

**OECD Reviews of Vocational
Education and Training**

**A SKILLS BEYOND
SCHOOL COMMENTARY
ON VIET NAM**

Viktorija Kis



December 2017

OECD Reviews of Vocational Education and Training

A Skills beyond School Commentary on Viet Nam

Viktorija Kis



This paper is published under the responsibility of the Secretary-General of the OECD. The opinions expressed and the arguments employed herein do not necessarily reflect the official views of OECD member countries.

This document, as well as any data and any map included herein, are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area.

The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law

Acknowledgements

The OECD is very grateful to in the United Nations Industrial Development Organization (UNIDO), which funded this work. We are grateful to Dinh Thi Hong Yen in the Ministry of Industry and Trade in Viet Nam for her work in providing information and advice and organising the visit. We would also like to thank the people who gave their time to welcome us at their schools and other institutions and answered our questions.

Table of contents

Summary: Strengths, challenges and policy pointers for VET in Viet Nam	6
The report on Viet Nam and its place in UNIDO and OECD work	8
VET in Viet Nam: a snapshot	11
Strengths, challenges and policy pointers	15
Strengthening employer engagement in the VET system	16
Promoting high quality work-based learning	22
Ensuring an adequately skilled VET teacher workforce	30
Implementing a qualifications framework	37
References	43
Annex A: QualiCarte (Switzerland)	47

Tables

Table 1: Educational attainment among young adults in Viet Nam	11
Table 2: Formal education and training programmes in Viet Nam	12

Figures

Figure 1: Vocational education and training in upper secondary education	24
---	----

Boxes

Box 1: Key characteristics of strong vocational systems	9
Box 2: The new Law on Vocational Education and Training	13
Box 3: Skills needs in Viet Nam: some findings from the STEP Skills Measurement Project	14
Box 4: Industry-led bodies engaged in VET policy	19
Box 5: What is work-based learning?	22
Box 6: External bodies involved in the provision of work-based learning	27
Box 7: Quality control of work-based learning in Switzerland	28
Box 8: Optional training for apprentice supervisors in Norway	29
Box 9: Pathways from industry to teaching in VET	34
Box 10: Assessments in modularised postsecondary VET programmes in Austria	39

Summary: Strengths, challenges and policy pointers for vocational education and training (VET) in Viet Nam***Strengths***

- New legislation on vocational education and training (VET), adopted in 2014 and due for implementation in 2015, allows for a sensible simplification of the system with clarity about the level of responsibility of the Ministry of Labour, Invalids and Social Affairs and the Ministry of Education and Training. A qualifications framework is currently in development and, while no panacea, it can help clarify linkages within the system.
- In Viet Nam students in all vocational education and training programmes are required to participate in a period of work-based learning as part of their studies.
- Policy measures are in the process of implementation to keep the skills of VET teachers up-to-date. The new law on VET will require all VET teachers imparting practical training in Viet Nam to spend some time in industry regularly to update their practical skills.

Challenges

- Industry engagement with the VET system appears relatively weak overall, both at policy making level and at local level between VET schools and local companies. This also creates a challenge for the effective development and implementation of the qualifications framework.
- While work-based learning (typically in the form of internships) is mandatory in VET programmes, ensuring sufficient work-based learning opportunities of high quality is a challenge.
- There is a shortage of VET teachers in some parts of the system. Many existing teachers lack relevant work experience and/or opportunities to update their technical skills.

Policy pointers

Strengthening employer engagement in the VET system:

- Promote industry involvement in VET through systematic arrangements to engage employers and unions in VET policy and provision. One option is to create a high profile national body, which includes all industry, government and other stakeholders and has either a very influential advisory role or decision-making power in relation to VET policy.
- Ideally the Vietnamese VET system would involve systematic co-operation between industry and the VET system at all relevant levels, national, sectoral and local.
- Ensure that bodies representing employers are genuinely representative of the views of employers in Viet Nam.

Promoting high-quality, work-based learning:

- Promote the quality of internships and other forms of work-based learning by developing and implementing quality standards for work-based learning.
- Develop and implement tools that support companies in delivering high-quality internships.

Ensuring an adequately skilled VET teacher workforce:

- Encourage newly-recruited vocational teachers to have relevant work experience in industry prior to entering the teaching profession.
- Encourage part-time working among VET teachers, with teachers in VET institutions spending some of their time in industry.
- Promote flexible pathways of entry into the VET teaching profession. Facilitate the entry of skilled workers from industry into the workforce of VET institutions through effective pedagogical preparation.
- Encourage interchange and partnership between VET schools and industry to facilitate effective implementation of the planned mandatory requirement for VET teachers imparting practical training to spend time in industry. With effective implementation, such placements should allow vocational teachers and trainers to update their knowledge.

Implementing a qualifications framework:

- Systematically engage with employers and other key stakeholders to develop and implement the qualification framework. This may involve a gradualist approach to implementation, to ensure the full buy-in of all stakeholders.
- Ensure that assessments are reliable, consistent and demanding so that the qualifications they support are credible proofs of competence.

The report on Viet Nam and its place in UNIDO and OECD work

This report is a contribution towards a UNIDO project entitled “Benchmarking study and strategy development review for the modernization of Viet Nam’s industrial skills training system” conducted between 2014 and 2016. The counterpart in Vietnam is the Ministry of Industry and Trade (MOIT). Part of the UNIDO project focuses on mechatronics and automation, with input from specialists in the field from Austria. The aims of the broader UNIDO project are:

- Benchmark Viet Nam’s industrial manufacturing skills training system against international and regional competitors, and identifying transferable best practices.
- Elaborate a strategic blueprint and roadmap for reforming the industrial skills training system, in line with the industrial development strategy of Viet Nam.
- Propose a structure able to effectively initiate and co-ordinate the strategy implementation during a second project phase.

The aim of this OECD report is to inform and assist VET policy development in Viet Nam. It builds on experience from 40 studies on vocational education and training conducted in over 30 countries all over the world. The OECD has been conducting two major thematic reviews of vocational education and training. The first series of reviews was launched in 2007 and looked at initial VET, often at upper secondary level. Following 17 country reviews, the project was completed with the publication of a final comparative report entitled *Learning for Jobs* in 2010. More recently, a second series of reviews focusing at postsecondary level has looked at the preparation of younger people and adults for technical and professional jobs. In the course of these two projects country studies have been conducted in Austria, Australia, Belgium (Flanders), Canada, Costa Rica, the Czech Republic, Chile, China, Denmark, Egypt, Germany, Hungary, Iceland,

Ireland, Israel, Kazakhstan, Korea, Mexico, the Netherlands, Norway, Romania, South Africa, Spain, Sweden, Switzerland, the United Kingdom (including separate studies for England, Northern Ireland, Scotland and Wales), and the United States.

These series of studies of VET at upper secondary and postsecondary level have identified a set of key characteristics of strong vocational education and training systems. They are summarised in Box 1.

Box 1: Key characteristics of strong vocational systems

Deciding on provision and meeting needs: How the mix and content of vocational programmes are determined

Mechanisms to ensure that the mix of vocational provision corresponds to the needs of the labour market: Sometimes the availability of vocational programmes is driven by student demand and the capacity of training institutions, rather than by industry needs. This can be balanced by constraints on training provision where there is little demand for the skills, by an emphasis on work-based learning as a means of signalling industry needs, and by well-grounded career guidance to inform student demand.

Adequate core academic skills, particularly literacy and numeracy built into vocational programmes: Basic skills are needed both for jobs and to support further learning. Vocational programmes therefore need to assess basic skills on entry, address weaknesses, and explore ways to integrate basic skills into vocational courses.

A range of programmes that offer opportunities for all, and minimise dropout: Some types of practical and work-based vocational programmes are very effective at engaging young people who have previously become disenchanted by academic education.

Flexible modes of study suitable to adults with working and home commitments: Adults, often with home and work responsibilities, tend to prefer flexible and part-time study options and often wish to take advantage of distance learning. Programmes and policies should therefore adapt to their needs.

Higher-level vocational qualifications, and avenues of progression from initial vocational programmes to both higher-level vocational and academic programmes: Higher-level vocational qualifications for graduates of upper secondary vocational programmes, offering management and entrepreneurial skills, and skills in managing trainees, alongside a deepening of technical competences, play a key role in enhancing the attractiveness of the upper secondary vocational track. Pathways to more academic qualifications are also important.

Delivering quality: How vocational skills are imparted to learners
High-quality apprenticeship systems, covering a wide range of professional domains and including higher-level apprenticeships: Apprenticeship is an outstandingly successful model of work-based learning, and a way to develop skills and transition young people into work. It needs to be actively supported in partnership with industry, backed by quality assurance, and developed in novel territory such as in public administration.

Work-based learning systematically integrated into all vocational programmes: In apprenticeships, but also more generally, work-based learning has such profound benefits, both as a learning environment and as a means of fostering partnership with employers, that it should be integrated into all vocational programmes and form a condition of public funding. It should be systematic, quality-assured, assessed and credit-bearing.

Box 1: Key characteristics of strong vocational systems (*continued*)

A vocational teaching workforce that offers a balance of teaching skills and up-to-date industry knowledge and experience: This implies measures to encourage industry practitioners to teach part time or to enter vocational teaching in mid-career.

Using learning outcomes: How skills are assessed, certified and exploited

Qualifications developed with labour market actors: This means that curricula, programmes and assessments are organised so as to meet the needs of industry, both in content and in modes of study.)

Qualifications reflecting labour market needs that are nationally consistent but flexible enough to allow for locally negotiated element: Nationally consistent qualifications support labour market mobility, but a locally negotiated proportion of the curriculum allows provision to respond to local employer needs.

Qualifications systems and frameworks that keep qualification numbers manageable: The tendency of qualifications to proliferate, allowing confusion to dilute their signalling value, needs to be combatted by active management of the qualifications system, involving employers and trade unions.

High-quality assessments of vocational skills built into qualifications: Good assessment of complex occupational skillsets is hard, but it is an essential element of strong qualifications generally, and vital for qualifications that are competence-based.

Effective competence-based approaches, including both professional examinations and recognition of prior learning: Professional examinations are a little-recognised part of countries' skill systems and often play an important role outside the formal education system. Recognition of prior learning requires strong incentives for the different actors to make it work.

Supporting conditions: The policies, practices and institutions that underpin vocational education and training

Vocational programmes developed in partnership and involving government, employers and trade unions: Typically, this will require a steering body involving the different stakeholders to co-ordinate provision, engage and involve all the stakeholders, including social partners, and address issues of coherence and co-ordination.

Effective, accessible, independent, proactive career guidance, backed by solid career information: Career guidance is still too often a weak by-product of school general counselling. The guidance profession needs to be upgraded and supported with good labour market information.

Strong data on vocational programmes, including information on vocational programmes in international categorisations and labour market outcomes: ISCED 2011 should improve the identification of vocational programmes, especially at the postsecondary level, but it needs to be well-implemented. Many countries need better information on labour market outcomes.

Consistent funding arrangements so that choices are not distorted by the availability of funds: While upper secondary vocational education and training rarely involves fees in OECD countries, postsecondary provision is subject to a range of fee regimes, not always consistent with those for other forms of tertiary education.

Source: OECD (2014a), *Skills Beyond School: Synthesis Report*, OECD Reviews of Vocational Education and Training, OECD Publishing. <http://dx.doi.org/10.1787/9789264214682-en>.

VET in Viet Nam: A snapshot

Viet Nam has achieved significant progress in educational achievement over the past decades. This is reflected in considerable variation in skills and education background among different cohorts. For example, 27% of 50-54 year-olds had no educational qualification in 2010, while among 25-29 year-olds this figure was reduced to 14%. Much of the educational progress is reflected in differences between cohorts in terms of general education qualification, while the difference in attainment in formal VET qualifications is more modest – 8% of 50-54 year-olds held a formal VET qualification in 2010, against 12.5% among 25-29 year-olds (VHLSS, 2010).

One way to provide a picture of the Vietnamese VET system is to look at levels of educational attainment. Table 1 shows the percentage of young adults by highest level of qualification. Among young adults (aged 25 to 29), 14% have no educational qualification and almost one in four have primary education as their highest qualification. About one in five young adults has a vocational background – 6% are technical workers (*Công nhân kỹ thuật*) and 12.5% have a formal VET qualification (VHLSS, 2010).

Table 1: Educational attainment among young adults in Viet Nam

Name of programme or qualification		Percentage of adults aged 25-29 by highest level of qualification
English	Vietnamese	
No certificate or never attended school		13.8
Primary	Tốt nghiệp tiểu học	23
Lower secondary	Tốt nghiệp THCS	19.6
Upper secondary	Tốt nghiệp THPT	15.2
Elementary vocational	Sơ cấp nghề	4.6
Vocational intermediate	Trung cấp nghề	3.9
Professional secondary	Trung học chuyên nghiệp	3.3
Vocational college	Cao đẳng nghề	0.7
University/college	Đại học/Cao đẳng	9.7
Postgraduate Master, PhD	Trên đại học	0.3

Source: VHLSS (2010), *Vietnamese Household Living Standards Survey*. General Statistics Office of Viet Nam.

Recent enrolment numbers provide another way of looking at the VET system (see Table 2). Vocational qualifications comprise a diverse range of programmes. Elementary vocational training programmes (*Sơ cấp nghề*) take between three and 12 months to complete. At secondary level two vocational qualifications are offered. Professional secondary programmes (*Trung học/cấp chuyên nghiệp*) are larger in terms of enrolment and take three to four years to complete. Intermediate vocational programmes (*Trung cấp nghề*) take three to four years to complete. Graduates of upper secondary education may complete it in one or two years if their credits are recognised. Following the implementation of the recently adopted new law on VET in 2015, the different secondary level VET qualifications will be merged. Both types of secondary level programmes provide a pathway to vocational college (*Cao đẳng nghề*).

Table 2: Formal education and training programmes in Viet Nam

Name of programme or qualification		Typical duration of programme	Number of students enrolled (head count)	Reference year ¹
English	Vietnamese			
Primary	Tốt nghiệp tiểu học	5 years (grade 1-5)	7 435 600	2013/14
Lower secondary	Tốt nghiệp THCS	4 years (grade 6-9)	4 932 390	2013/14
Upper secondary	Tốt nghiệp THPT	3 years (grade 10-12)	2 532 696	2013/14
Elementary vocational	Sơ cấp nghề	3 months - 1 year	1 698 678	2014
Vocational intermediate	Trung cấp nghề	3-4 years	132 605	2014
Professional intermediate	Trung cấp chuyên nghiệp	3-4 years	169 000	2014
Vocational college	Cao đẳng nghề	1-4 years	87 988	2014
Junior college	Cao đẳng	3 years	559 802	2013/14
University/college	Đại học/Cao đẳng	4-6 years	1 461 839	2013/14
Postgraduate Master, PhD	Trên đại học		101 681	2013/14

1. Data provided by the Ministry of Education refer to enrolments during the academic year 2013/14.

Data provided by the Ministry of Labour Invalids and Social Affairs refer to enrolments during the calendar year 2014.

Source: Ministry of Industry and Trade, internal document, July 2015.

Currently some parts of the VET system are managed by the Ministry of Education and Training (MOET), while others are managed by the Ministry of Labour, Invalids and Social Affairs (MOLISA). New legislation adopted in 2014 and due to be implemented in the course of 2015 will simplify the current landscape and consolidate most responsibilities for the VET system under the MOLISA (see Box 2). In addition to MOLISA, other ministries (e.g. Ministry of Industry and Trade, Ministry of Health) have responsibilities regarding programmes in fields relevant to their area of activity. Training institutions (universities, colleges and vocational schools) are directly managed by particular ministries, local authorities or other private or public entities. MOIT currently administers 48 education and training institutions, including 10 universities, 27 colleges, one institute for trade and industry professionals, eight vocational colleges, eight vocational colleges, one professional secondary schools and one vocational secondary school. Most of these training institutions are administered directly by MOIT, while the rest are administered through state-owned corporations (MOIT, personal communication, June 2015).

Box 2: The new Law on Vocational Education and Training

The new Law on Vocational Education and Training was adopted by the National Assembly Term XIII at its 8th session and came into effect on 1 July 2015.

It changes the terminology in use so that “vocational education and training” and “vocational learning” become commonly used terms, replacing “vocational training”. The new law also simplifies the landscape of programmes on offer, allocating all VET programmes into one of three levels: elementary, intermediate and diploma level.

The institutional landscape is also due to be simplified through mergers so that VET will be provided in centres for VET, VET secondary schools and colleges. The college system will be separate from the higher education system, which in turn delivers programmes at bachelor, master and doctoral level.

The new law also introduces reforms in a wide range of VET policy areas, such as vocational teachers’ and trainers’ careers, support for vocational students, testing and examination arrangements. Institutions that provide VET will also have greater autonomy following the reform.

Source: MOLISA, internal document, July 2015.

The VET system faces the challenge of responding to the needs of a rapidly expanding economy, providing adequately skilled workers. Survey data from the STEP Skills Measurement Project reveal that there is much room for improvement, as the current education and training system in Viet Nam struggles to respond to labour market needs (see Box 3 for more details).

Box 3: Skills needs in Viet Nam: Some findings from the STEP Skills Measurement Project

The STEP Skills Measurement Project (STEP) survey of adults and employers was conducted in 2011 and 2012 in Hanoi and Ho Chi Minh City and immediately surrounding provinces.

The survey explored what skills are in demand in the urban labour market in Viet Nam. Its findings show that employers rate job-specific technical skills as most important in hiring decisions, but generic skills such as problem solving, communication, the ability to work independently as well as in teams, and time management were also highly rated.

Survey data show that companies face recruitment difficulties because job applicants have inadequate skills and/or there is a scarcity of workers in some occupations. Employers also voice criticism regarding the Vietnamese education and training system. Over 60 percent of “international firms” (firms with international business contacts – these account for 93 percent of total employment in the survey) consider the availability of labour with the right skills as an obstacle to their activity. Almost half of international firms view the quality of vocational training as an obstacle to their activity. Finding adequately skilled workers is particularly hard for companies trying to recruit professionals and technicians. About 80 percent of employers that tried to hire for these occupations reported that applicants lacked the skills required for the job. For those trying to hire clerical workers, service and sales workers and craftsmen the share of those reporting lack of required skills was between 40% and 60%. Workers own views about their skills in relation to their work show a similar picture. Only about half of workers report that their education was moderately or very useful for their current work.

*Source: World Bank (2013), Viet Nam Development Report 2014, *Skilling up Viet Nam: Preparing the workforce for a modern market economy*, World Bank, Washington, DC.*

Strengths, challenges and policy pointers

Strengths

- New legislation on VET, adopted in 2014 and due for implementation in 2015, allows for a sensible simplification of the system with clarity about the level of responsibility of the Ministry of Labour, Invalids and Social Affairs and the Ministry of Education and Training. A qualifications framework is currently in development and, while no panacea, it can help clarify linkages within the system.
- In Viet Nam VET students at both secondary and postsecondary level are required to participate in a period of work-based learning as part of their studies.
- Policy measures are in the process of implementation to keep the skills of VET teachers up-to-date. The new law on VET will require all VET teachers imparting practical training in Viet Nam to spend some time in industry regularly to update their practical skills.

Challenges

Overall, while the system has some strong design features noted above, there are big challenges in delivering the kind of pervasive partnership between vocational training provision and employers that is found in the world's strongest skill systems. There are three main interconnected challenges:

- Industry engagement with the VET system appears relatively weak overall, both at policy making level and at local level between VET schools and local companies. This also creates a challenge for the effective development and implementation of the qualifications framework.
- While work-based learning (typically in the form of internships) is mandatory in VET programmes, ensuring sufficient work-based learning opportunities of high quality is a challenge.
- There is a shortage of VET teachers in some parts of the system. Many existing teachers lack relevant work experience and/or opportunities to update their technical skills.

Drawing on the evidence base developed through relevant OECD work, the analysis below is adapted from the OECD's Learning for Jobs report on VET (OECD, 2010) and relevant country-specific OECD reviews.

Strengthening employer engagement in the Vocational Education and training (VET) system

The effectiveness of VET systems depends on their links to the labour market. This means that it is essential to engage key stakeholders in the development of VET systems and the delivery of VET programmes. It is particularly important to ensure that employers can express their skills needs and to ensure that the content of VET is relevant to the labour market.

Comparing Viet Nam with OECD and partner countries

In Viet Nam, employers appear by and large to be weakly engaged in the VET system. There are some arrangements for consultation with employers in national policy making and some schools have built partnerships with local companies. But overall employers appear to have limited influence over policy making and many schools lack systematic and close collaboration with companies. Interviews conducted during the review visit suggest that some employer bodies are not sufficiently representative of Vietnamese employers. One challenge is that some of those in senior positions in sectoral bodies appear to have work experience in the civil service rather than in the industrial sector concerned.

Across OECD countries the level of employer engagement with the VET system varies markedly. Some countries, such as Austria, Germany, Denmark and Switzerland have a long tradition of co-operation between relevant government bodies, employers and trade unions at all relevant levels. In Switzerland, for example, the role of employers and trade unions in VET design and delivery is even stipulated by law. But in many countries ensuring that employers and trade unions have sufficient influence in shaping the VET system remains a challenge.

There is also variation among countries in the institutional arrangements for collaborating with employers and the tasks and actions carried out by employers. Sometimes employers have an advisory role (of variable weight), in other cases they participate in actual decision-making. International experience would support a systemic approach, in which employers can come to see the vocational system as ‘their’ system, which they can actively support and sustain in their own interests.

Analysis

The engagement of employers is key to successful VET systems

The involvement of employers is crucial if VET systems are to meet labour market needs. Employers are clearly in a strong position to see if the content of curricula and qualifications meet current labour market needs, and to guide their adaptation to emerging requirements. Employer engagement in policy development is also essential if policy is to be successfully implemented. For example, Viet Nam has recognised the importance of work-based learning and has made it mandatory in all VET programmes. But achieving high-quality, work-based learning, as discussed below, requires the engagement of employers. In Norway for instance, the establishment of apprenticeship training required the full support of employers and trade unions. Involvement in the design of VET policy makes employers understand the system better. Employers who do not understand the policy context and the institutional settings are more likely to disengage.

The engagement of employers can make or break a VET system. The lack of industry engagement with the VET systems, VET programmes of variable quality and weakly recognised qualifications can form a vicious cycle. But it is possible to break this cycle and turn it into a virtuous one. In the virtuous cycle the VET system provides high-quality programmes that are relevant to labour market needs, and as a result employers perceive the VET system as a source of well-trained recruits and will be interested in sustaining their relationship with it. This in turn helps sustain the quality of the VET system, as policies and programmes can be designed to meet labour market needs, systematic work-based learning maintains links between VET institutions and companies and improves the skills of VET students. The resulting quality of VET graduates sustains and improves employer confidence and engagement.

The influence of different groups needs to be balanced

There needs to be a balance between the influence of different stakeholders – employers, trade unions and the government. An important role for the government is to take into account the perspectives of employers and unions in policy development and, at the same time, support the interests of students. While employers have an essential role in articulating skills needs, they may be interested in investing in a narrower skill set than that which would be in the interest of VET students and society as a whole. To some extent this depends on the level at which their interests are articulated. Employers as a whole also have a very strong interest in general transferable skills.

Sectoral organisations naturally have an interest in sector-specific skills, while individual companies in firm-specific skills. But from the point of view of employers transferable skills have both positive and negative sides to them – they are important and applied in all occupations, but less positively for employers, they also bid up wages and increase job turnover (OECD, 2010).

Student interests might be represented directly in principle, for example through a student’s union, but in most contexts students are both young and unorganised. The government often plays an important role in supporting the interests of students and balancing the perspectives of different stakeholders. In Viet Nam the government has a very strong role in VET policy making, while industry involvement in policy making is not as systematic as it could be. Therefore it is industry engagement with the VET system that needs to be strengthened.

A carefully designed framework facilitates industry engagement

Countries with strong VET systems have typically established a framework for engaging employers and trade unions at various levels. The existence of a framework ensures systematic collaboration, rather than ad hoc partnerships over-dependent on personalities and of varying quality. Such a formal framework can usefully complement other forms of school-industry co-operation, such as local partnerships between companies and institutions providing VET.

Bodies for industry engagement may operate at different levels serving different purposes. A single national body allows for broad and strategic advice on VET policy. Bodies organised at local level can help improve links between individual institutions and local companies, facilitating work placements for example. Finally sectoral organisations are helpful in developing the industry or occupation-specific curricula associated with particular qualifications. Ideally the Vietnamese VET system would involve systematic co-operation between industry and the VET system at all relevant levels, national, sectoral and local. As Viet Nam does not have a strong tradition for private sector involvement in the VET system, focusing on strong collaboration at national level would be a good starting point.

There are different options for how such a body might be structured. It is crucial that employer organisations are genuinely representative and recognised as such by the great majority of individual employers. In Viet Nam this may be an issue, as some representatives of sectoral industry bodies seem to be weakly connected to companies in the sector concerned. Some degree of stability in the institutional frameworks for employer engagement is also important. If employer organisations involved in VET

policy making are not genuinely representative of individual employers, it would not really change the relationship between companies and VET policy making. Despite the existence of formal arrangements companies would continue to perceive the VET system as poorly linked to their needs. In England for example weak recognition by employers of bodies that are supposed to represent them has been identified as a cause of low industry engagement in VET (Gleeson and Keep, 2004). Conversely, such bodies can work well to facilitate the implementation of VET policies, if recognised by individual employers. In Norway, for example, employer bodies substantially facilitated the expansion of apprenticeships by actively promoting apprenticeships among their member firms (Bowman, 2005).

Box 4 provides some examples of institutional arrangements for industry involvement in VET policy making. The frameworks in Denmark and Switzerland build on strong industrial bodies (employer organisations and trade unions) and a long tradition of engagement in VET. The industry-led UK Commission for Employment and Skills (UKCES) in the United Kingdom does not build on strong and traditional industrial bodies, but involves high profile representatives of large and small employers (including CEOs of large companies), as well as other stakeholders. In the Vietnamese context, an approach that does not depend on strong sectoral bodies may have some advantages.

Box 4: Industry-led bodies engaged in Vocational Education and Training VET policy

Switzerland

The involvement of professional organisations in VET policy making is required by law. The term “professional organisations” in Switzerland refers to trade associations, employer association and trade unions, and include both companies and business persons. Professional organisations have the leading role in the content and examination process of both secondary and postsecondary VET programmes (in Switzerland postsecondary VET is referred to as “professional education and training”, PET).

Professional organisations in VET (at both secondary and postsecondary level) draft core curricula for PET college degree programmes, which are then approved by the Swiss authorities (Confederation). National examinations leading to a federal diploma are also led by professional organisations. They ensure those federal PET diplomas are relevant to the needs of the profession and the labour market. Professional organisations draft examination rules, which cover admission requirements, occupational profiles, the knowledge and skills to be acquired, qualification procedures and the legally protected title. They also conduct examinations. The role of Swiss authorities (at Confederation level) includes approving examination rules, supervising examinations and issuing federal diploma.

Source: OPET (2011), *Skills beyond School. The OECD Policy Review of Post-Secondary Vocational Education and Training. Swiss Background Report*, Federal Office for Professional Education and Technology, Bern; OPET (2012), www.bbt.admin.ch, Federal Office for Professional Education and Technology website (accessed January 2012).

Box 4: Industry-led bodies engaged in Vocational Education and training VET policy (*continued*)

United Kingdom

The UK Commission for Employment and Skills (UKCES) was launched in April 2008 with the aim of increasing the employer voice in the United Kingdom's VET system and promoting investment in skills to drive enterprise, jobs and growth. It is led by commissioners from large and small employers, trade unions and the voluntary sector. It also includes representatives of further and higher education institutions and from the devolved administrations.

Its strategic objectives are:

- 1 To provide world-class labour market intelligence which helps businesses and people make the best choices for them.
- 2 To work with sectors and business leaders to develop and deliver the best solutions to generate greater employer investment in skills.
- 3 To maximise the impact of changed employment and skills policies and employer behaviour to help drive jobs, growth and an internationally competitive skills base.

The UKCES works with government departments and agencies, as well as with researchers across the UK to develop an evidence base, to pool expertise and maximise the influence of research and labour market intelligence over policy and practice. The UKCES also funds and manages the Sector Skills Councils and oversees their relicensing process. As a UK-wide body, it helps ensure a strategic approach to skills development that overarches all four nations (with devolved administrations for education and training policy) of the UK.

A shift in the approach to employer engagement advocates that employers should own their skills agenda and develop their own initiatives, rather than relying on a policy agenda set by government with incentives for employers to join in. In 2011 the Prime Minister announced a fund of up to GBP 250 million to test out approaches that empower employers to take control of skills development. The UKCES is working closely with government to follow this approach.

Source: UKCES (2011), UK Commission for Employment and Skills website, www.ukces.org.uk (accessed December 2011).

One option is to create an industry-led body with clearly defined and important (either very influential advisory or decision-making) role in policy making. This would ensure that it has a real impact on VET policies and would encourage initial and sustained participation of employers and unions. Senior industry representatives are unlikely to give their time to official meetings if they do not see that they can have a large influence on policy and there are substantial benefits involved. This body could also take the

lead on the development and regular updating of qualifications included in the new Vietnamese national qualifications framework currently in development.

It would be sensible for this body to engage with policy making in VET both at upper secondary and postsecondary level. Vesting a single industry-led body with responsibilities regarding both upper secondary and postsecondary level would have various benefits. It would help ensure coherence and continuity in the content of VET programmes at different levels. In addition, industry leadership overseeing VET at both levels would ensure that the skills needs of the economy drive policy development, rather than potentially fragmented institutional frameworks and their sponsoring bodies.

To maximise the effectiveness of such an industry-led body, there needs to be a framework for systematic dialogue with the government. Involving all ministries that are involved in the planning and provision of VET in the dialogue would be essential to improve co-ordination and coherence in national policies related to VET. The new law on VET in Viet Nam will simplify the current VET system and consolidate most responsibilities for VET under the Ministry of Labour, Invalids and Social Affairs. At the same time various ministries (e.g. Ministry of Industry and Trade) will continue to be involved in the provision of VET in particular sectors. Creating a single forum, involving all ministries with responsibilities for VET would also make it easier to persuade industry representatives to attend, rather than talking separately to the different institutions and ministries dealing with VET policy.

Policy pointers for Viet Nam

- Promote industry involvement in VET through systematic arrangements to engage employers and unions in VET policy and provision. One option is to create a high profile national body, which includes all industry, government and other stakeholders and has either a very influential advisory role or decision-making power in relation to VET policy.
- Ideally the Vietnamese VET system would involve systematic co-operation between industry and the VET system at all relevant levels, national, sectoral and local.
- Ensure that bodies representing employers are genuinely representative of the views of employers in Viet Nam.

Promoting high-quality, work-based learning

Developing high-level workplace skills is one of the key challenges both for competitive enterprises and collectively for a modern productive economy. One of the best ways of ensuring that learning meets the needs of the labour market is to make the fullest use of the workplace as a powerful learning environment, and to find effective mechanisms to link employer interests to the mix of training provision. This is more easily said than done.

Ensuring that companies provide a sufficient number of work-based learning opportunities and that these opportunities are of high quality is a challenge in many countries. This topic has been examined in many reviews of VET, which the OECD has been conducting since 2007 and has involved over 30 countries across the world (see Box 5). Reflecting the importance of this topic, in 2015 OECD launched a study on work-based learning in VET that aims to deliver policy messages about how to use work-based learning to achieve better economic and social outcomes.

Box 5: What is work-based learning?

Work-based learning is learning that takes place through some combination of observing, undertaking, and reflecting on productive work in real workplaces. It may be paid or unpaid and includes, for example, institutional arrangements such as:

- Apprenticeships: More structured long-term workplace learning, typically over a period of years, leading to a qualification.
- Internships: Short periods of time – typically weeks or months – in which students attend workplaces and undertake work there, typically for zero or nominal wages. They may be governed by a special contract.
- Work placements
- Informal learning on the job.

Comparing Viet Nam with OECD and partner countries

In Viet Nam internships are mandatory in vocational programmes at all levels. But achieving high-quality internships and ensuring adequate supply of internships remains a challenge. Links between schools and companies are often weak, which affects both the quality and quantity of internships. The work undertaken during internships is not always adequately linked to the content of vocational programmes and it is not systematically ensured that students acquire skills relevant to their qualification during their

placement. Schools do not always perceive internships as an important element in the development of vocational skills. Instead internships are sometimes perceived as a burden on schools and the potential benefits are not always fully appreciated. Some schools struggle to arrange appropriate internships for students. Also, many companies lack the management capacity needed to provide high-quality work placements.

Across OECD countries, there is great variation in the use of work-based learning in vocational programmes (see Figure 1) and their quality. Some countries (e.g. Austria, Denmark, Germany, Switzerland) have a long-standing tradition of apprenticeships – forms of VET that combine work-based learning with school-based elements and lead to a formal qualification, most often with a contract. Some other countries, such as Norway, did not have a tradition of apprenticeships but have successfully introduced them. In a number of countries most upper secondary VET programmes are school-based, although even school-based VET programmes include sometimes a period of work-based learning. For example in Spain, similarly to Viet Nam, a period of work-based learning is mandatory in both upper secondary and postsecondary VET programmes (Field, Kis and Kuczera, 2012). But in a number of countries and vocational programmes work-based learning remains optional, participation rates vary and arrangements to assure its quality are relatively weak. So achieving high-quality, work-based learning and ensuring widespread participation is a challenge in many countries.

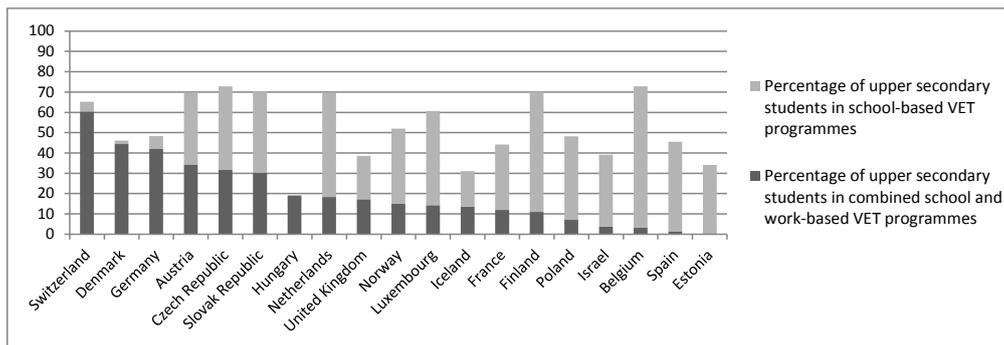
In China, the government actively encourages the use of work-based learning as part of upper secondary VET programmes. In some schools it is extensively used with up to one year of work-based training in the final third or fourth year of programmes. But the extent of work-based learning depends greatly on local links between schools and companies, so some programmes offer an inadequate quantity of work-based learning. Ensuring quality is also a challenge – internships are governed by national regulation but effective implementation and enforcement is a challenge (Kuczera and Field, 2010).

In Korea, VET programmes are mostly school-based with limited work-based learning. At secondary level students learn practical skills primarily in school workshops, although in some small programmes a work-based learning component is more common. In most secondary VET programmes when work-based learning does exist, its form, duration and quality are highly variable. (Kuczera, Kis and Wurzburg, 2009). Similarly, at postsecondary level work-based learning is optional and there is wide variation across institutions and programmes in participation rates. Some colleges have strong links with companies, while others only have very

weak links. Assuring the quality of work-based learning remains a common challenge (Kis and Park, 2012).

Figure 1: Vocational education and training in upper secondary education

Percentage of upper secondary students in VET programmes



Source: OECD (2014b), *Education at a Glance 2014: OECD Indicators*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/eag-2014-en>.

Analysis

Internship and other forms of work-based learning have major potential benefits both for students and for employers. All of these advantages apply to a structured and substantive element of work-based learning in a vocational programme – like apprenticeships – but most of them also apply, sometimes to a lesser extent, to other less formal and shorter forms of work-based learning.

- **Strong learning environment:** Work-based learning allows students to acquire practical skills on up-to-date equipment and under trainers familiar with the most recent working methods and technologies. It also allows students to develop key soft skills – like problem solving, conflict management and entrepreneurship – in a real-world environment. Research evidence shows that many soft skills are more effectively learnt in workplaces than in classrooms and simulated work environments (Aarkrog, 2005; Lasonen, 2005).
- **Improving school-to-work transition:** Work-based learning facilitates a two-way flow of information between potential employers and employees, making later recruitment much more effective and less costly.
- **Ensuring VET provision matches labour market needs:** Employer willingness to offer work-based learning opportunities is an indicator of

their support for the associated vocational programme. Employers will be particularly keen to offer work-based learning opportunities in contexts where they have labour shortages – both because students contribute to production and because they may be future recruits (i.e. both the production and the recruitment benefits will be high).

- **Productive contribution:** Apprentices and trainees who undertake useful work generate a productive benefit for the employer. This benefit tends to be important in the case of apprenticeships. Such a benefit is also possible in more substantial work-based learning periods, but more difficult to obtain in very short work placements (unless trainees perform only unskilled tasks, but that would be a poor learning experience).

These potential benefits can only be fully realised if work-based learning is high quality. But while firms are always interested in the immediate productive contribution of trainees, they may sometimes be less concerned with providing for a good learning experience (Cornford and Gunn, 1998; Kilpatrick, Hamilton and Falk, 2001; Gibb, 1999). Research from Norway (Askilden and Øivind, 2005) and the Netherlands (Smits, 2006) indicates that firms training with an eye on the production benefit tend to use trainees as a cheaper substitute for unskilled workers. Smits (2006) found that the quality of training is better in firms training with an eye on the recruitment benefit. Evidence from Switzerland provides a counter-example. Dionisius et al. (2008) indicate that, despite the difference in terms of productive contribution, the relative performance of Swiss and German apprentices seems to be identical at the end of training.

Even where firms have an interest in providing good training, their preference may be for firm- and occupation-specific skills, while students also need skills that are transferable to other firms and possibly other occupations (Smits, 2006). There is also variation in the quality of training according to the characteristics of firms. Research from Australia suggests that small firms are unlikely to have dedicated training staff (Hawke, 1998) and the training offered tends to be unplanned (Vallence, 1997), informal and firm-specific (Seagraves and Osborne, 1997). While work-based learning needs to yield benefits to employers to encourage them to offer sufficient training places, it should not be so firm-specific that it inhibits future professional mobility.

These considerations argue for careful quality control in work-based learning to ensure that the employers involved deliver on their training responsibilities. Learning objectives should be developed with the involvement of employers to ensure relevance to their immediate needs, but balanced by sufficient emphasis on transferable skills to allow for future mobility. In programmes that contain a large component of work-based

learning (e.g. apprenticeship) this is crucial. But in other forms of workplace learning, too, as in internships for VET students in Viet Nam, quality requirements are important so that both students and employers reap the desired benefits.

Quality standards are a binding set of rules defining the terms of work-based learning. They may cover the content and duration of training, the assessment of training outcomes and trainers' qualifications. Quality standards should prevent the placement of students in unskilled tasks and training in a firm that is not relevant to their VET programme or training too narrowly focused on the needs of a specific firm. They should ensure that training meets minimum standards in all workplaces, including smaller firms. Ryan (2000) in a review of apprenticeships in several European countries suggests that in the United Kingdom the lack of external regulations for apprenticeships leaves room for low quality training, while he notes that in Germany and Denmark there is stronger quality control and permission for training is withdrawn for companies that provide substandard training. Similarly, in Switzerland firms need to meet quality standards to be licensed to take on apprentices and the quality of practical training is monitored.

There is some tension between the goal of expanding work-based learning and that of improving its quality. Quality standards can create a burden on employers, which may discourage them from offering work-based learning. But quality standards can also help employers to achieve their objectives.

While employers can benefit from providing work-based learning, quality provision also involves costs. These include the wages of trainees, the time of experienced employees, mistakes by inexperienced apprentices (Richardson, 2005), teaching materials, special clothing and administrative costs (Rauner, 2007). The perceived costs and benefits of work-based learning determine employers' incentives to offer work-based learning.

Ensuring sufficient training places in firms is a challenge in many countries. In Viet Nam too, some students find it hard to find internship opportunities that allow them to develop their skills. Evidence from Switzerland indicates that work-based learning opportunities are offered mainly in occupations in which students fully compensate for the costs of training during the apprenticeship period (Wolter, Mühlemann and Schweri, 2006). Training opportunities are also more likely to be offered in occupations that do not allow trainees to switch to other employers after completing their training or where expensive and occupation-specific machines force schools and firms to cooperate. Specific incentives might be needed to encourage employers to offer work-based learning opportunities to VET students, recognising that firms might be discouraged by the risk of

poaching. Some countries (e.g. Austria, Switzerland) attempt to get round this problem by setting up sectoral training funds to which all companies from the sector contribute, while those that train are reimbursed (OECD, 2008). Small firms typically face further obstacles to training: the fixed cost of using one employee's time to supervise trainees is a proportionately greater burden for these firms and they often lack the capacity to deal with the administrative aspects of work-based learning. The implementation of good quality control mechanisms might further increase this burden. To encourage employers to take on VET students, some countries have established bodies that facilitate the allocation of students to companies by sharing the burden involved (see examples in Box 6). Such bodies may prove useful in Viet Nam, where many companies may lack the capacity to effectively manage internships, deal with administrative tasks and ensure that the internships provided are high quality.

Box 6: External bodies involved in the provision of work-based learning

Australia: Group training organisations (GTOs) are not-for-profit organisations supported by public authorities, with some charges to host employers. GTOs employ apprentices and hire them out to host employers, sometimes focusing on a particular industry or region. Their tasks include selecting apprentices adapted to the needs of employers; arranging and monitoring training both on- and off-the job; taking care of administrative duties; and ensuring that apprentices receive a broad range of training experience – sometimes by rotating them to different firms.

For research papers on GTOs see www.ncver.edu.au/publications/bytheme.html.

Norway: Training offices (TO) (opplæringskontor) are owned by companies and usually relate to specific trades. They aim to identify possible new training companies and establish new apprenticeship places, to supervise companies with apprentices, and to train staff involved in the tutoring of apprentices. Many TOs organise the theoretical part of the apprentices' training. They often sign the apprenticeship contracts on behalf of smaller training enterprises, thereby becoming accountable for completion of the training and its results.

Source: Norwegian Directorate for Education and Training (2008), "Responses to the National Questionnaire", unpublished.

Switzerland: Vocational training associations (Lehrbetriebsverbände) are groups of firms that share apprentices, thus reducing the financial and administrative burden on each firm. Firms that do not have the capacity to take on an apprentice on their own can therefore provide apprenticeships. In each association one firm takes formal responsibility for the apprentices. Switzerland subsidises these associations during the first three years, contributing to the initial costs of establishing a joint training programme. An evaluation (OPET, 2008) found this model effective, as without it the majority of the participating firms would not have engaged in apprenticeship training.

Source: Hoeckel, K., S. Field and W. Grubb (2009), *OECD Reviews of Vocational Education and Training: A Learning for Jobs Review of Switzerland 2009*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264113985-en>.

High-quality, work-based learning requires the active involvement of schools, so that schools and employers can have a shared understanding of the purpose of training, and clearly defined and complementary roles and responsibilities. In an ideal learning environment teachers and trainers work closely with work-based learning supervisors to ensure that students obtain the necessary skills (Robertson et al., 2000). In Viet Nam, it is therefore important that internships, in particular their content, are integrated into the curricula of VET programmes and VET teachers and trainers view them as an important part of the learning process.

Given the need to ensure sufficient opportunities for work-based learning, and in particular for Viet Nam ensure that all VET students find an adequate internship placement, quality control may need to take the form of supportive measures for employers, rather than a bureaucratic obstacle to firms wishing to provide work-based learning opportunities. The QualiCarte project in Switzerland (Box 7 and Annex A) provides an example of a tool that supports employers in improving their training.

Box 7: Quality control of work-based learning in Switzerland

Host companies are responsible for checking the progress of students. Developed with the social partners, the QualiCarte provides a checklist of 28 quality criteria describing key aspects of work-based learning (including the engagement of the company, particular aspects of the initial phase of the training and the subsequent training process). These criteria are used by companies for self-assessment.

Cantonal authorities control the quality of work-based learning by issuing licences, which host companies must obtain in order to provide work-based learning to VET students. To acquire a licence, companies must meet technical and personal criteria, and demonstrate that their training programme complies with quality standards and the content of training matches the needs of the occupation.

Source: OPET (2008), Vocational and Professional Education and Training in Switzerland. National report from Switzerland contributing to the OECD's review of "Learning for Jobs", Federal Office for Professional Education and Technology, Bern.

Supervisors (employees who supervise students who participate in work-based learning) play a key role and strongly affect students' learning experience. Although requiring formal pedagogical qualifications for work-based learning supervisors has appeal and is compulsory in some countries. While training for supervisors does involve costs, it can also increase the benefits of work-based learning to firms, since better trained supervisors can help trainees to be more productive. Training for supervisors can also have spill-over benefits, since the competences acquired tend to be shared among

colleagues. This is particularly important, since regular employees also assist trainees' learning experience by answering questions and providing informal feedback (Robertson et al., 2000). Rather than introducing compulsory training for supervisors, in the context of Viet Nam a more gradual approach may be more appropriate, bearing in mind the risk of creating an obstacle to employer engagement in work-based learning. One option may be to provide optional short courses for supervisors, as in Norway (see Box 8).

Box 8: Optional training for apprentice supervisors in Norway

In Norway optional training is offered by counties to employees involved in supervising apprentices. Some counties provide the training themselves, others ask schools or training offices to ensure its provision. The courses are free to participants, since counties provide for the course, learning material, subsistence and travel expenses. However, the firm is responsible for the supervisor's pay during the course.

Typically the duration of the training is two days (or four half days) per year. Often there is a time interval between each training session, so that supervisors may practice what they have learnt and prepare a report, which is then presented at the next session.

National guidelines, developed in co-operation with VET teacher training institutions, are available on the internet and can be adapted to local needs. The form of training typically includes role-play and practice. Supervisors learn to cover the curriculum, complete evaluation procedures and administrative forms, prepare a training plan for apprentices and follow through the plan.

Source: Norwegian Directorate for Education and Training, internal document, January 2009.

Policy pointers for Viet Nam

- Promote the quality of internships and other forms of work-based learning by developing and implementing quality standards for work-based learning.
- Develop and implement tools that support companies in delivering high-quality internships.

Ensuring an adequately skilled VET teacher workforce

As in other forms of education, the quality of the teacher and trainer workforce is critical to effective vocational education and training. Vocational teachers need a mix of technical and pedagogical skills – up-to-date technical skills ensure that they are familiar with the requirements of modern workplaces, while pedagogical skills help them effectively transmit skills and knowledge to VET students. Like in Viet Nam, many countries face challenges in ensuring an adequately skilled VET teacher workforce – shortages of VET teachers are common, many VET teachers lack relevant work experience and/or the opportunity to update their technical skills. So Viet Nam needs imaginative measures to promote the recruitment of VET teachers and ensure that they have the right mix of pedagogical and up-to-date technical skills.

Comparing Viet Nam with OECD and partner countries

In Viet Nam many vocational institutions struggle to fill VET teaching positions. Vocational teachers are required to hold a qualification in their occupational field (certificate for teachers responsible for practical training, degree for teachers responsible for vocational theory), as well as a pedagogical qualification. However relevant work experience in industry is currently not required. A typical career path to VET teaching involves obtaining the required qualifications and starting to teach immediately upon graduation, so often teachers lack the industry experience that would be very useful. Some features of the system may help address these challenges. Part-time teaching is allowed, subject to the rule that schools must employ at least 70 percent of their teachers full-time. It is also possible for people from industry to become vocational teachers after completing a short training programme. The new law on VET will require VET teachers responsible for practical training to regularly spend time in industry, in addition to holding both pedagogical and relevant occupation-specific qualifications.

Attracting and retaining adequately skilled VET teachers is often a challenge. As the current workforce ages, many European countries are facing a shortage of vocational teachers in VET institutions, or expect to face such a shortage soon (Cort, Härkönen and Volmari, 2004). The ageing VET workforce is also a challenge in Australia (NCVER, 2004). Many countries have found it difficult to compensate for the growing wave of retirements. When recruiting vocational teachers, VET institutions have sometimes had to compete with industry and are often unable to offer competitive salaries, particularly in fast-growing professions where VET teachers are most in demand.

Many OECD countries face the challenge of ensuring that the VET teacher workforce has the necessary mix of subject-specific and pedagogical skills and is familiar with the fast-changing requirements of modern workplaces. In some countries VET teachers are expected to have a subject-specific qualification, pedagogical training and relevant work experience. In Switzerland, for example, vocational teachers for upper secondary level programmes are required to hold a tertiary level degree, at least six months professional experience, and specific preparation in VET pedagogy (Hoeckel, Field and Grubb, 2009). Those teaching in postsecondary VET programmes are equally well-prepared both in their profession and pedagogically (Fazekas and Field, 2013). Similarly, in Austria vocational teachers are required to have several years of relevant industry experience, in addition to subject-relevant qualification (e.g. degree) and pedagogical training. In addition, many schools have flexible arrangements, with teachers working part time in industry. China has strong arrangements to ensure that teachers in vocational schools remain abreast of the requirements of modern industry. Teachers in vocational schools are required to spend one month in industry each year, or two months every two years. In addition, many schools employ a significant number of part-time teachers who also work in industry (Kuczera and Field, 2010).

For a number of countries, ensuring that all vocational teachers have strong subject-specific and pedagogical skills and ensuring that they keep these up-to-date remains a challenge. In Mexico, for example, many vocational teachers have work experience in their field and continue to work part time. But some start teaching without adequate pedagogical training. The OECD review of VET in Mexico recommended that all vocational teachers receive pedagogical training, that those teaching practical skills in VET schools should have relevant work experience and that schools develop strategies to update the vocational skills of their teachers (Kis, Hoeckel and Santiago, 2009). In Korea the challenge is to ensure that teachers have up-to-date industry specific skills. The OECD review of VET in Korea recommended that newly-recruited VET teachers be encouraged to have relevant prior work experience. It also recommended that all VET institutions be required to ensure that VET teachers regularly update their skills in the vocational area, including their knowledge of technologies and working practices (Kuczera, Kis and Wurzburg, 2009).

Analysis

This section argues that encouraging the recruitment of teachers with relevant work experience helps ensure they have appropriate knowledge of industry needs and can support collaboration between schools and industries. To ensure that VET teachers remain familiar with the industry

needs, they need to regularly update their skills and knowledge. Recruiting workers in mid-career from industry as teachers (often part time) can be particularly helpful in addressing problems of teacher shortage as well as ensuring that teachers have up-to-date technical skills. Some targeted preparation for teachers of general subjects in vocational programmes can also be helpful to ensure that VET students perceive general subjects as relevant to their training. Finally, collecting data on VET teachers can help inform policy making.

Teachers with relevant work experience have various advantages

Relevant work experience provides teacher with a context for their teaching, and increases their confidence in teaching for their occupation, according to a review of existing evidence in the United States on this issue (Lynch, 1998). But beyond a threshold level more work experience does not seem to further improve teaching effectiveness, so the nature of work experience may be more important than its length. As reported by Harris, Simons and Bone (2006), students best learn occupational skills through “hands-on” experience. But VET teachers who lack relevant work experience may find it harder to teach students about the working environment. They may also be more theory-oriented in their teaching and neglect practice as a way of skills development.

Teachers who have worked in industry bring with them not only their practical knowledge but also their network of contacts and personal relationships with their previous colleagues. These networks can be shared, and they powerfully support co-operation between the VET school and industry, including the arrangement of work-based learning opportunities for students. Given the requirement in Viet Nam for all VET students to participate in an internship, strengthening such networks between VET schools and industry could prove particularly useful. In addition, according to Australian evidence, work-relevant qualifications of VET teachers in secondary schools can improve industry’s perception of the quality of VET programmes (Spark, 1999, in Dalton and Smith, 2004).

Vocational teachers need to regularly update their skills and knowledge of modern workplaces

VET needs to continuously adapt to rapidly changing labour market needs. Vocational teachers therefore have to be aware of new technologies applied in industry and their impact on working and production methods, as well as of the generic skills required in the workplace. Without regular updating, the vocational skills of teachers become obsolete over time. Addressing this challenge is particularly important for Viet Nam, as its

economy grows rapidly, human resource development is a strategic priority (as illustrated, for example, by the Vietnamese Socio-Economic Development Strategy 2011-2020), but VET programmes are often perceived as disconnected from the reality of industry.

As in Viet Nam, in many countries keeping the occupational skills of VET teachers up-to-date is a challenge. For those who worked in industry before starting to teach, the risk is that their ties to enterprises diminish significantly after they enter the teaching profession. Viet Nam has recognised the importance of this issue and aims to address the challenge through the new law on VET, which will require VET teachers who deliver practical training to regularly spend time in industry. This initiative is welcome and will need to be complemented with careful implementation to ensure its benefits are fully realised. For effective implementation schools and their vocational teachers will need to build links with industry, to ensure that teachers can find placements corresponding to their needs, ensure that during the placement period teachers do useful work and acquire relevant skills and knowledge. The process surrounding such placements (including the negotiations before, monitoring of the placement and follow-up) can itself be useful in promoting communication between VET schools and companies (see the section on strengthening employer engagement for further details).

Recruiting teachers who work in industry has various potential benefits

People working in industry, equipped with practical workplace skills need to be encouraged to become vocational teachers. This can facilitate recruitment and could be particularly beneficial to Viet Nam, as it faces a shortage of VET teachers and many of those in the VET teacher workforce lack work experience in industry. In many countries there are staff who work part time as VET teachers and part time in industry. Such arrangements offer particular benefits because these teachers remain in close touch with the changing industry needs, and this pattern of working may also appeal to those who wish to develop a career as a teacher but retain a job in industry. Skilled workers may also be hired from companies on short-term contracts to fill VET teacher vacancies. Such arrangements exist in Norway, where VET institutions and local employers cooperate to ensure an adequate supply of vocational teachers. To promote such arrangements, close collaboration between providers and employers is crucial.

Effective and diverse pathways of entry into the vocational teacher profession may help with this (Box 9 provides some examples). Viet Nam already has relevant arrangements, as part-time teaching is allowed and

workers from industry may enter the teaching profession after some targeted preparation. A key challenge for Viet Nam is to ensure that the pathways from industry to VET teaching are well-known, appealing to workers in industry, and are sufficiently used.

Box 9: Pathways from industry to teaching in VET

Denmark

In Denmark, work experience is at the core of VET teacher preparation. A candidate for a post as a VET teacher is required to have relevant apprenticeship training and five years of work experience. Prior training in pedagogy is not necessary but can be started after beginning teaching (Sören, 2007).

Norway

In Norway there are two possible paths for VET teachers. First, three years at University College, prior to which candidates should have a trade- or journeyman's certificate, work experience and qualification for higher education. During the course, the student follows 12 weeks of pedagogical practical training in a school or other training institution. In order to strengthen the vocational breadth of their competences, the students must also follow up to 12 weeks of practical training in co-operation with an enterprise within the chosen upper secondary programme. Second, one year practical pedagogical education (*Praktisk pedagogisk utdanning*): candidates are required to have either a craft- or journeyman's certificate or other completed upper secondary education, plus a certificate qualifying the student for higher education/non-formal or informal learning, plus two years of theoretical education in the trade, plus at least two years' work experience following the trade- or journeyman's certificate. Those with professional bachelor's or master's degrees and at least two years of relevant work experience are also eligible to enrol in the pedagogical training.

Source: OECD (2010)

South Carolina (United States)

In programmes such as welding, cosmetology and culinary arts, individuals with relevant work experience can enter the teaching profession through the state's career and technical education (CTE) work-based certification programme. Candidates must show that they have the required competences by obtaining an appropriate industry certification or passing a state-approved competence examination in the chosen area. The prospective CTE trainers coming from industry and business often have little experience with teaching. To provide them with pedagogical skills and help them to make a successful transition from industry to school, an obligatory training programme (DIRECT) was designed especially to meet their needs. The DIRECT programme provides both classroom and hands-on instruction in methods of teaching, classroom and laboratory management, curriculum and assessment. Courses are provided in a block over a few days during the summer and on a couple of other Saturdays during the school year.

Source: Rex J., V. Evans Harrison, J. Couch (2008), South Carolina Five-year Plan, July 1, 2008-June 30, 2013 for the Carl D. Perkins Career and Technical Education Act of 2006, South Carolina Department of Education, www.scdirect.org/.

Box 9: Pathways from industry to teaching in VET (*continued*)

Switzerland

The Swiss Federal Institute for Vocational Education and Training (SFIVET) offers training courses leading to a federal certificate to people who work in industry and wish to teach part time in a VET school at upper secondary level. Entry requirements for the training course include a tertiary degree in the relevant field, at least six months work experience in the relevant field, and part-time employment as a teacher – applicants start teaching and follow the course at the same time. The length of the programme is 300 hours, typically completed over a 6 month period.

At the end of the programme, participants are expected to be able to plan and give classes, and evaluate these. The programme includes:

- Context of vocational education and training.
- Young adults in training: theories of learning.
- Structuring teaching: from preparing a lesson to evaluating the competences acquired by students.
- Teaching techniques and application to the case of VET schools.
- Developing your teaching potential: teaching styles, communication skills, relationships with students.
- Observing and analysing lessons given by participants.

Source: Swiss Federal Institute of Vocational Education and Training, www.ehb.schweiz.ch/fr/formation/certificats/Documents/Certifeaccs.pdf.

Teachers of general subjects in VET programmes can also benefit from specific preparation

General teachers, for example those teaching physics to electricians in VET institutions, are in a somewhat different position. While workplace experience may be less relevant to them than to their colleagues responsible for practical skills, there remain issues about both the content of what is taught – so that it is most useful in the workplace – and how it is taught – so that its relevance is clear to the student. In Switzerland, teachers of these general subjects in VET institutions are required to take an additional course to ensure that the subjects are made relevant to the needs of VET students. For those who have a school teacher's certificate at upper secondary level this involves 300 learning hours. The institution which commonly provides

these courses (the Swiss Federal Institute for Vocational Education and Training) also serves as a centre of expertise on the training of VET teachers.

Data collection on VET teacher workforce help inform policy makers

For any VET system, diagnosing a recruitment challenge requires good data. This means collecting data on the age of the workforce, and retirement and recruitment rates, so that simple extrapolations of the trainer labour force can be estimated. Better data would allow policy makers not only to diagnose the scale of any problem, but also to predict its evolution over time (given projected retention and recruitment rates), and to evaluate different potential solutions – for example, making it possible to compare the impact and cost of salary increases with other incentive mechanisms. But in many countries data on the VET teacher and trainer workforce are weak. Longitudinal data, at least on a sample basis, would help to illuminate the factors influencing key career decisions. Such data exist, for example, in the United States and have been used to identify key factors affecting the teacher and trainer workforce.

Policy pointers for Viet Nam

- Encourage newly-recruited vocational teachers to have relevant work experience in industry prior to entering the teaching profession.
- Encourage part-time working among VET teachers, with teachers in VET institutions spending some of their time in industry.
- Promote flexible pathways of entry into the VET teaching profession. Facilitate the entry of skilled workers from industry into the workforce of VET institutions through effective pedagogical preparation.
- Encourage interchange and partnership between VET schools and industry to facilitate effective implementation of the planned mandatory requirement for VET teachers imparting practical training to spend time in industry. With effective implementation, such placements should allow vocational teachers to update their knowledge.

Implementing a qualifications framework

Comparing Viet Nam with OECD and partner countries

Vietnam is currently developing a national qualifications framework. In the current draft national qualifications framework Levels 1 and 2 cover training that lasts less than three months, Level 3 corresponds to elementary level VET, Level 4 to intermediate level VET, Level 5 to diploma level VET, while Levels 6, 7 and 8 correspond to bachelor degree, master's degree and PhD respectively (MOLISA, personal communication, July 2015).

Many OECD countries are currently implementing qualification frameworks, or have done so recently. Broad support for the introduction of qualification frameworks was advanced in the OECD reviews of VET in Mexico (Kis, Hoeckel and Santiago, 2009) and Chile (Kis and Field, 2009). They have often been used as part of broader reforms. In principle, they can make vocational education and training systems more transparent, so that the value of different qualifications can be more clearly recognised by students, employers and other stakeholders. If frameworks are underpinned by a strong methodology for allocating qualifications to levels, supported by key stakeholders, and backed by complementary measures to unify the vocational system and improve transitions, they can facilitate lifelong learning, and improve access to higher-level education (OECD, 2010). At the same time, expectations of qualifications frameworks have sometimes been too high. Experience from various countries shows that qualifications frameworks are not a panacea (see Allais et al., 2009).

Analysis

Qualifications frameworks can be helpful but need to be carefully implemented

Potentially, the introduction of a qualifications framework may:

- Help to facilitate pathways of progression within the education system, by situating qualifications at different levels and clarifying how they relate to each other. Transparent progression pathways help to clarify the place of vocational qualifications and facilitate lifelong learning.
- Create, in the context of stakeholder engagement with the framework, a forum for co-operation between the different stakeholders involved in the VET system.

- Improve quality assurance mechanisms by challenging individual qualifications to demonstrate that they deserve a given rank in the framework.
- Give employers a clear view on the level of competences which should be associated with different qualifications.

Systematic evidence on national qualifications frameworks and their effects is scarce, but some common themes have emerged in the literature as set out below.

Making frameworks and underlying qualifications credible

Credibility requires a defensible methodology for locating individual programmes and courses within a qualifications framework – to demonstrate that one programme is indeed at level 3, for example, and is, by some objective test, superior to level 2. The methodology also needs to command the support of employers, preferably because it has been developed with their involvement, so that employers take the framework seriously. Strong quality assurance mechanisms are crucial to ensure the value of qualifications that are included in the framework.

At the same time as Viet Nam is developing its national qualifications framework, it is also reforming graduation requirements in the context of the introduction of module-based and credit-based programmes. Under the new Law on Vocational Education and Training (see Box 2) students will be able to obtain a qualification without a final examination. In this context, as new regulations regarding graduation requirements are being developed, the way learning outcomes are assessed must receive particular attention. In order to be credible, qualifications need transparent and consistent assessment, which guarantee that qualification holders have the intended skills. Transparent and consistent assessment frameworks ensure that clear standards are applied, benefit students by making it easier to prepare for the exams, and grant employers more confidence in the skills of qualification holders.

Assessment is the rock on which strong qualifications rest, confirming that qualified persons have the intended competences. Close attention to the quality of those assessments is required. Some assessments of vocational skills are paper and pencil, but many, for good reasons, involve practical work tasks, where consistent assessment is difficult and/or costly – in particular when practical skills are to be tested and the material and equipment involved is expensive. In addition, incentives to pursue such rigorous assessments of vocational skills are often weak. Institutions that provide VET (schools, colleges etc.) sometimes have incentives to lower

standards and increase pass rates, to make their qualification more appealing to students. While some employers might notice declining standards, this risk is often less compelling than the more obvious appeal of marketing “easy” qualifications to students. Such challenges were noted in the review of Korea (Kis and Park, 2012), where mainly tuition-funded junior colleges have strong incentives to attract students, and allow them to graduate. The review of England highlighted a similar challenge, as training providers may choose among different awarding organisations (which define the content of qualifications and examination requirements). Training providers receive public funding depending on whether the qualification is obtained by the student, so that there are incentives for awarding organisations to create less demanding qualifications that are easier to teach and easier to pass (Musset and Field, 2013; Richard, 2012). The review of the United States highlighted a similar challenge for certifications (Kuczera and Field, 2013).

Austria provides an example of assessments in modularised postsecondary VET programmes, where institutional autonomy is balanced by quality assurance (see Box 10).

Box 10: Assessments in modularised post-secondary VET programmes in Austria

In Austria, all professional bachelor and master programmes are accredited and evaluated by the Council of Universities of Applied Science (*Fachhochschulrat*). Programmes are modularised, and each module prescribes competences that students should have obtained upon completion of the course. Each institution can develop curricula for the programmes it provides, but each programme must be accredited and the proposed curricula approved as part of the accreditation procedure. Similarly, each institution can set its own examination procedures, but these must be approved through accreditation. Students are tested typically after completion of the relevant module to check whether they have acquired the relevant skills. Examination assignments are developed by teachers, based on the curriculum. At the end of the programme, students prepare a diploma thesis and pass an oral examination. The composition of the examination board must be approved in the accreditation process.

Source : FH Council (2010), *Guidelines of the Fachhochschule Council for the Accreditation of Bachelor's, Master's and Diploma Degree Programmes*, www.fhr.ac.at/fhr_inhalt_en/00_documents/AR_08102010_Version1.1.en.pdf; ISO (2012), *New and Improved ISO/IEC 17024 Standard for Personnel Certification Programmes*, www.iso.org/iso/home/news_index/news_archive/news.htm?refid=Ref1625, International Organization for Standardization, (accessed on 28 March 2013).

Co-operation across government and different stakeholders

A qualifications framework can improve articulation across different institutional sectors by locating qualifications delivered by different sectors within the same framework. But the articulation is not automatic. Close co-operation between the sectors of government is also necessary to ensure coherence, avoid duplication of effort and to create progression pathways within the system. In Viet Nam, in addition to co-operation between different government agencies, effective engagement of employers in the design, implementation and updating of the qualifications framework would be essential (see also section on strengthening employer engagement).

Implementation may be difficult

The implementation of national qualifications frameworks is often associated with administrative difficulties, such as a proliferation of bodies dealing with quality assurance, standard setting and assessment. The lack of expertise among staff can lead to an excessive focus on bureaucratic procedures rather than the quality of learning, undermining trust in the new qualifications and producing complaints about the slowness of the process (Young, 2005). There may also be tensions between public bodies, such as different ministries or agencies dealing with qualifications (Young, 2005). In New Zealand, for example, tensions between the qualifications authority and the Ministry of Education were the source of serious problems (Philips, 2003).

Avoiding the proliferation of qualifications

Regardless of the existence of a national qualifications framework, proliferation of qualifications remains a risk. Although qualifications should cover a wide range of occupations and competences demanded in the labour market, the number of qualifications should be limited, since otherwise the meaning of a qualification and its signalling value may be reduced. While new qualifications are always needed, there need to be checks in place to see that they add value rather than adding confusion.

In Switzerland, for example, when new federal diploma qualifications are approved, they are industry-led, but the federal authorities check that the proposed qualification has the support of the whole industry sector, not just of some enterprises. This means that the whole industry sector can be engaged in the updating of the qualification in response to changes in technology or industry organisation. Micro-qualifications, appropriate only to a small industrial subsector, also need to be avoided as they may be unhelpful to graduates if they wish to change jobs and develop their careers. In Viet Nam active engagement of employers in the introduction and

updating of qualifications would be crucial. Creating systematic arrangements that allow employer representatives to engage with VET policy development (see section above) would greatly facilitate this.

Consultation and a gradualist approach

Consultation with employers over the elaboration and updating of qualifications is crucial to ensure that qualifications are recognised on the labour market. Partnership between different stakeholders is the key to success (Young, 2005; Raffe, Gallacher and Toman, 2007). Qualifications rely on trust, since they inevitably claim to represent more than they can demonstrate. Support from different institutional sectors in the education and training system also facilitates effective implementation. Experience from various countries shows that pragmatic and incremental change is more likely to succeed than a radical break with previous qualifications arrangements (Young, 2005; Raffe, Gallacher and Toman, 2007). For example, it may be easier to introduce national vocational qualifications in certain industrial sectors first and then gradually extend them. National vocational qualifications could be created in fields where occupational standards are widely agreed, and homogeneous across the country, and where it is in the interest of all stakeholders to create a national qualification. Finally, expectations need to be realistic about the capacity of the framework to achieve change, and the speed at which change may be achieved (Raffe, Gallacher and Toman, 2007).

Resource implications

The costs of implementing a national qualifications framework can be significant. They include policy analysis, assessment of international experience, development of options, creation of task groups, engagement of stakeholders, the establishment of a specific national body, and piloting. While the central administration costs of a qualifications framework may be modest, further costs can arise from associated processes, such as quality assurance procedures and the development of standards. At the same time, in a better co-ordinated qualifications system there are likely to be some cost savings, because there can be less duplication of effort. Investment into institutional capacity building, and in improved training and professional development for teachers and trainers, is necessary to develop trust and limit the costs of the qualifications framework (Young, 2005).

Policy pointers for Viet Nam

- Systematically engage with employers and other key stakeholders to develop and implement the qualification framework. This may involve a

gradualist approach to implementation, to ensure the full buy-in of all stakeholders.

- Ensure that assessments are reliable, consistent and demanding so that the qualifications they support are credible proofs of competence.

References

- Aarkrog, V. (2005), “Learning in the Workplace and the Significance of School-based Education: A Study of Learning in a Danish Vocational and Training Programme”, *Lifelong Education*, Vol. 24, No. 2, pp. 137-147.
- Allais, S., D. Raffe, R. Strathdee, L. Wheelahan and M. Young (2009), “*Learning from the first qualifications frameworks*”, ILO Employment Working Paper No. 45, www.ilo.org/wcmsp5/groups/public/@ed_emp/@ifp_skills/documents/publication/wcm_041902.pdf.
- Askilden, J. E. and N.A. Øivind (2005), “Apprentices and Young Workers: A Study of the Norwegian Youth Labour Market”, *Scottish Journal of Political Economy*, Vol. 52, No. 1, pp. 1-17.
- Bowman, J.R. (2005), “Employers and the Politics of Skills Formation in a Coordinated Market Economy: Collective Action and Class Conflict in Norway”, *Politics and Society*, Vol. 33, No. 4, pp. 567-594.
- Cornford, I. and D. Gunn (1998), “Work-based Learning of Commercial Cookery Apprentices in the New South Wales Hospitalities Industry”, *Journal of Vocational Education and Training*, Vol. 50, No. 4, pp. 549-568.
- Cort, P., A. Härkönen and K. Volmari (2004), *PROFF – Professionalisation of VET Teachers for the Future*, CEDEFOP, Tessaaloniki.
- Dalton, J. and P. Smith (2004), “Vocational Education and Training in Secondary Schools: Challenging Teachers’ Work and Identity”, *Journal of Vocational Education and Training*, Vol. 56, No. 4, Taylor & Francis Group.
- Dionisius, R., *et al.* (2008), “Cost and Benefit of Apprenticeship Training – A Comparison of Germany and Switzerland”, *Discussion Paper*, No. 3465, IZA, Bonn.
- Fazekas, M. and S. Field (2013), *A Skills beyond School Review of Switzerland*, OECD Publishing, Paris. <http://dx.doi.org/10.1787/9789264062665-en>.
- Field, S., Kis, V. and M. Kuczera (2012), *A Skills beyond School Commentary on Spain*, OECD Reviews of Vocational Education and Training, OECD Publishing, Paris.

- Gibb, J. (1999), "The Quality of Learning", *Australian Training Review*, No. 32 (Oct/Nov/Dec), pp. 32-33.
- Gleeson, D. and E. Keep (2004), "Voice without Accountability: the Changing Relationship Between Employers, the State and Education in England", *Oxford Review of Education*, Vol. 30, No. 1, pp. 37-63, Routledge.
- Harris, R., M. Simons and J. Moore (2005), "A Huge Learning Curve: TAFE Practitioners' Ways of Working with Private Enterprises", NCVET, Adelaide.
- Hawke, G. (1998), "Learning, Workplaces and Public Policy" in J. McIntyre and M. Barrett (eds.), *VET Research: Influencing Policy and Practice, proceedings of the First National Conference of the Australian Vocational Education and Training Research Association*, Sydney.
- Hoeckel, K. (2010), *Learning for Jobs. The OECD Review of Vocational Education and Training. Austria*, OECD, Paris, www.oecd.org/dataoecd/29/33/45407970.pdf.
- Hoeckel, K., S. Field and W.N. Grubb (2009), *Learning for Jobs: OECD Reviews of Vocational Education and Training: Switzerland*, OECD, Paris. Available at: www.oecd.org/dataoecd/12/5/42578681.pdf.
- Kilpatrick, S., V. Hamilton and I. Falk (2001), "Issues of Quality Learning: Apprenticeship in Rural and Remote Australia", *Australian and New Zealand Journal of Vocational Education Research*, Volume 10 Issue 2, Sydney.
- Kis, V. and E. Park (2012), *A Skills beyond School Review of Korea*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264179806-en>.
- Kis, V., K. Hoeckel and P. Santiago (2009), *Learning for Jobs. The OECD Review of Vocational Education and Training. Mexico*, OECD, Paris. www.oecd.org/dataoecd/28/37/43277304.pdf.
- Kuczera, M. and S. Field (2010), *Options for China*, OECD Reviews of Vocational Education and Training, OECD Publishing, Paris.
- Kuczera, M. and S. Field (2013), *A Skills beyond School Review of the United States*, OECD Reviews of Vocational Education and Training, OECD Publishing, Paris. <http://dx.doi.org/10.1787/9789264202153-en>.
- Kuczera, M., V. Kis and G. Wurzburg (2009), *Learning for Jobs: OECD Reviews of Vocational Education and Training: Korea*, OECD, Paris. www.oecd.org/dataoecd/53/49/42689417.pdf.
- Lasonen, J. (2005), "Workplace as Learning Environments: Assessments by Young People after Transition from School to Work", www.bwpat.de/7eu.

- Lynch, R. (1998), "Occupational Experience as the Basis for Alternative Teacher Certification in Vocational Education", *Quality of Vocational Education: Background Papers from the 1994 National Assessment of Vocational Education*, pp. 43-64.
- Musset, P. and S. Field (2013), *A Skills beyond School Review of England*, OECD Reviews of Vocational Education and Training, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264203594-en>.
- NCVER (2004), "Profiling the National Vocational Education and Training Workforce", NCVER, Adelaide.
- Norwegian Directorate for Education and Training (2008), "Responses to the National Questionnaire", unpublished.
- OECD (2008), The OECD International Survey of VET Systems: First Results and Technical Report, unpublished.
- OECD (2010), *Learning for Jobs*, OECD Publishing, Paris. <http://dx.doi.org/10.1787/9789264087460-en>.
- OECD (2014a), *Skills Beyond School: Synthesis Report*, OECD Reviews of Vocational Education and Training, OECD Publishing, <http://dx.doi.org/10.1787/9789264214682-en>.
- OECD (2014), *Education at a Glance 2014: OECD Indicators*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/eag-2014-en>.
- OPET (2008), *Resultate Evaluation Lehrbetriebsverbände*, OPET, Bern.
- OPET (Federal Office for Professional Education and Technology), (2011), "Skills beyond School. The OECD Policy Review of Post-Secondary Vocational Education and Training' *Swiss Background Report*, OPET, Bern; OPET (2012) *Federal Office for Professional Education and Technology* website, www.bbt.admin.ch, (accessed on January 2012).
- Rauner, F. (2007), 'Kosten, Nutzen und Qualität der beruflichen Ausbildung', *Bremen University*, Bremen, http://www.pedocs.de/frontdoor.php?source_opus=9142
- Rex J., V. Evans Harrison, J. Couch (2008), 'South Carolina Five-year Plan', *Carl D. Perkins Career and Technical Education Act of 2006*, July 1, South Carolina Department of Education.
- Richard, D. (2012), 'The Richard Review of Apprenticeships', *School for Startups*, London, www.schoolforstartups.co.uk/richard-review/richard-review-full.pdf.

- Richardson, S. (2005), 'New Estimates of Employers Contributions to Training, in K. Ball', *Funding and Financing of Vocational Education and Training, Research readings*, NCVET, Adelaide.
- Robertson, I., et al. (2000), 'Evaluating On- and Off-Job Approaches to Learning and Assessment in Apprenticeships and Traineeships', *Post Compulsory Education and Training Conference*, Gold Coast.
- Seagraves, L. and M. Osborne (1997), "Participants in a Work-based Learning Programme: Small and Medium Enterprises and their Employees" in *Good Thinking: Good Practice – Research Perspectives on Learning and Work*, 5th Annual International Conference on Postcompulsory Education and Training, Griffith University, Brisbane.
- Smits, W. (2006), "The Quality of Apprenticeship Training", *Education Economics*, Vol. 14, No. 3 pp. 329-344, Routledge.
- Sören, N. (2007), "The Professional Situation and Training of Vocational Teachers in Denmark", in Grollmann P. and F. Rauner (eds.), *International Perspectives on Teachers and Lecturers in Technical and Vocational Education*, pp. 77-96, Springer.
- Spark, C. (1999), "Vocational Education and Training in Senior Secondary Schools", *Vocational Education and Assessment Center*, Canberra.
- UKCES (2011), UK Commission for Employment and Skills website, www.ukces.org.uk, (accessed on December 2011).
- UNIDO (2014), Benchmarking study and strategy development review for the modernization of Viet Nam's industrial skills training system, Project of the Government of the Socialist Republic of Viet Nam, unpublished.
- Vallence, K. (1997), "Training One-to-one: Out of Sight, Out of Mind" in *Good Thinking: Good Practice – Research Perspectives on Learning and Work*, 5th Annual International Conference on Post-compulsory Education and Training, Griffith University, Brisbane.
- VHLSS (2010), *Vietnamese Household Living Standards Survey*. General Statistics Office of Viet Nam.
- Wolter, S., S. Mühlemann and J. Schweri (2006), "Why some firms train apprentices and many other do not", *German Economic Review*, Vol. 4, No. 1, pp. 249-264.
- World Bank (2013), "Viet Nam Development Report 2014, Skilling up Viet Nam: Preparing the workforce for a modern market economy", *World Bank*, Washington.

Annex A: QualiCarte (Switzerland)

Company/institution.....
 Date

 Name of supervisor.....

 Assessment - - does not meet criteria - partially meets criteria
 + meets criteria (there is room for improvement) ++ meets criteria well

Quality indicators	Assessment				Notes
	- -	-	+	++	
Hiring: The receiving company/institution establishes the conditions of hiring.					
1. The criteria defining the expected profile of the apprentice are announced.					
2. Interviews are conducted with the applicants, in addition to other recruitment tools.					
3. “Taster apprenticeships” (short periods allowing potential apprentices to learn about the job) are organised.					
4. The results of the application process are communicated clearly.					
5. Information is provided on working conditions.					
6. The terms of contract are explained to the apprentices.					

Starting the training: A special programme is prepared for the initial period spent in the company/institution.					
7. The persons responsible for the apprenticeship are designated.					
8. The apprentice receives a personal welcome.					
9. Information is provided on the activities of the company/institution and the relevant industrial field.					
10. The apprentices are informed about work, security, health and hygiene regulations.					
11. A workplace equipped with the necessary tools is available to the apprentice.					
12. The apprentices are informed about the importance of the training plan (methodological guide, apprenticeship plan etc.).					
13. There is a regular dialogue between the apprentice and supervisor during the probationary period. At the end of the probationary period a training report is written together with the apprentice.					

Training: The company/institution helps the apprentice acquire competences required in the labour market and takes the time to provide training and progressively transmit their knowledge and skills.					
14. The training of the apprentice provided by supervisors is embedded in the company/institution.					
15. The training plan and other tools to support learning are used in an interactive way.					
16. The supervisor defines clear and measurable objectives.					
17. The different working methods and procedures are planned, demonstrated and explained.					
18. Tasks carried out by the apprentice are subjected to qualitative and quantitative control.					
19. The apprentice progressively becomes involved in the company's activities, with increasing autonomy.					
20. The performance of the apprentice in the VET school and industry courses is taken into account and discussed.					
21. The supervisor supports each apprentice according to his/her potential and needs.					
22. The supervisor prepares a training report at the end of each semester, according to relevant regulations ("ordinances").					
23. The supervisor takes into account the feedback received from the apprentice as much as possible.					

Responsibility of the training company/institution: The company/institution is engaged and collaborates with all those involved in the training.					
24.	If the apprentice has difficulties, the supervisor contacts his/her parents, school or relevant VET office.				
25.	If there is a risk of breaking off the apprenticeship contract, the training company/institution immediately informs the relevant authorities.				
26.	The departure of the apprentice is in order.				
27.	The supervisor continuously updates his/her skills needed to support apprentices.				
28.	The company/institution provides the supervisor with the necessary time, financial and material resources.				

Objectives	Deadline

The supervisor (name and signature)

.....

For the company/institution (name and signature).....

.....