A Practitioner Review of the Great Leap in Mainland China's Tertiary VET

Introduction

China's tertiary vocational education/training (VET) has a relatively short history but its unprecedented growth has been the major force in the recent expansion of China's tertiary education. The first institution bearing the Chinese name 'ZHI YE JI SHU XUE YUAN' ('职业技术学院', 'polytechnic' or 'professional and technical college') was established in Shenzhen in 1993 (Xiao, 1998). In 1996, tertiary VET was officially written into the national vocational education regulations (State Education Commission, 1996). By 2004, the number of students enrolled in China's tertiary VET sector (two million in total) had already exceeded that in other tertiary sectors combined (Ministry of Education, 2005). The growth of China's tertiary VET institutions has become the major force in the recent expansion of China's tertiary education. Therefore, a survey of China's tertiary VET and where it is heading is fully merited. This paper starts with a brief overview of the historical background of China's VET institutions after 1949. Then it goes on to describe the social and economic environment for the birth and development of China's tertiary VET institutions. Subsequently, the paper will present the problems and barriers that have to be overcome in order to ensure a sustainable future for China's new tertiary VET institutions. In the end it urges both governments and practitioners to work together for China's VET institutions' better future.

Historical Background

China's tertiary VET is committed to a different educational mission from that of regular, academic tertiary institutions. China's tertiary VET aims to develop a highly skilled labour force, including a large number of junior and intermediate engineers, managerial and other technicians. The idea of China's tertiary VET institutions took

root in the promotion of ‘specialized institutions’ initiated by the National educational authority in the 1950s. The embryo forms took shape in workers’ colleges and adult education in the 1980s. In late 1990s, the national law gave China’s tertiary VET legal recognition and sparked off a stunningly rapid expansion in China’s tertiary VET sector.

Starting from 1950, the central government urged industries to set up ‘specialized institutions’ (ZHUAN KE XUE XIAO, ‘专科学校’) to train senior technicians and experts (Lu, 1998). Although there were no statements referring to them as tertiary ‘VET’ institutions at that time, these ‘specialized institutions’ shared similar educational objectives with today’s tertiary VETs. The State Council further stipulated in August, 1950, that ‘specialized institutions’ should train specialized technical personnel who were educated in theories and competent in giving practical application to these theories. These specialized personnel included industrial technicians, agriculture technicians, pharmacists, management cadres, and art professionals. During the Great Leap (1957-1959), some institutions closely collaborated with industrial enterprises and started offering part-time programmes to their employees, who were well received by these enterprises at that time. However, ‘specialized institutions’ suffered from the political turmoil and most of them in the end gave up training technicians or senior technical experts.

At the beginning of the 1980s, adult education institutions, such as workers’ colleges, were founded in cities including Nanjing and Wuhan (Lu, 1998); these were quickly followed by over 120 more similar institutions within a few years. By 1991, there were 634 correspondence and evening schools offering tertiary programmes together with 1256 independent adult education institutions, including open universities, workers’ universities, management cadre institutes, and institutes of education, and so on. In July, 1985, the State Educational Commission started offering five-year

programmes in three secondary vocational schools as a trial and thus introduced a new form of post-secondary education. It took another decade for China's tertiary VET to muster its development forces and to become a major component of China's tertiary education.

In 1996, following the third National Vocational Education Conference, the State Education Commission passed the Vocational Education Law, ruling that China's vocational education consists of junior (secondary), senior (secondary), and tertiary education (State Education Commission, 1996). From 1998, China's tertiary VET started to expand at spectacular speed. Between 1998 and 2003, the enrolment figures for China's tertiary VET per year outstripped enrolment in China's tertiary education by almost 6%, averaging 32.47%. The number of China's tertiary VET institutions had risen from 432 to 908 (Ren, 2005). Meanwhile, as China's tertiary education grows at a speed of over 25% each year, the government understandably cannot cope with increased demands for funding and has to transfer the expenses of China's extraordinary increase in tertiary education to its users (Mok & Wat, 1998; Wang, 2001; Hu, 2004; Shen &Li, 2004). The Vocational Education Law encourages a diversification of funding for the establishment of tertiary VET institutions. Consequently, by 2003, 164 self-financing institutions had been set up with little government support.

Current Socio-Economic Conditions for China's Tertiary VET

The rapid development of China's tertiary VET has been largely a response to the shifting social and economic realities. Firstly, the vocationalization of secondary education in the 1980s and early 1990s paved the way for today's vocationalisation of tertiary education. Second, as China becomes the workshop of the world, our industries are in need of a highly-skilled labour force to deliver technological innovations.

First, by 1995, students enrolled in China's secondary vocational schools had exceeded those in secondary academic schools by a ratio of 57:43 compared with one of 19:81 in 1980 (Yang, 1998, p. 290). The rationale behind such an immense effort to vocationalize secondary education in China was to equip school graduates with the vocational skills that were needed in the job market (State Education Commission, 1996; Yang, 1993, in Lumby & Li, 1998) as well as to take pressure away from the public demand for tertiary education (Yang, 1998). However, the empirical research has found that VET school graduates do not necessarily display better work performance than general academic secondary graduates (Xiao, 1998; Yang, 1998; Xiao & Lo, 2003). It seems necessary for vocational school graduates to receive more education to make up for their lack of training. As there has been a trend for VET graduates to move on to training and education at post-secondary or tertiary level in developed countries like Germany and Britain, (Lumby & Li, 1998; Tabbron & Yang, 1997), Chinese policy-makers started recognizing the importance of tertiary VET in the Vocational Education Law (State Education Commission, 1996), which led the fledgling tertiary VET into an era of astonishing growth in places like Shanghai (Xiao & Lo, 2003).

The growth in China's tertiary VET has also been urged by the fact that China has become the world's workshop. Between 1990 and 2003, the output in the secondary industrial sector had risen from 41.6% to 52.3% of our national GDP (Gross Domestic Product) while the output in the tertiary sector had barely increased from 31.3% of the national GDP to 33.1% during the same period (State Statistical Bureau, 2004). Following robust growth in the manufacturing sector, there has been a great demand for a well-educated and skilled workforce (Xiao, 1998; Benson & Zhu, 2002; Xiao & Lo, 2003; Venter, 2004). However, according to the national statistics, only 4% of the national skilled labour force could be classified as 'highly skilled', with senior

professional/vocational titles, which is far below the 30-40% in developed countries (Ren, 2005). Even among the 4% highly skilled labour force, there are problems of aging and low education. Take Shanghai, the manufacturing and economic hub of China, as an example; in 2003, Shanghai registered 142,000 highly skilled workers, 40.02% of whom were over 46 years of age and 38.44% of them under 36. Moreover, only 23.35% of them received tertiary education or above (Ren, 2005). Furthermore, both national government and local governments started to realize that low-efficiency manufacturing industries were doomed. In 1998, the high technological component in our national manufactured products was 51%, considerably lower than the global average of 58.7%. As China's GDP per capita reached 1000 USD, in 2003, many people, including policy-makers, started seriously contemplating technological advances in the secondary industry and realized that they were in need of a large number of highly skilled workers to implement these changes. As a result, the National Education Commission insists that a great effort be invested in training highly skilled and competent personnel as the major labour force to push forward technological innovation and convert technology into products (Ministry of Education, 2004). In the search for a well-educated and highly-skilled labour force for the sustainable development of our national economy, China's tertiary VET institutions seem to hold a large portion of the solution. However, they are not yet in a strong position to deliver the solution because their development is constrained by problems and barriers.

China's Tertiary VET Institutions' Difficulties

Following the unprecedented growth in numbers of institutions and enrolled students, China's tertiary VET institutions have been suffering immense difficulties. First of all, China's tertiary VET graduates experience greater job-seeking pressure in comparison with their counterparts in other tertiary institutions (Postglione, 2005). By

Sept. 1st, 2004, our statistics indicate that only 61% graduating tertiary VET students were successful in getting job placements while 93% of postgraduates and 84% of the first-degree graduates for the same year succeeded in doing so (Ren, 2005). The year of 2005 will be even more difficult for tertiary VET graduates as the total number of tertiary graduates reaches 3.38 million, 0.58 million more than last year's figure. The low graduates' employment figures will certainly discourage potential school graduates to apply for studies at tertiary VET institutions. Second, many tertiary VET institutions have been severely handicapped by a shortage of funds because most institutions have been relying heavily on students' tuition as THE major source of income. The government adopted the policy from the outset when launching tertiary VET initiatives that the financial support for tertiary VET should be diversified. It encouraged financial institutions to 'use the means of credit extension' to support the development of vocational education (State Education Commission, 1996). Many tertiary VET institutions received bank loans to start constructing ambitious campuses from scratch with the result that they have been finding it extremely difficult to cope with institutional improvements and loan repayments. Third, although the current socio-economic conditions provide the rationale and the justification for a Great Leap in China's tertiary VET institutions, as a new educational form, tertiary VET still needs to strive for wide social acceptance and recognition. There is still a general hesitancy among parents to send their children to tertiary VET institutions because new tertiary VET institutions have not yet established sound reputations as other tertiary institutions have done over a long period of time. The educational expense for receiving tertiary VET education also keeps parents away. Often to cover their costs, self-financing tertiary VET institutions have to charge their students more tuition than other tertiary institutions do. Finally, tertiary institutions in the lower strata of China's tertiary

educational hierarchy, including tertiary VET institutions, also tend to receive more students from families of low social and economic status (Hu, 2004; Shen & Li, 2004). As lower-ranking institutions often do not enjoy parity with other tertiary institutions in receiving government funds and student support from financial institutions, students from low-income families face a more serious financial plight at these institutions (Hu, 2004).

Five Challenges Ahead

Fundamental to the solutions of the above-mentioned problems facing China's tertiary VET institutions, China's tertiary VET practitioners need to overcome five challenges ahead of China's tertiary VET institutions. First, they need to promote a socio-cultural shift in popular perceptions of VET, in which VET is regarded as a less appealing form of education in China. Second, they need to seek further clarification of the roles of tertiary VET in government policies and maximize the government's support for China's tertiary VET. Third, they need to develop an educational curriculum closely integrating learning and professional practices by seeking alliances with industrial enterprises. Fourth, they need to invest in the development of faculty members who are both well-trained in pedagogy at the tertiary level and professional practices in relevant industries. Finally, tertiary VET institutions need to have a balanced programme structure across academic disciplines to cope with shifting job market realities.

In the first place, they need to change popular social beliefs that only scholars and professional specialists are the genuinely talented people needed by the society. Vocational institutions, including tertiary VET, aim to develop a skilled and well-trained labour force for posts including junior and intermediate engineers, managerial and other technicians. For most of these posts, tertiary VET graduates will undertake a

certain amount of physical or clerical work. Since physical workers, according to Chinese tradition, are meant to support mental workers (Mencius, 1998, in Schulte, 2003) they are seen as inferior in social position to mental workers by the people. As it does not serve the interests of parents to invest in an education to prepare their children for a lesser future, Chinese parents are understandably not willing to send their children to vocational educational institutions, including tertiary VET, in particular, given the enforcement of the one-child policy (Schulte, 2003). Therefore, to attract strong applicants for VET programs, it is crucial for tertiary VET institutions to have a social discourse that does not bias against tertiary VET education. As parents are willing to send their children to tertiary VET institutions regardless of the vocational nature of education, China's tertiary VET will be in a better position to improve their graduates' employability and hence justify their rightful existence in the China's tertiary education landscape.

Second, to start a cultural shift in popular conceptualization of tertiary VET, a policy change is needed to bolster up the development of China's tertiary VET. It is essential to have favourable policies defining China's tertiary VET's status and roles. When tertiary VET was first introduced, many people, including local tertiary VET practitioners and policy makers, struggled with the question what tertiary VET actually was. At the moment, tertiary VET, in reality, is conceived as an inferior version of tertiary education and placed at the lowest stratum of China's tertiary educational hierarchy, which means they can only admit high school graduates after the universities and colleges have filled their places. Changes are needed so that China's tertiary VET institutions can enjoy parity with other tertiary institutions in terms of receiving state support. In fact, China's tertiary VET, as an alternative form of tertiary education, plays a very different role. Taking the institution where the writers work as an example, in

spite of the increasingly competitive graduate job market, the majority (99%) of our graduates found jobs and have been working as frontline operatives in modern large-sized manufacturing enterprises, as managerial/technical operatives in small or medium-sized companies, or as technicians in large and medium-sized enterprises in traditional industries (Ren, 2005). However, if tertiary VET institutions continue to be defined as 'inferior versions of China's tertiary education', this will seriously damage their appeal to the general public and discourage potential school graduates from attending tertiary VET institutions. As the quality of intake deteriorates, their graduates will also find it more difficult to find job placements. Then a poor job placement rate among graduates leads to a further reduction in the tertiary VET's appeal to the general public. In the end, China would then lose educational institutions that develop human resources catering for workers needed by a still booming economy.

In the third place, to provide the highly skilled technical personnel needed by the flourishing industries, tertiary VET institutions need to establish strategic alliances with enterprises, develop programmes in response to industrial needs, and provide graduates tailor-made for these enterprises. The low job placement rate that tertiary VET graduates have suffered does not mean that tertiary VET graduates are less wanted in the job market. A closer look at inter-institutional differences in job placement rate among tertiary VET institutions revealed that graduates from institutions which have already had a close partnership with enterprises fared much better in respect of job placement opportunities; the reason is that their programmes are normally developed around the needs of enterprises and have a major component of well-supervised practical training at relevant enterprises' premises. Since most of China's tertiary VET institutions are short of funds, it is particularly important for tertiary VET institutions to cooperate closely with industrial enterprises, which can help to provide real workshops

needed for tertiary VET students' vocational training. While individual VET institutions have been actively seeking alliances or partnership schemes with various industrial enterprises, national and local governments, as policy-makers, need to offer guidelines and incentives to facilitate the match-making process between tertiary VET institutions and enterprises (Lumby & Li, 1998). Meanwhile, tertiary VET practitioners should also commit themselves to the research effort to find out how to ensure that professional training beyond the institutional premises be effective for their graduates' development towards becoming highly skilled technical personnel. Such a research effort will also generate a wealth of knowledge that will inform curriculum development and implementation at tertiary VET institutions.

Fourth, China's VET institutions need to adopt appropriate staff development and recruitment strategies. One characteristic of China's tertiary VET development is that many of them were upgraded from secondary vocational schools in a short time. Taking the municipality of Ningbo in Zhejiang province alone, there are now eight tertiary VET institutions and all of them have been upgraded from secondary VET schools within the last six years. Consequently, there is also a serious problem of staff shortage in these newly-established tertiary VET institutions. When many China's tertiary VET institutions came into being, the existing teaching staff members were not all qualified tertiary educators. The qualified teaching staff members are those who have sufficient knowledge of pedagogy and their own disciplinary field as well as have experience in utilizing their disciplinary knowledge in professional work. To have qualified staff, most institutions have two possible solutions: developing their own staff members or borrowing extra hands from other institutions. The first solution obviously takes a long time but the second solution offers no better results. Most staff members that VET institutions employ from other tertiary institutions are likely to be more experienced in

their academic pursuits of the specialized subjects and have little practical professional background qualifying them to be professional guides for tertiary VET students. Moreover, administrators at many tertiary VET institutions also tend to copy administration practices from traditional tertiary institutions to run staff development and recruitment since there are no tertiary VET administration practices that can serve as precedents for them to follow. Therefore, those who are well-established professionals and good at transferring their professional expertise to students can have little prospect of being promoted to senior teaching positions due to the research output requirements in the staff evaluation procedures in such tertiary VET institutions.

Lastly, China's tertiary VET institutions need to balance programme structures across different academic disciplines among tertiary VET institutions, which helps to increase job placement opportunities for tertiary VET graduates. The causes behind the unbalanced programme structure in some institutions are often related to the cost issue. There are often more programmes related to the tertiary industry than those related to the secondary industry because it is less costly to run programmes catering for secondary industry than service (tertiary) industry as institutions have to invest in expensive machinery and materials. However, there are also costly consequences for such institutions afterwards. Taking Shanghai for an instance, in 2003, there were over 700 tertiary VET programmes, of which 68% were programmes preparing professional posts in the tertiary industry and only slightly more than 20% were for posts in the secondary industry. Furthermore, most programmes for the tertiary industry recruited more than two classes of students, sometimes even more than two hundred students, while most programmes for the second industries only had one class of students (Ren, 2005). Therefore, graduates from the programmes for the tertiary industry significantly outnumbered graduates from the programmes for the secondary industry. However, the

reality is that tertiary and secondary industries in Shanghai made a similar contribution to Shanghai's economy, taking 48.4% and 50.1% of the total GDP respectively, and employed similar numbers of staff and workers at a ratio of 1.73:1.83 (Shanghai Statistical Bureau, 2004). The tertiary industries might not be able to absorb so many tertiary VET graduates while the secondary industry could potentially have more. Thus, these tertiary VET institutions in Shanghai have created a problem for themselves. Without low job placement rates among their graduates, their future will clearly be in jeopardy.

Conclusion

The paper has so far reviewed the historical development of China's tertiary VET and sketched socio-economic conditions behind rapid development in China's tertiary VET. It has also attempted to outline the problems that will frustrate the tertiary VET's future growth, including low graduates' job placement rates, insufficient public investment, and lack of social recognition. The future of China's tertiary VET will depend on how well tertiary VET practitioners deal with the five challenges as described. Above all, China's tertiary VET needs further recognition and acknowledgement by governments in terms of educational policies and regulations, which would help create a new public discourse about tertiary VET and attract public and private funds into tertiary VET. Meanwhile, the future of tertiary VET also lies in the hands of practitioners who should reach out for close cooperation with industries that are in need of well-trained vocational graduates and develop programmes catering for their needs. As the number of tertiary VET graduates increases dramatically each year, both governments and tertiary VET institutions can no longer afford not to keep China's fledgling but robust tertiary VET on a steady course of healthy growth.

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