
Development of TVET in China: Issues and Challenges

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Introduction

The recent years witness the great development of TVET in China, which is featured with the expanding scale, good quality of school-based vocational education and rapid development of informal training in China (Zhang, 2009). Great efforts, however, are still called for to enhance a sustainable development as some issues and challenges are rooted in the current TVET system. In this paper, the issues and challenges will be examined and some suggestions will be given.

TVET System in China

In China, vocational schools, vocational colleges, as well as various kinds of vocational training institutions, constitute the TVET system, in which formal vocational education is the main component, as outlined in Fig. 1.

The shaded blocks, generally considered as formal vocational education, are a huge body compared with general education and complementing with it.

- The junior secondary vocational education is rather a small share in the junior secondary education, providing vocational education for primary school leavers in some rural areas and special vocational training for the handicapped in urban areas.

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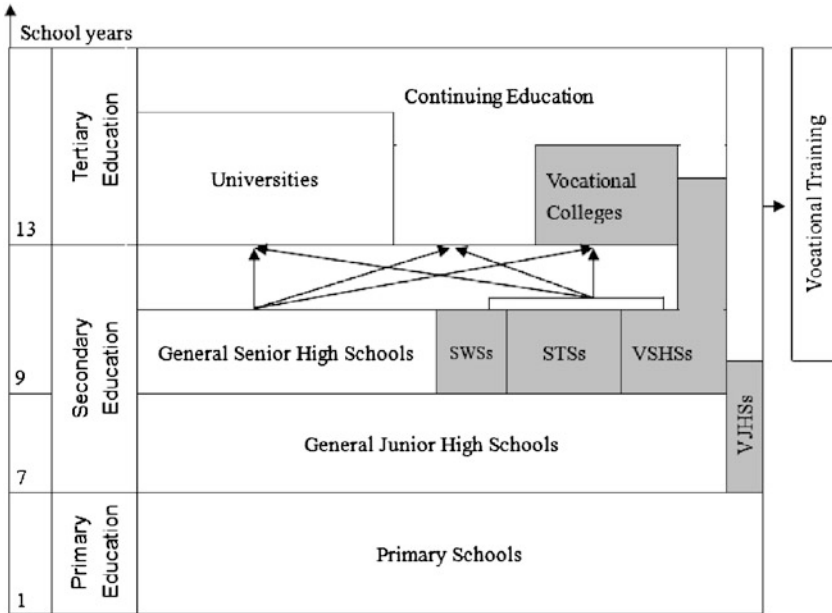


Figure 1 Education in China: basic structure. VJHS: Vocational Junior High Schools; STSs: Secondary Technical Schools; VSHs: Vocational Senior High Schools; SWSs: Skilled Worker Schools. (Source: own illustration)

- The senior secondary vocational education (for children aged 15–18), which is based upon the 9-year compulsory education, is the major part of TVET in China.
- In its first climax of industrialization in the 1950's, the PRC (the People's Republic of China, founded in 1949) established thousands of government-run factories and companies, which were straightly confronted with shortage of skilled workers and hence had to open their affiliated Skilled Worker Schools to train such workers (Fang, 2009). In the so-called 'era of planned economy', SWSs took the major responsibility of vocational education. In the recent 30 years, state-owned factories and companies have been undergoing the process of privatization (or restricting as is called). Many SWSs are regarded as burdens and kicked out of the enterprises. Therefore, the number of the SWSs shrink from 4,477 in 1993 to 3,008 in 2010 and occupies only 21.6% of all TVET schools, but are still common in top manufacturing enterprises (Yang, 2009).

- Unlike the SWSs which are affiliated to enterprises, Senior Technical Schools were originally started by different ministries (or under the supervision of the ministries) to foster technicians for a whole industry instead of particular enterprises. Nowadays, while most of the STSs are supervised by local educational administrations, supports like information, technology and human resources can still be easily obtained from local industrial sectors due to their intimate connections to different industries.
- After its adoption of Open-and-Reform policy to the world, China began its endeavor to restructure TVET system in the late 1970's, establishment of the system of Vocational Senior High Schools being one of the major strategies. At first, vocational courses were added to some selected senior high schools. Later, the whole 1980's saw great amounts of new VSHSs emerge. By the end of 1990, 48.7% of the teenagers who chose TVET attended VSHSs (MOE, 2006). Such schools, mainly funded by local governments and fully serving local communities, are often seen as relatively comprehensive vocational educational agencies, providing fairly extensive selections of majoring for its students, comparing with SWSs and STSs which are more likely to focus on the demands of industries or enterprises.
- There are two types of Vocational Colleges: one is 3-year Vocational College (enrolling secondary school graduates at age of 18) and the other is 5-year Vocational College (enrolling Junior High School graduates at age of 15), and 3-year Vocational College is the majority, mainly developed in 1990's, to train highly-skilled workers (Pan, 2005).
- Vocational training does not form part of the national education system, and is developed through different human resource departments or agencies. Graduates are only awarded relevant vocational qualification certificates or technical-graded certificates (Wu, 2007).

Issues and Challenges of TVET in China

In this part we try to put forward several issues and challenges in current development and reform of TVET in China.

Great Expansion of Secondary Vocational Education versus Student Demographic Change

In recent Five-year National Plans, 'enhancing the development of TVET' is repeatedly mentioned as a national priority in 'building strong human resources'. It leads

to a great leap in the enrollment rate in the TVET schools and colleges, which can be called the Great Expansion of TVET (see Figs. 2 and 3).

As well as the increase in absolute numbers, the leap is especially symbolized by a rough equivalence of general and vocational schools and colleges in enrollments.

The increase and equivalence, obviously targets of policy makers and main achievements in the development of TVET, is now under scrutiny, as demographic data indicates that student population has an inclination to decrease.

In this country, 15–19 years old are the group that are likely to attend senior secondary schools. According to the MOE, the gross enrollment ratio of the senior secondary schools has reached 85.5% by the end of 2010. It is obvious that little

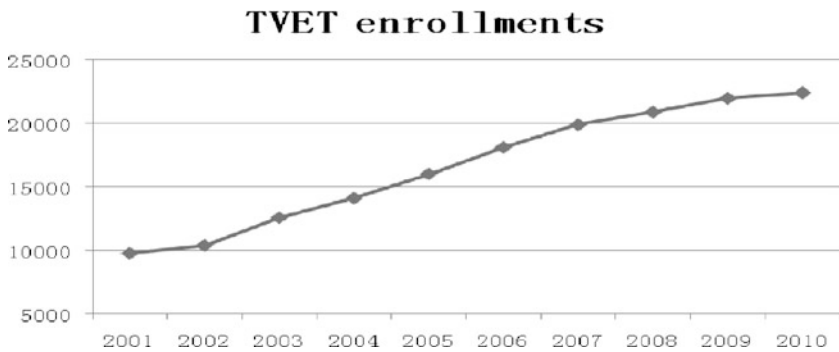


Figure 2 TVET enrollment in China: a speeds increase. (Source: MOE (2011))

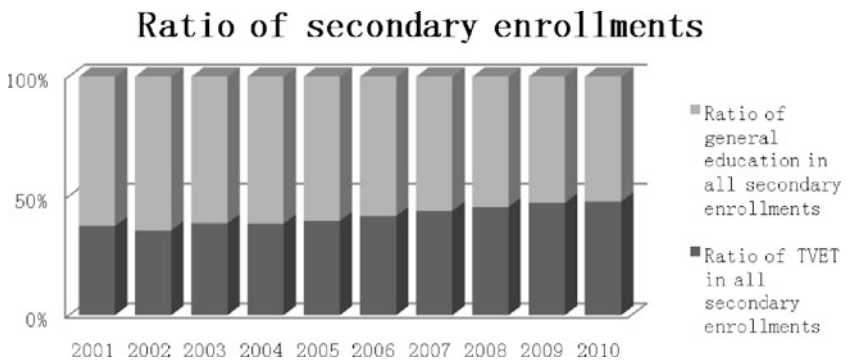


Figure 3 TVET enrollment in China: a balanced increase. (Source: MOE (2011))

can be done to increase enrollments in such demographic and education context. TVET schools and colleges will have to learn to cope with an enrollment decline situation. It is proper time to re-evaluate the effectiveness of this expansion policy.

Governmental Determination to Have Balanced Development of Secondary Vocational Education against General Education versus the Freedom of Parental Choice of Schools

China has almost the longest uninterrupted history of education in the world, which roots in people's mind the value of academic learning. Studying for a vocational purpose is often sneered at. In a survey conducted in 30 vocational schools, only 73.6% of the students interviewed believed they would lead a decent life as workers and 78.6% did not hesitate to answer that they would seek chances of further academic learning if possible. 67.1% of the parents surveyed expressed dissatisfaction about the stratification mechanism, in which academic standards are lifted and half of the junior high school leavers who cannot reach the standards have to be led through the vocational track (Yuan, 2007).

The results reveal the fact that educational authorities' efforts to ensure the Great Expansion are confronted with rooted educational values of the masses. To some extent, the success of the expansion cannot be attributed to the success of TVET, but

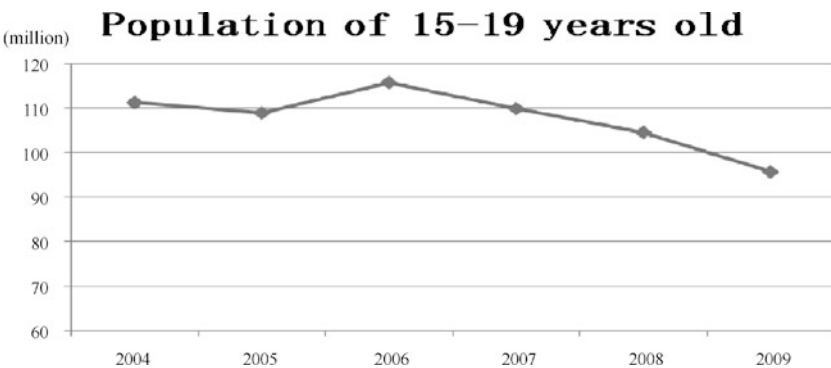


Figure 4 Demographic change in the past six years: 15–19 years old. (Source: NBSC (2011))

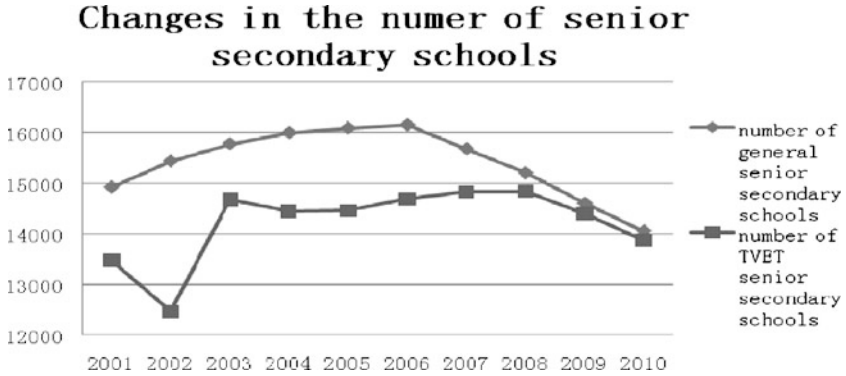


Figure 5 Changes in the number of senior secondary schools. (Source: MOE (2011))

due to limitation to the capacity of academic high schools. Data in Fig. 5, together with Fig. 4, show that TVET schools are deliberately protected in the recent tides of closing and merging of high schools to ensure the equivalence of both kinds of school enrollments. But 81.9% of the students interviewed declared that they attended vocational schools not out of free will but because of refusals from academic high schools (Yuan, 2007).

Thus the educational policy makers come to a dilemma: the nation is faced with great pressure of improving working skills but this idea is unpopular among the masses. The root of the dilemma is in fact the dichotomy between vocational and general education systems. The resolution might be the merging of the two tracks. When the choice is returned to the students and their parents, balance between social demands and personal needs may be reached.

Government's 'Employment-oriented' Training versus Vocational School Students' 'Needs for Further Education'

The national educational authority demands that 'vocational education' should be 'employment-oriented' to well prepare students for the future labor market. The so-called 'employment-oriented' vocational education indicates the authority's anxiety that the nation's vocational education system is hardly linked with labor markets and that the TVET school leavers are always labeled as incapable by employers. As

we have discussed in the previous sector, only one fifth of VET schools make educational decisions according to the demands of labor markets and ensure their students full employment, the others, under the supervision of educational authorities, are loosely connected with employers. The employment-oriented policy, treated as a remedy to low employment rate of TVET school leavers, becomes the dominant philosophy in TVET and has achieved its goal.

Unfortunately, like every policy, the employment-oriented policy is going through some form of transformations. 'Dead-end' effect is one of them – accessing to post-secondary TVET colleges is not encouraged.

As Fig. 1 shows, pathways have been designed to ensure senior secondary students, whether general or vocational, the opportunities to access to tertiary education. Obstacles, however, are created during the whole process of schooling in practice. Only 5% of all TVET senior secondary students are permitted to continue their study in vocational colleges, even smaller ratio are eligible for universities (Shi, 2006).

It has been enthusiastically debated, though seldom publicly, that TVET education is not a synonym to 'employment education' and vocational schools should be multi-functional. It is important that TVET schools not only help students straightly through the process from school to work but are equally responsible to prepare their students for a better tertiary education and a more personalized future.

It's believed that China is entering the era of late industrialization, more flexible and better learned human resources are essential to build a harmony society. As a result, actions must be taken to build bridges over the border between secondary and tertiary education.

Academic Learning Enhancement versus Poor Capability of Learning

As discussed in the previous sectors, most of the students are simply such losers in the academic competition that they have difficulty in basic literacy and numeracy. Naturally, 73.2% of the young learners, as a survey shows, hate mathematics and language courses most (Shi, 2006). The teenagers put TVET educators into an embarrassing context: on one hand, remedial and academic courses must be given; on the other, hatred and incapability of the courses prevail.

To get extricated from the embarrassment, curriculum reformers take such measures as:

- to add the course time for literacy and numeracy;
- to organize unified tests for these subjects;
- to increase the difficulty in learning contents (Jiang, 2009).

The measures are based upon the philosophy that learners will pay special attention to a particular subject when special emphasis is placed on it by educators, as have been proved effective in the general senior high schools. Hence, another embarrassment occurs: more and more time and resources are spent but achievements are little accomplished.

The naked fact might be totally forgotten that in the shade of their previous learning experiences, the young learners are not capable of suiting themselves to traditional academic learning patterns. Any attempt to adopt traditional academic teaching modes is doomed to fail.

In vocational curriculum reforms, the most crucial part is to change the contents of learning and the way of teaching, and let students feel the contents are interesting to learn, the process of learning is enjoyable, and learning can be paid with good results. Thus, literacy and numeracy should be taught with job skills and life skills or in relevant with the world of work and the world of life. At the same time, we had better change teachers' view of teaching, behavior of teaching and way of teaching, which could be the key to the success of curriculum reform.

Government Plan to Strengthen the Practical Skill Training versus Poor Foundation for its Implementation in Vocational Schools

Since TVET in China is defined to be employment-oriented, educational authorities take initiatives to equip TVET schools with up-to-date facilities for skills training. Great amounts of money have been invested in the construction of so-called 'in-school skills training bases', where students learn to operate sets of machines or even complete assembly lines.

But it's still not sufficient compared to the demand of practical skill training. Now it is still common to see in vocational schools: teachers who teach job skills are lack of the working experience themselves; practical skill training facility in vocational school is not sufficient to achieve its purpose, which is especially so after the great expansion of vocational school education; and school learning is not well integrated with workplace learning, for the industries are not very much supportive in this integration (Hao, 2005).

Chinese TVET system is mainly school-based, which will not be changed in a certain period of time. In such a framework, no matter how 'modern' the learning content is, it is no easy for vocational school to keep up with the knowledge and skill changes in workplace; no matter how 'skilled' the vocational school teachers are, it is difficult for them to keep up with the new development in workplace; no matter how 'advanced' the training facilities in vocational schools are, it would soon be out-of-date. These are the 'born weakness' within the system! The only way out is to develop partnership between schools and the industries. Modern apprenticeship or 'dual system' might be a better solution!

'Key Vocational Schools/Colleges' versus 'Model Vocational Schools/Colleges'

In the past four years, more than 100 'Model Vocational Colleges' have been selected and another 1,000 more 'Model Vocational Schools' will be added in the next three years, with huge funding from the central and regional government. The aim of the policy is to foster 100 top vocational colleges and 1,000 top vocational schools with large investment both in hardware and software.

The lure of great funds agitates every potential school/college, the decision-makers of which cannot afford to stop to think for a while what 'model' really means. Among the ten principals of TVET schools/colleges in which we conducted a survey, eight admitted, in private of course, that they cared little about what a model school/college was supposed to be, and that they were mainly attracted by the large amount of investment.

In Chinese, being model means setting the standards that everyone should abide by, so models cannot be special but common. With special funds, special human resources and special policies, the project will undoubtedly produce top-class schools/colleges. There are doubts, however, that all the other schools/colleges can follow the pattern and satisfy the standards. It is believed that these specially selected schools/colleges can be key ones instead of role models for others. We argue that 'model vocational schools/colleges' should not be 'special'; they should be a 'model' in successfully solving the common issues and problems in current development and reform in most of vocational schools/colleges in China. This concept should penetrate in the whole process of the construction of model vocational schools/colleges.

‘Highly-skilled Workers’ versus ‘Technicians’ in the Training Target for Vocational Colleges

In a series of surveys, worries were repeatedly heard that vocational college graduates are not so competitive as most of people thought. Many teachers definitely assert that their students have to compete with high school leavers for the same positions. It sounds obscure but is occasionally a fact. The irritating situation is partly due to the blur of teaching targets.

Traditionally, vocational colleges used to foster technicians with secondary vocational schools fostering skilled workers (Xu, 2009). Years ago, when TVET were experiencing unprecedented employment stresses, the national educational authorities announced an official teaching target for vocational colleges – ‘to foster highly-skilled workers’. But no explanation was given about what skill was high or what was low. In China’s political context, educational authorities have incomparable influence over individual schools/colleges, which were quick to make a series of adjustments. More manual trainings were added to the curricula and lower standards of academic learning were adopted. Consequently, the official teaching target is partly achieved: workers are trained but high skills are missing.

Whether vocational colleges should target at highly skilled workers or technicians may not be the center of the issue. What really matters is a clear definition of the teaching targets. Policy makers must learn to avoid vagueness.

Conclusions

From the brief analysis of the present issues and challenges of TVET in China, we may come to the following simple but important conclusions:

1. With the demographic change and further industrialization, a crucial point is ahead of TVET system, where more individual-oriented education is needed. Policy makers and educators of TVET must get well prepared for the alternation.
2. An independent TVET system is no longer appropriate for the rapid development of China society; a close partnership with other social sectors is essential and urgent.
3. The reform of the TVET system in front of us must be a comprehensive one rather than one-side solutions.

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