

Industry Links with Vocational Education and Training in China

Paul Comyn

Abstract:

A brief history of Chinese industry involvement in vocational education and training is presented, including discussion of emerging industry arrangements in the market oriented Chinese economy. Industry involvement in vocational education and training is then considered in more detail, including the role of industry associations and newly created industry coordinating commissions, which have emerged through the work of an Australian government funded project to support education and training reform in the Chongqing Municipality. The potential of these advisory networks is then considered in more detail, with reference to the broader Chinese vocational education and training reform agenda and international experience in industry linkages with vocational training.

Introduction

As is the case with many developed and developing economies, linking industry with education and training systems is a key priority and often a central principle of policy reform. As noted by Byrne (2005) a comprehensive vocational education and training (VET) system requires very close linkages with industry and business at all levels: 'it requires industry to be able to organise itself so that it can work with government at the level of VET strategy and policy and at the level of national VET framework development and operation' (2005: 1). In China, the situation is no different, with reforms of the last ten years strongly oriented towards improving VET industry linkages in a range of areas (see State Council (1996) and State Council (2005) for further examples of key policy initiatives).

Under national guidance from the State Education Commission, the administration of VET in China is shared between a number of government departments (UNESCO 1995). As noted by Simmons & Polgar (2005), China does not have a VET 'sector' or 'system' under unified administrative arrangements. Indeed, VET arrangements in China are complex and multi-layered. Generally speaking, vocational education in China is managed by the Ministry of Education (MOE) and the related provincial and county education commissions and bureaus. MOE conducts national examinations and issues qualifications. At the provincial and municipal level, education commissions are responsible for school-based vocational and general academic education. The vocational education delivered through these arrangements is typically broad in scope and less practical in focus than vocational training. Vocational training is delivered by secondary and tertiary vocational schools which are managed by range of different industry ministries including MOE. In addition to general academic programs, these schools deliver programs oriented towards a system of occupational standards and qualifications administered by the Ministry of Labour and Social Services (MOLSS). These qualifications and assessments are based on occupational standards which reflect an analysis of professional functions and their activities (Zhang 2002). Secondary and

tertiary vocational schools issue awards of successful course completion, with some also endorsed through the MOLSS system to conduct assessments for these skill occupational qualifications. As noted by Simmons & Polgar (2005), vocational training aligned with the MOLSS administered system provides specific skills and knowledge for skilled worker occupations in accordance with this skill standard and assessment certification system. The size of the Chinese VET system can be grasped from the following figures which show that in 2004 there were 217,143 vocational schools; 6,179,903 students and 514,534 teachers (All Countries 2007). In the context of these arrangements the challenge of developing VET-industry linkages in a systematic way should not be underestimated.

The development of industry and its links with VET in China

Industry involvement in vocational education and training is not new to China. Prior to the Cultural Revolution of 1967, state owned industry was actively engaged in vocational education and training, through strong partnerships with providers and in some cases, through the direct management of individual schools and colleges. Whilst linkages were largely eliminated during the Cultural Revolution from 1967-1977, the years 1978–85 represent a critical stage for the restoration of industry involvement in VET.

This restoration was brought about through a range of important policy pronouncements that included the reaffirmation of industry's key role in VET and the expansion of industry managed VET schools. From 1986 onwards, VET has experienced a period of rapid progress, with industry linkages at the local, provincial and national level steadily increasing (see Misko, Liu, Jiang, Wu & Wang (2005) for a complete account of the history of industry VET linkages in China).

Industry links with VET have clearly been influenced by the development of industry in China, which has undergone a massive and spectacular transformation in recent times. From the founding of the People's Republic of China (PRC) in 1949, to the late 1970's when market oriented reform commenced, economic output in China was dominated by state-owned enterprises (SOEs). Keating, Medrich, Volkoff & Perry (2002) suggest that the major problem of these SOEs was not lack of growth, but inefficiencies. Consequently, as Goodman (1999) notes, 'a wholesale restructuring was required to redistribute resources into more productive channels with greater potential for long-term sustained economic growth' (1999: 133). As a result of this restructuring, since 1978, nearly 40,000 state owned industries have closed, resulting in the retrenchment of 53 million public sector employees alone between 1996 and 2001 (Fishman 2005).

In the last 30 years, China has implemented a wide range of economic reforms, a strategy that accelerated from 1992 as a result of a stronger commitment to the 'open-door' policy of Deng Xiaoping. Keating et al (2002) note that this strategy led to a number of major reforms, including the introduction of foreign investment and the liberalisation of enterprise ownership and governance. During the period of transition that followed, government and industry in China became closely intertwined. Examples of these arrangements included the Ministry of Public Security owning luxury hotels in joint ventures with foreign capitalists; the State Security Ministry operating an import-export company, and the People's Liberation

Army operating more than 20,000 businesses, including the deluxe five-star Palace Hotel in Beijing (Shawki 1997). This last example indicating the extent to which the Chinese administration moved to embrace capitalism and market forces. As a result of the reforms, much of the initial development in manufacturing output was through local government 'collective enterprises', township and village enterprises, and private Chinese, foreign or joint-owned ventures (Fishman 2005). As noted by Ozyurt (2007), 'the rapid industrialization of China was mainly marked by the surge of small-scale enterprises in rural areas which absorbed huge amounts of surplus labour in agriculture. Consequently, substantial efficiency gains have been reaped from the reallocation of resources to higher productivity sectors' (2007: 1). However, Fishman also notes that more recently, private business have come to replace the village and township enterprises and now 'account for more than 25% of China's GDP' (2005: 75).

In China, the classification of industries is based on the 'The Classifications of Industries for the National Economy' released in March 2002. Within these sectors there are 95 large divisions, which comprised 395 further classifications, in turn divided into 912 smaller categories (China Statistics 2003). Whilst the classification of Chinese industry is generally comparable with other national approaches (see Misko et al 2005), Chinese industry comprises a more diverse collection of organisations than what might typically exist in a Western market economy. Indeed, what constitutes industry in China is blurred by the complex relationships between private and public capital that exist in a planned economy in transition to a market economy. Industry in China includes SOEs, local government 'collective enterprises', township and village enterprises, and private Chinese, foreign or joint-owned ventures. Chinese industry also comprises industry organisations and associations which are managed to varying degrees by the Ministries & Commissions of the State Council. However, as Byrne (2005) notes, the rapidly changing industry development and ownership pattern has not yet produced coherent representative organisations through which industry can identify its collective views on important economic and social issues and present them to government. Rather, 'there are complex connections between governments as industry stakeholders, enterprises and associations, and governments as industry facilitators and regulators' (Byrne 2005: 48).

When considering industry VET links in China, Misko et al (2005) argue that industry organisations and associations are an important part of the economic environment in China. 'They represent the interests of individuals and enterprises, public institutions, research institutes and trade organisations in specific industry sectors. Members may come from all parts of the country, and from all types of departments and enterprises' (2005: 65). In addition to protecting the legal rights and interests of their members, Misko et al (2005) also note that industry organisations and associations are responsible for promoting the development of the industry sector they represent.

Although they are voluntary, self-governing and not-for-profit organisations, industry organisations and associations adhere to government policies and regulations, and carry out work entrusted to them by government. In so doing, they act as a link between government and enterprises and have a 'go between role' (Misko et al 2005). The Ministry of Civil Administration notes that by late 2002, there were 39,000 industry organisations and

associations in China which represented 29.3% of all 133,000 registered organisations in the country (MOCA 2006). Whilst the establishment of many of these organisations has been driven by China's ascension to the WTO, the China Economic Review has claimed that there are so many conflicting and overlapping industry associations in China that often they 'represent only a small section of the national industry and have limited influence' (CER 2001).

Despite this mixed picture, Misko et al (2005) note that there are three major types of industry organisations and associations in China. The first of these are industry organisations and associations with strong government roles. These include the China National Light Industry Association, China Building Materials Industries Association, China General Chamber of Commerce and the China Electricity Council. These organisations often have government functions allocated to them by the State Council. The second type is semi-government controlled industry organisations and associations. These include the large number of industry organisations and associations established by government institutions and would include the China Electronic Commerce Association established by the Ministry of Information. The third type is the self-regulated association. These have been mainly established in the regions where the market economy is well established, and have on occasion been created to limit the development of unrestrained competition (Misko et al 2005).

Consequently, Misko et al (2005) argue that industry associations are in a unique position in China's emerging economy and are particularly relevant to the development of its VET system. However, recent attempts to involve them in VET reform initiatives in the Chongqing Municipality has met with mixed success as a number of government industry bureaus and commissions take the view that industry organisations and associations are less likely to be active in VET reform because of the limited support for VET that they believe exists amongst their enterprises (Comyn 2006).

However, unlike the majority of private enterprise in China, government ministries, industry organisations and industry associations generally have a special department or training centre dedicated to VET. These elements of Chinese industry are not only involved in the planning, management and delivery of VET in their sector but often contribute to the development of national VET policy (Comyn 2006). Despite their current involvement and their potential, Misko et al (2005) note that industry organisations and industry associations in particular face a number of challenges. Firstly, they are 'more concerned with technical training than education'; secondly, 'the training they do provide is available for their members only and not for other individuals or organisations'; and thirdly, they are seen to 'lack independence and initiative' (2005: 62).

Notwithstanding these challenges, there is evidence that industry organisations and associations are becoming more active in VET through engagement with national government ministries. The Department of Science, Technology & Education within the Ministry of Communications for example, rely on a number of industry commissions to provide industry guidance on VET. This involvement covers a range of issues, including

technical input into occupational standards, development of guidelines for schools intent on delivering industry programs, and the teacher professional development (Comyn 2006).

Industry linkages with VET can clearly involve a wide range of mechanisms and activities, from providing national policy direction and identifying skill needs, to setting skill standards and providing technical input into teaching and learning resources. However, the challenge faced by China and other developing market economies is that ‘in a modern market economy, technical and vocational education policy design and delivery should be achieved through a new partnership between government, employers, professional associations, industry, employees and their representatives’ (ILO 2005: 13).

The International Finance Corporation (IFC) has developed a set of best practice VET criteria which include indicators of industry linkages. The IFC consider best practice industry involvement to include arrangements where:

- the needs of industry and business drive training policy delivery;
- national competency standards, guidelines and qualifications are industry led; and
- national and regional industry training advisory councils have a majority of private sector representation (IFC 2005).

Whilst industry-VET linkages in China are yet to evolve to the extent called for in the IFC guidelines, the long-standing Chinese VET traditions coupled with the economic transformation experienced by in the last 25 years provide a solid foundation for the ongoing realignment of VET to the needs of industry in the future.

ACCVETP: A case study of Industry-VET Linkages in China

An example of how recent Chinese policy is moving to address these issues is evident in a joint ministerial proposal for increasing industry involvement in VET (MOFCOM 2002). The proposal from the Ministries of Education (MOE), Labour & Social Security (MOLSS) and Finance and Commerce (MOFCOM) clearly outlines the principles of industry involvement in China’s VET system. The statement illustrates considerable resolve to achieve reform through initiatives at the national, municipal and local levels, by calling for increased involvement of enterprises in VET.

A further example of Chinese efforts to strengthen the links between VET and industry is the Australia-China (Chongqing) Vocational Education & Training Project (ACCVETP). Whilst there have been numerous international donor funded projects aimed at VET reform in China, ACCVETP was unique in that it included initiatives at the local, municipal and national levels. This feature set ACCVETP apart from other project, which have tended to operate at the college or enterprise level within one or more provinces. ACCVETP’s ‘vertical slice project design’ (ACCVETP 2003) provided the opportunity to engage with industry and providers at the enterprise, commission and ministry level, and in doing so, targeted the key dimensions of industry –VET linkages in China. The ACCVETP project was funded by the Government of the Peoples Republic of China and the Australian Government through the Australian Agency for International Development (AusAID). ACCVETP ran for five and a

half years, from the beginning of 2002 until August 2007. The project was implemented by Hassall and Associates International (HAI) in association with Royal Melbourne Institute of Technology (RMIT).

Whilst ACCVETP undertook work at the local, municipal and national levels, the initial focus of project activity was the implementation of competency based training (CBT) in a select group of schools. Phase 1 of the project worked with five pilot schools, with Phase 2 seeing an expansion to more than 60 different schools, colleges and universities in the Chongqing Municipality. In parallel with the introduction of CBT amongst this network of providers, the project also engaged with industry through the establishment of eight Industry Coordinating Commissions (ICCs). These ICCs facilitated industry input to a range of new CBT courses, improved links between enterprises and partner schools, and promoted stronger links between VET providers and their members. The new CBT courses were based on competency standards that were developed and endorsed by the ICCs, and by June 2006, more than 410 individual units of competency had been developed (Comyn 2007).

ACCVETP established five ICCs in 2003 to engage with the Automotive, Construction, Tourism, Electronics and Business industries. These ICCs each had on average 20-30 members, the majority of which were industry representatives (CQMEC 2004). A review of ICCs in 2004 found that these initial Chongqing ICCs had achieved many important outcomes including: industry involvement in the development of competency standards, curriculum and teaching materials; approval of new curriculum; assisting schools to liaise with industry; developing industry training plans to forecast skill needs; assisting schools to establish workplace training agreements with enterprises; assisting schools to establish teacher development opportunities in enterprises and assisting school teachers obtain higher professional qualifications (ACCVETP 2006a). In 2006, three new ICCs were established in Health, Agriculture and Resettlement. Whilst resettlement was not strictly an industry in its own right, a number of major resettlement agencies have been established in China to implement the National Training Program for Rural Workers and deal with the huge internal migration occurring in the country (Comyn 2006). The establishment of these new ICCs represented a commitment by the Chongqing government to the role of ICCs and acknowledgement of their potential in Chinese VET. The decision to expand the number of ICCs also reflects the initial success of the first five ICCs, which was notable, given the newness of the concept for Chongqing and Chinese VET.

To replicate ACCVET project outcomes and further encourage VET reform in China, an Industry ICC was established at the national level in 2006. The National ICC brought together the Ministry of Education, Ministry of Communication, Ministry of Information Industries, Ministry of Construction, Ministry of Health, Ministry of Agriculture, Ministry of Tourism and the National Industry Association for Electronics. The roles of this National ACCVETP ICC were to:

- Guide and assist the work of relevant Chongqing Municipal ICCs;
- Review competency standards developed by Chongqing Municipal ICCs so that they can be replicated across China;

- Support VET reform, teaching reform & teacher development in pilot schools involved in the project; and
- Actively advocate the outcomes and experience achieved by the Project (ACCVETP 2006c).

It is envisaged that not only will the National ICC play an important role in replicating ACCVETP outcomes more widely in China, but that it will also be an active participant in VET reform at the national level. However, as Byrne (2005) notes, for the ICCs to fully carry out their role and test the concept further, ‘they need the resources and the authority to carry out the task’ (2005: 49). In Chongqing, the ICCs themselves have acknowledged that their operational limitations are directly related to their lack of formal status and the lack of dedicated resources (Comyn 2006), concerns which mirror issues evident in other VET systems where industry advisory arrangements are in periods of transition (see ACTU (1994) for a discussion of the impacts of restructuring of industry training advisory bodies in Australia). Despite an uncertain future beyond the life of the ACCVETP project, during 2006, the terms of reference for Municipal ICCs were revised to include the following requirements:

- Develop and review industry competency standards;
- Support and extend effective cooperation between VET schools & colleges, industry and enterprises;
- Support the review and development of VET in schools, colleges, industry and enterprises;
- Produce an updated industry VET development plan every 12 months;
- Participate in the development of new curriculum and teaching & learning materials;
- Support the delivery of industry relevant training and/or professional development programs for teachers;
- Advocate VET reform and provide VET intermediary services as required; and
- Produce an Annual Report every 12 months which details the activities of the ICC over the previous 12 months and sets out priorities for the coming 12 month (ACCVETP 2006b).

These Municipal ICC terms of reference clearly reflect a mature approach to VET industry advisory arrangements and have been heavily influenced by the roles and responsibilities of industry skill councils in Australia. Whilst the Chongqing Municipality government committed to continue support for ICCs after ACCVETP ended, it remains to be seen the extent to which ICCs grow to become a central feature of industry-VET linkages in that municipality and the country more widely.

Analysing Chinese Policy on Industry – VET Linkages

Beyond the scope of ACCVETP, other reform initiatives that aim to increase links with industry in China's VET system have also been introduced. Drawing on the most recent Chinese VET policy decisions (State Council 2005) and using the IFC indicators of best practice (IFC 2005), the following policy directives have been identified as specifically aimed at increasing industry involvement in VET.

IFC Indicator 1: The needs of industry and business drive training policy delivery.

Section 22 of State Council (2005) states that:

'Departments in charge of various industries and industrial associations should: carry out projections of demand for qualified personnel in their respective industries; draw up education and training plans, and organize and guide industry specific VET under the guidance of national training principles and policies on education. They should participate in the formulation of industry standards for jobs specific to their industries; the work of assessing vocational skills and issuing certificates; the work of developing the standards for qualified training organizations and their employees; and the work of evaluating the management and teaching & learning arrangements in VET institutes' (State Council 2005: 8).

Whilst giving considerable responsibility to the various Ministries of the State Council, current Chinese policy is silent on the need to specifically engage with private enterprise and broaden industry advisory networks in light of the changing nature of Chinese industry. Chinese policy also does not specifically detail mechanisms by which private enterprise can link with VET. As noted by Misko et al (2005), 'the current laws on general and vocational education and labour have few or no clauses which deal with the practical implementation of industry-VE collaborations' (2005: 72).

IFC Indicator 2: National competency standards, guidelines and qualifications are industry led.

Section 24 of State Council (2005) states that:

'We will promote and standardise the vocational qualifications system. We will strengthen our guidance and management of vocational skills assessment, evaluation of professional and technical credentials, and the system for issuing vocational qualifications. We will also move as quickly as possible, to institute a standard system of vocational qualifications that will reflect the needs of economic development and the labour market' (State Council 2005: 8).

Whilst a current policy priority is to reform China's vocational qualifications system, Chinese skill standards and qualifications are aligned with vocations rather than specific job roles, an approach that is arguably incompatible with contemporary theories of skill development (Briggs & Kittay 2000). This view is supported by anecdotal evidence from a number of Chinese national ministries which indicate concern over the suitability of MOLSS defined vocations and skill standards and their relevance to current industry practices and skill sets (ACCVETP 2006).

IFC Indicator 3: National and regional industry training advisory councils have a majority of private sector representation.

Whilst not specifically referred to in decisions of the State Council, the terms of reference for the National ICC indicate that it was established in order to 'implement the spirit of the Decision on Vigorously Developing Vocational Education by the State Council by actively promoting VET reform' (ACCVETP 2006c: 1). The terms of reference for the National ICC also include the roles of 'developing VET more vigorously; developing VET according to the needs of industries and enterprises; and supporting the replication of ACCVETP outcomes' (2006: 1). Whilst these broad statements are consistent with the IFC best practice indicator, the lack of a clear VET mandate for industry associations coupled with the embryonic ICC arrangements in China, suggest that this aspect of VET in China is still in development.

However, in addition to these specific statements from the 2005 State Council decision, there are other clauses from that decision that clearly emphasise the need for greater industry linkages with VET. These include the need for schools and enterprises to develop closer links for work placement and internship programs; the need for dual certification of VET teachers; the call for 1.5% of wages to be allocated to staff training in enterprises; the need to co-locate schools with factories and other enterprises and the prospect of tax relief for donations to schools and colleges (State Council 2005)

However, Byrne (2005) notes that the very fluid state of industry development and relationships in China at present suggest that achieving coherent industry leadership of VET at the national level will take considerable time and effort. Byrne argues that 'a formal role for industry should be established in China's VET system, including responsibility for the development of workplace competency standards as the required outcomes for VET providers' (2005: 48). Whilst ICCs are assuming some of this responsibility at a municipal level in Chongqing, their potential to develop industry networks and use contemporary methods to develop skill standards is compromised by both traditional approaches to standards development and the current MOLSS vocational standards template, which neither necessarily capture current industry practice nor support the development of quality competency standards (Comyn 2007). Regardless, the focus of the ACCVET project in its final stages gave greater emphasis to national policy reform, including the need for continuous improvement of skill standards and occupational testing within China's VET system. However, this work has yet to bear ripe fruit, and it is not clear that the national ICC will remain into the future to facilitate the harvest.

Conclusion

It is evident that China's transition to a market economy is placing demands on the nation's VET system. Whilst policy frameworks for industry engagement have been established, implementation appears ad hoc and remains focused on the needs of state owned or government backed enterprises. It is arguable that whilst there are numerous examples of strong links between individual VET providers and enterprises, the more strategic engagement of key enterprises varies considerably across industry sectors at both the national and provincial levels.

In China, as elsewhere, when industry has confidence in the quality of technical and vocational education, it will become more active in VET. This is because it has defined the outcomes required of VET and helped to set the quality framework for VET providers. If senior industry representatives are given the opportunity to interact with government on VET matters, China will develop a culture which demonstrates that industry is the prime customer of the VET system. As Byrne notes, 'if enterprises are to be active in training policy formation, competency standards and qualifications setting and even direct delivery of training in partnership with national institutional providers, the benefits of doing so must be understood and promoted' (2005: 2).

Economic development must be supported by a high quality, flexible and fast-reacting training system and industry and enterprises should be directly involved in leading the system and developing specifications for training and assessment outcomes. It is arguable that industry participation in China's VET system is hindered by ineffective administrative mechanisms and a lack of incentives for employers.

Misko et al (2005) suggest that 'it is clear that the government has not invested sufficiently in financial incentives and reward programs to encourage enterprises to participate in VET. It has not implemented a system of tax incentives for those enterprises prepared to participate in the provision of VET and has not paid much attention to rewarding participating enterprises with specific commendations or awards' (2005: 71). New patterns of employment, including opportunities for self-employment and jobs created by and with foreign companies, have impacted on the aspirations of young people entering VET in China (Lumby & Li 1998).

Despite these shifts, the training system in China is presently more closely geared to the needs of the SOEs and will need ongoing major reforms if it is to meet the knowledge and skill demands of the emerging private sector enterprises which have to compete in the global market.

Paul Comyn is a self-employed consultant with over 20 years experience in education, training and management gained through varying roles in both the public, private and community sectors..

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