government's "one child" policy, which was introduced in the mid 1970s. These "only child" families had their children reaching the age of senior secondary education by 1990. Parents placed all hope onto this one child and expected him or her to bring honour to the family. "*Wang zi cheng long*" [expecting son to become a dragon] is a very common Chinese parental mentality. In fact, many parents, regardless of their child's abilities and despite their child's preference for vocational education if s/he had, would try to make their child to get into general senior secondary schools so as to take tertiary entrance examinations at the end of three years' study at senior general high school. They were even willing to pay a large amount of school fees for their child to enter general senior high schools if

⁴⁸ Yang, Xiong (2000), "Looking Back Upon the Evolution of Youth Values during the Economic Reforms and Opening-Door Policy in the Past 20 Years" [Hui su 20 nian: Gaige kaifang zhong de qingnian jiazhi guan de yanbian], in Songxing Su & Zhenping Hu (eds.), *Differentiation and Conformity: Youth Values in Contemporary China* [Fenhua yu zhenghe: dangdai zhongguo qingnian jiazhi guan], Shanghai: Shanghai Social Science Press, pp.37-115 (p.71).

their child did not reach the entrance scores⁴⁹. Parental preference for general senior high school education was re-enforced by the fact that secondary VTE school students not only no longer received living allowance as their former schoolmates in the early 1980s, but also had to pay tuition fees, an amount equivalent to that of general senior high schools. With more and more difficulties for secondary VTE graduates to compete in the job market (which will be discussed later in this chapter), parents would prefer their only child to go to general senior high school and then to college, university, or any form of tertiary education, and the opportunities for getting into tertiary education became more and more available. The following is an excerpt from a VTE school graduate's biographical article about his father's attitude to his choice of VTE.

At present, the parental mentality of “wang zi cheng long” is dominating the society. I came to a crossroad on graduation from junior high school about whether to enter general senior high school, or to go to vocational senior high school. I had to deal with considerable pressure from my parents and the society. From the financial point of view, my family had the ability to support me going to university. Like many other parents my parents hoped that I would choose to go to general senior high school. But when the examination result came, I was admitted into Qingdao Cookery High School. My result was only a few marks below the entrance score of key general senior high schools. Due to the social prejudice against vocational education, parents felt as if they had committed a crime when their children went to vocational school. I still remember that a few days after I had received the admission notice, some of my father's friends came for dinner. They showed happiness and pride on their faces when talking about their children having been admitted into the well-known key general senior high schools in the city. But my father looked very sad and said: “You guys ‘wang zi cheng long’ [Expecting one's son to become a dragon – hoping one's children to have a bright future], but I only can ‘wang zi cheng chong’ [Looking at son to become a worm].”⁵⁰

Wang Tao became a successful business entrepreneur several years after graduation from the vocational school. His restaurants became a famous chain business in Qingdao City. He dedicated his success to his vocational education. Jiang Shijie was

⁴⁹ Many general senior high schools allowed a quota of fee-paying students into school. These students missed the entrance scores by a few marks or so, but schools allowed them to get into the school by paying a full fee. This was also a means for schools to generate funds for their schools.

⁵⁰ Wang, Tao (199u), “Vocational School Students Can Also Make a Big Career” [Zhizhongsheng ye neng chuang daye], *Success of entrepreneurs* [Chuangye zhi xing], pp.1-5.

another example. He graduated from Qingdao Beauty Care and Hairdressing Vocational Senior High School. He also had difficulty in making decision on post-secondary education. He wrote his experience as follows:

In 1990 when I graduated from junior high school, my future became family's focus of discussion. Father is a high school teacher, with a university degree, and he expected me to go to general senior high school, and then go to university.⁵¹

At first, Jiang had the same idea as his father, but later he changed his mind. This was because he was not strong in academic study, but rather he was talented in art and painting. He thought that with the rise of living standard as a result of fast economic development, the care of hair and looks would become people's concern. He was confident that he would have strong advantage in this field. He succeeded in persuading his parents to let him get into the vocational school. Upon graduation, a prestigious China-Finland joint venture company employed him, and he was paid a much higher salary than average university graduates. Later he resigned the job and set up his own business that became very successful. Both stories relate how parents and society perceived vocational education, but they also vindicate that vocational education was able to lead an individual to a bright career future. To some extent, it was not what educational qualifications one could have that mattered, but more importantly it was what kind of job one could excel.

In 1997, the author interviewed Mr Yue, a parent of a student in Tianjin Real Estate Management School. He chose this school for his son because real-estate was a very hot economy in China. Property developers and those who were involved in real estate business made a great deal of money. As the vocation was very popular, the school was very hard to get in. Mr Yue had to seek help from his friends and contacts to get his son into the school. During the interview, Mr Yue said:

I have designed a future for my son. The main issue to consider when choosing the school for my son is the matter of survival in future. Nowadays, parents do not want their children to become factory workers, such as lathe operator (turner), fitter (benchwork operator),

⁵¹ Han, Chunqiu (199u), "Lively and Vigourous in Vocational Education" [Zhijiao tiandi long fei feng wu], *Success of Entrepreneurs* [Chuang ye zhi xing], Qingdao: Qingdao Education Commission, pp.256-258.

etc. In Tianjin, property development grew very fast, and people working in this field are able to earn high incomes. I hope that when my son graduates from this school, he could be upgraded to a tertiary diploma student.⁵² After that hopefully he will become a property development project manager in future.⁵³

Mr Yue represented a large number of parents' opinions. Parental and social perceptions on ideal employment can be summarized in Zhu Jiayong's words:

At present there is a strong tendency of valuing the tertiary industries. Working in tourism, foreign trade, finance, commerce, hospitality (hotel services), China-foreign country joint venture business, etc. is regarded as "high class" jobs by students and parents, because incomes are higher and work conditions are better. In contrast, nobody is interested in factory work. In the 1960s, "nothing was better than lathe, benchwork and milling work", but now "nobody shows interest in them". People try to keep away from work in hard, dirty, tiring and dangerous jobs.⁵⁴

The change of students' and parents' job preference reflects the change of social value. Although the Chinese tradition of valuing education remained unchanged, people's opinion about success did change in the 1990s. They were no longer content with just an academic qualification or certificate, but rather they were more concerned with what their qualifications could bring to them, in both power/status and wealth. People became more materialistic. High income was youth's No.1 consideration according to a survey of 1,500 youths between 15 to 29 years of age in Beijing, Shanghai and Guangzhou.⁵⁵ They aspired to work in well-paid office jobs, such as joint ventures, business companies, government offices, etc. "Blue collar" was not among their choices. A newspaper reported:

Parents resent "vocational skills", graduating students refuse to become "blue collar". Skilled worker schools in Shanghai are suffering an empty house.⁵⁶

⁵² From 1997, some secondary specialized schools and vocational senior high schools began to have upgrading courses, which means a small number of students with high exam marks could be upgraded into tertiary vocational training diploma courses after 2 or 3 years of studies at the school.

⁵³ Interview with Yue, Jianmin, Tianjin, 3 December 1997.

⁵⁴ Zhu, Jiayong (1996), op.cit.

⁵⁵ Yang, Xiong (2000), op.cit., p.85.

Similar problems were found in many provinces and cities in China. In Jiaonan City of Shandong Province, 12 skilled worker schools achieved only 50% of recruitment target in 1992. In 1993, 19 skilled worker schools, which composed of 70% of the total number of skilled worker schools in recruitment, did not fill their enrolment quota.⁵⁷ In Beijing, skilled worker schools aimed at 13,000 new enrolments each year, but the actual new enrolments were less than 10,000 each year in the 1990s, and only about 8,000 remained upon graduation, which means the dropout rate was 20%. In Liaoning, China's centre of manufacturing industries, the number of skilled worker school students was less than 50% of schools' training capacity, and most of the students at school were from the rural areas.⁵⁸

Recruiting students from rural areas was a remedy of the government to enable skilled worker schools to survive those so-called "hard, dirty, tiring and dangerous" types of work.⁵⁹ Rural students saw this as a path to get into city, because the Chinese government strictly controlled the number of urban residents, and it was very hard for rural people to obtain a permanent urban residential card.

The low interest of urban students in skilled worker schools was because the insecure job prospects as a factory worker. In 1988, as a part of the strategy for the economic reforms, the government began to close down state-owned plants and enterprises and reduce the number of workers. The first group (about 300,000) of state-owned factory workers became unemployed, and the number of unemployed workers increased as more and more factories were closed down. By 1997, it was estimated that there were 20 million workers out of job in the country. According to a survey, 98% of enterprises in China had overstaffing problem.⁶⁰ This problem caused by the former planning economy had to be resolved by reducing staff/worker numbers, but the supporting measures for retrenched workers were not fully in place. Although the

⁵⁶ Luo, Xinyu, "Skilled Worker Schools in Shanghai Have an Empty House" [Shanghai jixiao menting lengluo], *Chinese Youth Online* [Zhong qing zai xian], <http://www.edu.cn/20020128/3018921.shtml>, accessed 5/05/2002.

⁵⁷ Lu, Jinglian (1996), "Problems of Skilled Workers Schools and Their Solutions" [Jigong xuexiao mianlin de wenti ji duice], *Chinese Vocational and Technical Education* (Beijing), No.1, pp.27-28.

⁵⁸ Zhu, Jiayong (1996), op.cit.

⁵⁹ Shen, Shuyuan & Dong, Jie (1995), "Studies on the Problems and Their Solutions in the Reform of Skilled Workers Education System in Tianjin" [Tianjin shi jigong xuexiao banxue tizhi gaige de wenti yu duice yanjiu], *Vocational and Technical Training* [Zhiye jishu peixun] (Zhengzhou), No.1, pp.3-4.

⁶⁰ Wu, Jiping & Xu, Ying (1997), *Who am I: The Social Positions of Contemporary Chinese People* [Wo shi shui: dangdai zhongguo ren de shehui dingwei], Huhehaote: Nei Menggu People's Press, p.185.

Chinese government set up a “re-employment project” [*zai jiu ye gong cheng*] to help those workers for retraining and re-employment, there were many problems related to the project and it was very difficult for many people to live through the hard time.⁶¹ This had a great impact on the Chinese society. People were disillusioned that “blue-collar” workers had no job security and had the lowest social position and status in the market economy in China. One newspaper report cited a young man’s letter to the editor of the newspaper that “(m)y biggest mistake in my life is having chosen to go to a skilled worker school. Can you bear to see your child go to skilled worker school, become a factory worker, be retrenched and become unemployed?”⁶² Wu and Xu also told a story that one factory worker, in order to teach her child to study hard at school, took her child to her factory where she worked. After that she said to her child: “If you don’t study hard, you will be a stinky factory worker when you grow up!” They also quoted the result of a survey published by *Beijing Youth News* in June 1995 that only 1.3% of the 344 mothers being surveyed would agree to let their child become a factory worker when they grow up, but in that year 30% of the work force in Beijing was blue collar workers.⁶³

While many of the blue-collar workers were out of work, highly educated people were making their ways up the social ladder in terms of income and social status. In 1980, Chen, Chunxian, a science researcher from China Science Academy set up China’s first private high-tech company with other 6 technical specialists from research institutes in Beijing.⁶⁴ Soon after that, highly educated and skilled professionals began to leave their permanent jobs in government institutions and set up private business. Beijing Stone Company, a well-known successful business in

⁶¹ There are many reports on the problems of retrenched workers, e.g. “Retrenched Workers” [*Xia gang gong ren*], www.cnd.org/HXWZExpress/02/01/020115-5.gb.html, accessed 27/09/2002; “The Retrenched Workers” [*Xia gang gong ren*], www.cnd.org/HXWZExpress/02/03/020328-4.gb.html, accessed 20/09/2002; “The Out-of-Work Workers” [*Shiye laogong*], <http://www.cnd.org/HXWZExpress/02/06/020619-3.gb.html>, accessed 27/09/02.

⁶² *Ibid.* From in the 1990s, the Chinese government began to close down those state-owned factories, and large numbers of workers started to be laid off. Each year from then, there were thousands of factory workers who became unemployed. Social security system was not well established, and many of these retrenched workers were not able to be re-employed. This problem became a very serious social problem in China at the turn of the 21st Century.

⁶³ See Wu, Jiping & Xu, Ying (1997), *op.cit.*, p.175.

⁶⁴ “The Computer Street” [*Dian zi yi tiao jie*], <http://www.hdda.gov.cn/wszl/dzytj.asp>, accessed 03/03/2005.

computer was one of the few.⁶⁵ Following their footsteps, high-tech private business companies were set up one after another. The “Zhong Guan Cun Computer Sreet” (later referred by the Chinese as China’s Silicon Valley) that housed many successful high-tech intellectual entrepreneurs in Beijing was well known to the public. Starting from the early 1990s, more and more intellectuals began to resign from their permanent jobs in universities, schools, government offices, or research institutes and set up their own business enterprises or work for large private business companies. Tianjin municipal city government provided a statistics that 1,500 professors and specialists in the city had become business entrepreneurs or company executives by the mid 1990s. Similar situations occurred in Shanghai, Guangdong and other places.⁶⁶ These intellectual entrepreneurs applied their special skills and knowledge, and were successful in their business endeavours or made huge profit for the companies they worked for. Their success stories made a great impact on society. People believed that the main reason for their success in business was because they were highly educated and skilled. Without higher education qualifications and skills, it was impossible to work in those large profitable companies.

From this time on, the white-collars began to see their fate changed. The “*nao ti dao gua*” syndrome [Manual workers earn more than mental workers] had been corrected. Knowledge and technology were treasured. The government allowed and encouraged highly educated professionals and specialists to apply their knowledge and expertise by working in second jobs, by providing professional and specialized services to social institutions and business companies, and by claiming patents for their research outputs. They began to be recognized as a crucially important group in society, because the further development of China’s economy depended on high level of knowledge and skills, and the high level of knowledge and skills could only be acquired through education. As a result, professionals and technical experts started to receive higher income that was increased dramatically.⁶⁷ In 1998, the “open” income of professionals in comprehensive technology services and scientific research

⁶⁵ See detailed stoty in Xing, Houtian (ed.) (1994), *Tou Ding Yi Pian Tian, Stories of Chinese Successful Entrepreneurs*, Beijing: China Industry and Commerce Association Press, pp.1-21.

⁶⁶ Zou, Dongtao & Tan, Zhongzhen (eds.) (1996), *China in Transition* [Zhuangui de Zhongguo], Beijing: Reform Press, p.136.

⁶⁷ Zhang, Lihua, “The New Changes of the Chinese Urban Citizens’ Mentalities” [Zhongguo chengshi dazhong xintai de xin bian hua], <http://www.cnd.org/HXWZExpress/02/06/020617-4.gb.html>, accessed 27/09/2002.

industries was at the top rank among the incomes ladder of urban residents.⁶⁸ According to some surveys, the income of employees with university qualifications had increased by 71% from 1988 to 1995, but the income of employees with secondary VTE qualifications had increased by 56% in the same period.⁶⁹ Professionals and highly skilled specialists in fact had much higher income than the “open” salaries because they had lots of “secret” (hidden) or extra income. This “secret” income was in fact the major source of income for some, or many, professionals. The following story is an example:

There was a high-profiled medical professor at a large hospital in Beijing. He graduated from a prestigious medical school many years ago, and had been working very hard for several decades. He had trained a number of excellent doctors and saved numerous patients' lives, and therefore was very much respected by his colleagues. One day he died suddenly of a stroke. When people were sorting out his belongings in his office, they opened his ever-locked drawer in his office. All the people were stunt at finding a dozen of gold chains, many gold rings with precious stones and a number of expensive watches. There was also a bank deposit book with 28,000 yuan in the account, and another 5000 yuan cash in his drawer. All these were not made public, but rather his “secret” income or “red package” from patients.⁷⁰

From the Western point of view, this “secret” money practice is not acceptable, but in China during the 1990s, it was a very common practice. In the process of economic reforms and the transition from the planning economy to market economy, there occurred many abnormalities and there was no effective measure to correct them. Chinese people's values also changed from time to time: from the traditional “money should not be a topic” to “without money, nothing can be done.” People's preferences shifted from “power-oriented” or “political-oriented” to “money-focussed” or “high skill-focussed”. Young people, and their parents, began to see the importance of acquiring higher qualifications and high skills, and more people chose to become a professional over an administrative cadre.⁷¹ Ordinary people looked at those professions like lawyer, doctor, computer specialist, model, and positions in finance,

⁶⁸ See Yan, Zhimin (ed.) (2002), *Studies of the Current Social Classes and Stratums in China* [Zhongguo xian jieduan jieji jieceng yanjiu], Beijing: CCP School, p.176.

⁶⁹ See Yan, Zhimin (ed.) (2002), op.cit., p.175.

⁷⁰ Wu, Jiping & Xu, Ying (1997), op.cit., pp.251-252.

⁷¹ Zhang, Lihua, op.cit.

foreign trade and insurance as “golden bowl” professions [*huang jin hang dang*].⁷² From early 1990s, young Chinese regained enthusiasm for education and learning. Their motives were mostly employment-oriented.⁷³

The change of values in people’s mind certainly affected parents’ attitudes towards secondary VTE that was not likely to achieve the “golden bowl” positions. Parents and students put secondary VTE as the last choice. Unlike the 1980s when tertiary education was only for a very small percentage of students, there were more channels to achieve tertiary education certificates in the 1990s. Not only universities and colleges increased enrolment numbers, but also there were other courses or programs available. These programs included short-cycle courses offered by universities and colleges, distance learning offered by television universities and correspondence universities, self-pace studies of tertiary courses, overseas studies and so on. This situation led to fewer students applying for secondary VTE schools, and parents even would not send their children to higher VTE institutions that trained senior technical workers, although these institutions were classified as tertiary education. One parent commented, “if my child goes to this kind of institutions, even later he becomes a senior technical personnel, he still will not be able to work in the office and still have to work at the workshop.”⁷⁴ This is because engineer and technical personnel were not considered as a “golden bowl” occupation, and any type of education related to “vocational” and “technical” was perceived by parents and students as second class and “inferior” to others.⁷⁵

It is a common practice that people aspire employment positions of higher income and social status. It is the government’s regulations and mechanisms to control the development of human resources and employment. From the end of 1980s, the Chinese government started to reform the employment system by introducing a new employment mechanism of “meeting between supply and demand” [*gong xu jian mian*] and adopted a “two-track selection” approach [*shuang xiang xuan ze*], which means

⁷² Xiao, Tong & Du, Li (1997), *1978-1996, the Chinese Ordinary People’s Mentality during the Transition Period* [Long Li 1978-1996, *zhuanxing qi zhongguo laobaixing xin ji lu*], Beijing: Gaige [Reform] Press, p.389.

⁷³ Yang, Xiong (2000), *op.cit.*

⁷⁴ Luo, Xinyu, *op.cit.*

students were to find employment through job interviews and negotiations with prospective employers. Schools and universities would help their graduates in the job searching. There was no guarantee that all graduates would find jobs immediately after graduation. On 3 January 1987, the National Education Commission (MOE), National Planning Committee, National Economy Committee and Ministry of Labour jointly held a conference on national work in VTE. The conference issued a document, in which a plan was initiated that job allocation for secondary specialized school and skilled worker school graduates would be phased out gradually, and a new employment system based on merits would gradually take its place.⁷⁶ Secondary specialized school and skilled worker school graduates, who used to have little problem in getting employment, suddenly were faced with the problem of “difficulty of employment”.⁷⁷ Although the central government issued the principle of “training before work” in 1985, but the government did not have legislative measures to oversee the implementation of its policy, and many employers did not follow the principle. This resulted in the employers’ cold shoulders to the secondary VTE graduates. They preferred to recruit general senior high school graduates than vocational high school graduates, because they believed the former were of better quality than the latter as higher score achievers were admitted into general senior high schools. It was also noted that large enterprises would rather recruit general senior high school graduates and trained them.⁷⁸ It was also observed that most job advertisements put tertiary diploma or degree as basic requirements of candidates, even for the jobs of junior office clerks, like typing, reception staff. Some even indicated “(o)nly postgraduate students or formal university graduates would be considered”.⁷⁹ This was because employers believed higher education credentials of staff represented good reputation

⁷⁵ Cao, Wen (2002), “The Difficult Situation of Higher VTE” [Gao deng jiaoyu de kunjing], *Education and Occupation* (Beijing), No.3, pp.49-50, 34, reprinted in China RENDA Social Sciences Informational Center, *Occupational and Technical Education*, 2002, No.3, pp.38-40.

⁷⁶ See National Education Commission, and several other departments of the national government (1987), “Report on the Conference of National VTE Work” [Guanyu quanguo zhiye jishu jiaoyu gongzuo huiyi qingkuang de baogao], reprinted in *Selected Documents on VTE 1978-1988*, pp.49-64.

⁷⁷ Ma, Genrong (1989), “Problems and Their Countermeasures in VTE” [Tantan zhiye jishu jiaoyu de weiji ji duice], *Secondary School Education* [School Management Edition] (Shanghai) pp. 40-41, 45.

⁷⁸ Liu, Jinghui & Zhao, Zhiqun (1996), “Several Basic Issues in Vocational Education of Our Country” [Guanyu wo guo zhiye jiaoyu de ruo gan jiben wenti], *Chinese Vocational and Technical Education* (Beijing), No. 1, pp.34-37 (p.37).

⁷⁹ “Why Senior Level Skilled Workers are More Scarce than Post-Graduate Students?” [Gaoji jigong yuanhe bi yanjiusheng hai xique?], <http://www.edu.cn/20011122/3011253.shtml>, accessed on 18/05/2002.

and status of an institution, and it was also due to the fact that China's labour market was saturated.⁸⁰

In fact, this situation was not unique in China, but is common in the world. Simon Marginson points out:

*All economies have experienced a continuing growth in the number of credentials at a given level, relative to the number of jobs...Between 1971 and 1991 in Australia, the total workforce grew by 35.6 per cent while the number of degree holders multiplied by 5.61 times.*⁸¹

Similar situations were also found in other countries such as Canada, Britain and even Germany.⁸² These findings suggest that with the globalization and further development of information technology, job market has become more and more competitive, and educational qualifications have become more advantageous for people in job seeking. However, in the Western society, human resource development responds to the job market requirement and constantly makes adjustments, while in China, although a job market has been established, human resource training and development was still in the planning stage. As a result, large numbers of senior secondary students in the VTE stream would face unemployment upon graduation, or be greatly disadvantaged as far as financial rewards are concerned. Those employers wishing to offer jobs to skilled worker school graduates, for example, would be in a advantageous position to offer much lower pay than university graduates, and very often the graduates did not have any other choice.

30 years ago, Phillip Foster discussed problems of separate technical schools in African countries, with special reference to Ghana, and argued that while proponents of technical education were criticizing the neglect of technical provision in the (academic) schools, the products of such technical institutions as existed were often experiencing difficulties in obtaining employment. He also pointed out that a real

⁸⁰ Liu, Bin (2001), "The 'Cold' Thinking on Vocational Education" [Zhiye jiaoyu "leng" sikao], <http://www.edu.cn/20011122/3011227.shtml>, accessed on 05/05/2002.

⁸¹ Marginson, Simon (2000), *The Changing Nature and Organisation of Work, and the Implications for Vocational Education and Training in Australia: Issues Paper*, Adelaide: NCVER, p.21.

⁸² See Marginson, Simon (2000), *ibid.*, and Iwanowitsch, J. (1995) "A Critical Analysis of Some Prerequisites and Features of the German Dual system" in UNESCO, *Establishing Partnership in Technical and Vocational Education*, A seminar for Key Personnel in Africa and Asian, Berlin, Germany, pp.112-114 (p.113).

demand may exist for trained personnel, but at the same time scarce personnel were not utilized and skilled workers were involved in the tasks not directly relevant to their professional accomplishments. It was also a fact that skilled personnel may not enter the type of job for which they had been trained because opportunities seemed so much greater in alternative occupations.⁸³ The problems described by Foster were found in China 30 years later. While secondary VTE graduates experienced difficulty in obtaining employment, it is reported that 90% of graduates from technical colleges in Shanghai did not take jobs as skilled workers,⁸⁴ but at the same time, senior level skilled workers and technicians were in great shortage. In 2002, only 3.5% of skilled workers were at senior level in China. In Shanghai, one question was asked: how bad is the shortage of senior technical personnel? The answer from enterprises was: It is much harder to find senior technical personnel than postgraduate students.⁸⁵ Some companies and enterprises had to import skilled workers from overseas, such as Japan.⁸⁶ This serious problem has a great impact on China's economy, and "threatens to slow down development in both the public and the private sector".⁸⁷ China joined WTO in 2001, and her survival in the highly competitive world economy will depend on her high quality products, which can only be produced with high skills, but China faces skills crisis. This situation demonstrates that the Chinese government's efforts in developing human capital through school-based secondary VTE in the past 20 odd years have failed. Many overseas research findings have proved that social and economic rates of return to secondary VTE in developing countries is negative,⁸⁸ and China's experience, especially from the 1990s onwards, is another example.

⁸³ Foster, Philip (1966), "The Vocational School Fallacy in Development Planning", in C. Arnold Anderson & Mary Jean Bowman (eds.), *Education and Economic Development*, London: Aldine Publishing Company, pp.142-166 (p.145-146).

⁸⁴ Luo, Xinyu (2002), <http://www.edu.cn/20020128/3018921.shtml>, accessed on 05/05/2002.

⁸⁵ "Why Senior Level Skilled Workers are More Scarce than Post-Graduate Students?" [Gaoji jigong yuanhe bi yanjiusheng hai xique?], <http://www.edu.cn/20011122/3011253.shtml>, accessed on 18/05/2002.

⁸⁶ "China Faces Skills Crisis among Senior Skilled Workers", http://english.people.com.cn/200312/20/eng20031220_130834.shtml, accessed 19/09/2004.

⁸⁷ Ibid.

⁸⁸ World Bank (1991), *Vocational and Technical Education and Training: A World Bank Policy Paper*, p.12.

CHAPTER NINE

CONCLUSION

Secondary VTE in China went through tremendous development from the end of 1970s, when the Chinese government designated educational development as a part of the strategies to help the reform and development of national economy that was crushed during the “Cultural Revolution” decade. Secondary VTE was pinpointed to play an important role for the human capital development of the country. A target of 50% of senior secondary students being streamed into VTE schools was set in the 1985 government document, and later was expanded to an average of 60% across the country and 70% for cities where every young person receives senior secondary education by 2000. Examining the development during the 20 odd years from 1978 to 2000, it can be summarized into three periods: restoring the old system developed before the “Cultural Revolution” from the end of 1970s, reforming and developing on a full scale from 1985, and stagnating from the second half of 1990s.

This dissertation focused on structure and problems of secondary VTE that cover teaching resources, curriculums, students’ and parental attitudes, employment opportunities and social opinions. Serious problems were found in all these areas, which affected the quality of VTE and the prospects of its development. The rigid school system with long-termed courses was a clumsy system that could not timely respond to the rapid changes of economy and requirements of labour market. The curriculums were centrally controlled and usually pre-planned. Course content was out of date, or too narrowly focused, which did not prepare students to adapt to the requirements of the fast growing economy. Although efforts were made to learn from overseas experience and models in curriculum reform and development, a large number of teachers were not competent and lacked qualifications and experience in teaching VTE students. The three types of secondary VTE schools lacked coordination in curriculum design and development. There was repetition between vocational senior high schools and secondary specialized schools in courses of popular fields, which resulted in poor teaching outcomes, oversupply of skills and

waste of resources, while at the same time there was a serious shortage of funding across the VTE sector. China tried to learn from international experiences, especially the German “Dual-System”, but many Chinese enterprises lacked interest in such investment, and the government lacked effective mechanism to oversee the active involvement of enterprises in VTE. The government initiated the employment policy of “training before work”, but lacked effective measures to carry it out, especially when China adopted a full market economy from 1993.

Although most of these problems existed all the time during the two decades, they did not have the same effect in the different periods. The social and economic conditions played an important role. Until the early 1990s, secondary VTE made considerable contributions to the Chinese economy by training millions of skilled workers for manufacturing industries, which helped the Chinese economy develop rapidly. During this time, service industries began to grow. Vocational schools trained thousands of skilled personnel for China’s tertiary industries that grew fast during the 1980s, although the development was in the primary stage. In the 1980s, students and parents, especially of lower socio-economic background, took secondary VTE as a good option because tertiary education had limited space and the national remuneration system was under the control of the government, and there were no large disparities between different occupations. As China was still in the planning economy and human resource system had not been reformed, secondary VTE graduates were assigned jobs by the government who was able to force employers, usually state-owned enterprises, to accept VTE graduates, whether they were well-trained or whether the enterprises needed new workers and staff or not. This in fact resulted in wastage of resources and manpower, but the wastage was not adequately measured and discussed by China’s policy makers and scholars during this period of time.

In the 1990s, the government pushed further development of secondary VTE, and set a target of 70% of senior secondary enrolment into VTE stream in cities by 2000. However, the secondary VTE system lacked further reform to adapt to the needs of a full market economy that embarked from 1993. As a result, serious problems began to appear. With the increase of enrolments in tertiary education, general senior secondary students in cities had more and easier access to tertiary

education, while secondary VTE was struggling with recruitment of students. At the same time, the free labour market was getting saturated, and employers favoured candidates with a tertiary degree, which secondary VTE students had slim chance to get. Social prejudice against vocational education grew stronger, and secondary VTE was doomed.

The analysis of this dissertation suggests that the problems cannot be discussed *per se*, but are fundamentally due to the government's philosophy of education and social attitudes towards VTE. It is ironic that the Chinese government published numerous documents on the VTE reforms and development and widely propagated the importance of receiving VTE, but its priority of funding and staffing was on general education. The government's elitist attitude and policy on education left secondary VTE to survive by itself, and this situation did not bring any favour to the VTE's social image and reputation. From the late 1970s when Deng Xiaoping put forward to allow a small number of people to become rich first and to restore the key schools in primary and secondary education levels, that aimed to produce highly successful academic students to enter universities, a message was given to the society that the "small number" and the "key" group were the advantaged and it was legitimate and honourable to do so. Therefore, everybody tried to become one of them. This elitism goes back for centuries. In the imperial China, a scholarly examination system was used for selecting government officials, and it was clear to the society that scholars were the ruling class while labourers were the class to be ruled. Although the imperial examination system was abolished over 100 years ago, and situations in the 1990s were totally different from the imperial times, elitism was deeply rooted in the mind of both policy makers and ordinary citizens. In addition, the severe corruption in the CCP government and society, the wealth and status anxiety of the Chinese people, and the popularity of higher education degrees in job markets and social life are also the factors for a stronger social bias against secondary VTE in the 1990s and afterwards. Secondary VTE was received negatively because it is "vocational" and "technical", which are perceived to be related to "lower (academic) ability", "less glamorous occupation", "poor job prospects", and "lower social status".

This study has also found that social bias against VTE is not unique in China, but universal in the world. It is the government's attitudes and policy that make its

success for human capital development in the OECD countries. What the Chinese government should learn from those countries' experience is not the form of VTE but the content. Many advanced countries' experience indicate that in contemporary world of work, people need higher level of knowledge foundation on which they can develop the capacity for further training and to adapt to the requirements of work, and therefore vocational training has better result when provided at post-secondary education level. China is not ranked as an advanced country, but China's urban development has been fast, and China's entry into WTO has plunged her into the intense competition, which is dominated by high-tech and knowledge-based world economy. To be successful in the competitive world market, China needs massive highly skilled workers for its products. The high skills are no longer single, specific and isolated, but rather they are clusters of skills that enable individual workers to adapt to any existing and new job requirements. These kinds of skills can only be trained on the basis of broad general knowledge and good human quality of the individuals. It is also important to note that the nature and content of education in the contemporary world has changed dramatically from the traditional types. With increased access to tertiary education, and the blurring of academic and vocational subjects in schools, equal opportunity and free choice in education are more emphasized than ever before. With further economic, political and social development, China should abolish elite education and open educational opportunities to all. At the same time, China should learn the experience of advanced countries by letting market forces and parental expectations to determine the course of VTE development.

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