

Chapter 1

Introduction

In recent years, vocational education and training (VET) has become a policy priority in OECD countries. There are three main reasons. First, VET has an important economic function, providing trade, technical and professional skills for the workforce. Second, there are signs of emerging strains in VET systems, including a lack of workplace training places and a shortage of vocational trainers and teachers. Third, VET has been neglected in the past, certainly by analysts, but also to some extent in the policy arena. In the light of this strategic priority, the OECD launched the current policy review. It involves analytic work and 15 country reviews over the period 2007-10, leading in 2009 to this initial report and a final publication in 2010.

Many vocational skills, particularly practical skills, can in principle be learnt on the job by employees. But firms may be unwilling to invest in training for different reasons, because they fear poaching, or are too small and specialised to provide broad enough training to give a young person a good start in working life. High minimum wages and other labour market regulations may make it more attractive for an employer to hire trained workers than to train raw recruits. For these reasons and others, it often makes sense for governments to provide vocational training to young people. This report is primarily concerned with initial VET, meaning VET programmes designed primarily for young people – but including programmes at both secondary and post-secondary level. It touches less directly on training for employees. Its agreed focus is on how VET systems can respond better to labour market needs.

While countries can learn much from each other in designing their VET systems, lack of data and diversity of VET systems makes international comparison hard. This comparative review therefore aims to enlarge the evidence base on what works in VET. It is designed to help governments shape their policies so that they teach the right mix of skills to meet labour market needs, so that they prepare their teachers and trainers well, and that they make full and effective use of workplace training. In addition, countries need to fully engage employers and trade unions to support policy development and implementation.

1.1 How the OECD review came about

Learning for Jobs: bridging the gap between education and working life

For many learners in vocational education and training (VET, for a definition see Box 1.1) and for many employers, the gulf between learning and work is large. Learning is often seen as abstract, classroom-based and academic. The world of work is seen as concrete, with bosses and customers, profits and machinery.

Those are stereotypes of course, but with a grain of truth. Institutions providing VET have a style and ethos quite different from the world of work, with different institutional goals, different funding incentives and different constraints. And yet, despite the separation, the task in VET institutions remains that of meeting labour market needs – of providing *learning for jobs*. Countries are trying to do this in different ways. They are building partnerships with industry to ensure that VET provision is relevant to their needs. They are developing programmes for workplace experience and training. They are working with industry to identify new technical skills and build them into qualifications systems and VET provision. They are following up learners into the labour market to see if, in fact, the learning has led to relevant jobs.

Box 1.1 Defining vocational education and training

Vocational education and training (VET) includes education and training programmes designed for, and typically leading to, a particular job or type of job. It normally involves practical training as well as the learning of relevant theory. It is distinct from (academic) education – for example in mathematics, which is relevant to a very wide range of jobs. In the United States the usual term for vocational education and training is *career and technical education* (CTE). Education and training for some high level professions such as medicine and law meets the definition but is not normally described as VET.

Initial VET includes programmes mainly designed for and used by young people (we propose those under 30) at the beginning of their careers and commonly before entering the labour market. It includes many upper secondary and tertiary programmes. *Continuing VET* is all other sorts of VET, including enterprise training of employees, and training provided specifically for those who have lost their jobs.

These definitions and distinctions inevitably leave some blurred edges, since programmes can meet some of the relevant criteria but not all of them (for example programmes designed for direct labour market entry but which rarely result in that outcome).

This is the *initial* report of the comparative study of Learning for Jobs. The *final* comparative report will be published in book form in late 2010 (see Box 1.2).

Box 1.2 Learning for Jobs: the OECD VET study

This study seeks to help countries increase the responsiveness of VET systems to labour market requirements. It aims to improve the evidence base, identify a set of policy options, and develop tools to appraise VET policy initiatives. It looks primarily at initial VET in schools, workplaces and colleges and other providers.

A programme of analytical work draws on evidence from all OECD countries. It includes an international questionnaire on VET systems, literature reviews of previous OECD studies and the academic literature on topics such as costs and benefits of VET, and analysis of available VET indicators.

Country policy reviews are being carried out in Australia, Austria, Belgium (Flanders), the Czech Republic, Germany, Hungary, Ireland, Korea, Mexico, Norway, Sweden, Switzerland, the United Kingdom (England and Wales), and the United States (South Carolina and Texas) between the end of 2007 and 2010. Special studies will also be conducted in Chile and the People's Republic of China. Canada, Denmark, Finland and the Netherlands have also contributed financially to the work.

The results of both the analytical work and the country reviews will feed into the comparative report. This initial version is being made available on the OECD website. The final comparative report, drawing together all the conclusions of the study will be published in late 2010.

For further documents and details of the work programme see www.oecd.org/edu/learningforjobs.

This policy review was conducted simultaneously with another OECD exercise on 'systemic innovation in VET', undertaken by the OECD Centre for Educational Research and Innovation (OECD, 2009). This exercise included case studies in Australia, Denmark, Germany, Hungary, Mexico, and Switzerland.

The current global economic crisis developed while this report was in preparation. The size and impact of the crisis varies from country to country, but potentially it may have significant effects on VET systems. One of the most urgent challenges, faced by a number of countries is how to cope with apprentices made redundant midway through their training. Hard pressed employers concerned by their immediate survival may be less willing to offer workplace training. Fewer jobs will mean that potential learners are keener to undertake full-time education and training, but public expenditure pressures, sharpened by the crisis, may make it much harder to accommodate the increasing demand. Some opportunities may nevertheless emerge – for example to redeploy the practical skills of unemployed professionals as trainers. These immediate pressures on VET systems are currently under examination as part of this OECD review (Brunello, 2009). Some of the conclusions of this initial report are therefore tempered by the need to take full account of a changing economic and labour market environment.

Why OECD countries wanted the review: the Copenhagen meetings

In 2005 in Copenhagen the OECD brought together the chief civil servants of education ministries of OECD countries and asked them to identify their most important policy priorities. The answer they gave surprised many, for it was neither schools nor

universities, but, in fact, vocational education and training. But if in Copenhagen¹, the importance of VET was underlined, the reasons were diverse, as emerged in the subsequent informal OECD ministerial meeting on VET which also took place in Copenhagen in January 2007. Three factors stand out as reasons for the growing interest of policy makers: *economics*, *strains* in the system and *previous neglect*.

On *economics*, many OECD countries worry about ever-increasing global competition. Since OECD countries cannot compete with less developed countries on labour costs, they will need to compete in terms of the quality of goods and services they provide. That means a highly skilled labour force, with a range of mid-level trade technical and professional skills alongside those high-level skills associated with university education. The large numbers of unskilled jobs which existed a generation ago are fast disappearing, and the future is particularly bleak for the unskilled in rich countries, since they are so vulnerable to competition from low-wage countries. And, although general education also has its claims, VET is frequently seen as the right vehicle for upskilling those who would otherwise be unskilled and ensuring a smooth transition into the labour market.

And then there are *strains*. One of them is the lack of workplace training places. Another is the lack of trainers. In some countries the rapid expansion of tertiary education has undermined school-based VET. In Korea for example, around three-quarters of those who undertake upper secondary VET subsequently enter tertiary education, challenging the rationale for these programmes as a direct means of entering the labour market. Career flux means that one-to-one relationships between initial training and a single lifetime occupation have become rarer than ever – questioning the relevance of initial VET training in that form. This factor has led, in the United States, to a new terminology of “career and technical education” in preference to “vocational education and training”.

VET has been *neglected*. The great reform movements which have swept over basic school and university systems have often affected VET, but have rarely taken it as their focus. Challenging issues like how to go about teaching practical skills, or the rapid expansion of tertiary vocational programmes, have been relatively un-analysed. Analysts sometimes find VET dull or incomprehensible, perhaps because they themselves have rarely received their education there. The perceived status of VET has been a barrier to people’s engagement in the sector and how it has been viewed analytically. One objective of this review is to remedy this past neglect.

Clearly many vocational skills, particularly practical skills, are learnt in the workplace by employees either informally or through formal training. Chapter 4 argues that there are many advantages to workplace training. Some skills requirements are volatile and driven by rapid technological change – and such requirements are best met through continuous education and training. Why not, then, leave vocational training to employers and reserve basic education for generic cognitive skills? These would include numeracy, literacy and general subjects like the sciences, history and geography. There are a number of answers:

- First, the traditional economic argument is that, while firms provide firm-specific training to their employees, they have no incentive to provide general training, since the benefits of general training will accrue to the employee, even when the investment in training would pay off handsomely in terms of productivity

¹ Chair’s Summary from the Meeting of the Education Chief Executives, Copenhagen, 22 to 23 September 2005, www.oecd.org/dataoecd/56/34/35557211.pdf.

(Becker, 1975). The more productive trained employees can demand a higher wage, since they can sell their productive skills to the highest bidder. While all kinds of market features mean that employers do provide general training, their incentives to do so are limited. There may also be structural problems, such as the limited training opportunities in smaller firms. One role of initial VET in schools and institutions is to compensate for these weaknesses by providing a strong initial base of vocational skills.

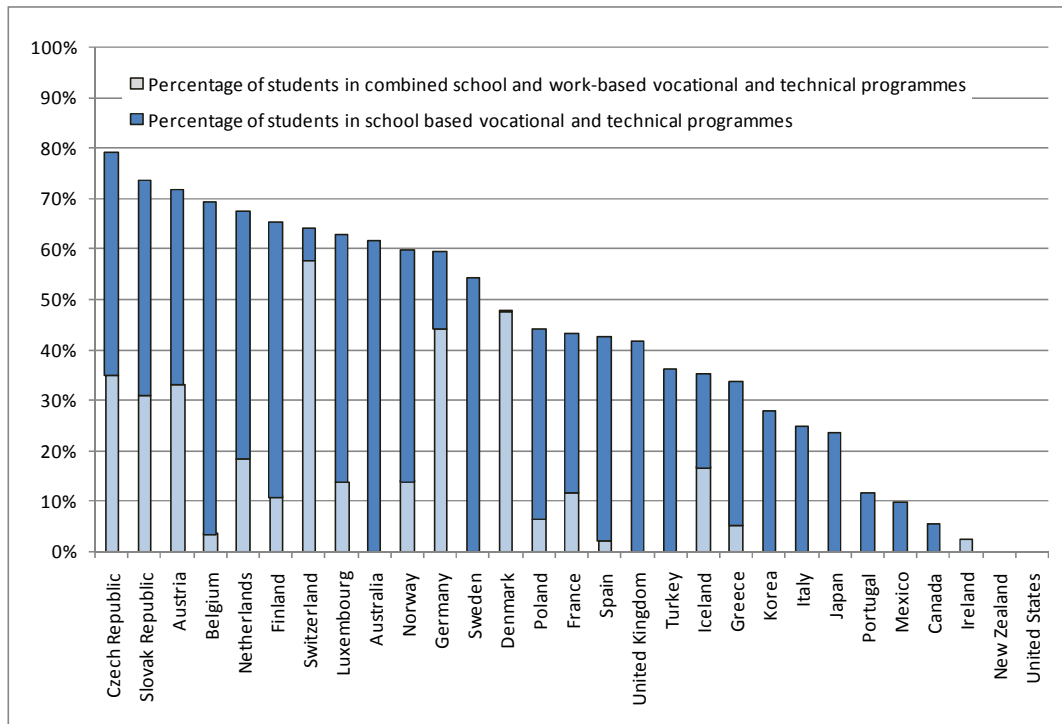
- Second, in some more regulated labour markets many employers may be unwilling to invest in training of the new recruits. In deregulated labour markets employers may be able to run, in effect, an informal apprenticeship system, by recruiting young people at low wages, training them, and retaining the most productive as long-term employees. Legal wage minima, implicit minimum wages set by collective bargaining, and strong employment protection legislation are all potential barriers to this approach. Where these barriers are high, in the more regulated labour markets, the transition of young people from school to work may be more difficult, unless they can present themselves to potential employers as “job ready”. This implies that initial VET can meet this requirement.
- Third, well-educated individuals are much more likely to obtain further education and update their competencies and develop new skills over their lifetime. By the same token, those with lower levels of education, who would benefit the most from additional skills, might not be able to acquire them as readily once in the labour market. These individuals might develop job relevant competencies more effectively when they are still in full-time education, before they enter the labour market. The role of initial VET role would be to provide these skills.
- Finally, some commentators have argued that in the absence of systemic measures to raise skill levels, countries can slip into a “low-skills equilibrium” in which no actor has sufficient incentive to invest in better skills (Finegold and Soskice, 1988). Conversely, the availability of a high-skilled labour force may encourage investment in the country increasing economic growth. At individual level, employee skills may promote the skills of workmates. Alongside the theoretical argument, some VET programmes pay off in the labour market. In the United States, where there is relatively little VET at upper secondary level, a carefully designed study by Meer (2007), controlling for a wide range of potentially confounding variables, reports that returns to upper secondary technical education are positive: “students on technical tracks are not likely to earn more had they chosen differently” (p. 572). In the quite different case of Switzerland, where two-thirds of the cohort enters some form of VET at a secondary level, good rates of return have been calculated for upper secondary VET (Wolter and Weber, 2005). These two examples, at opposite ends of the vocational training spectrum, are no more than indicators, but they suggest that initial VET, designed to fit individual country circumstances, can play a useful role in many education systems.

How we approached the work

Taking account of diversity

It is a commonplace to note the heterogeneity of national VET systems, particularly the contrast between systems where VET plays a very central role in the initial education of young people – for example in Austria, where 70% of young people undertake a VET programme at upper secondary level – and other systems, like the United States, where very few undertake a designated VET programme (see Figure 1.1). In Ireland for example, there is little VET at upper secondary level, but an extensive system, including apprenticeships, above that level (see Figures 1.1 and 1.2). These data have been validated by OECD countries, but they should be used cautiously, given the difficulties attending some of the categorisations.

Figure 1.1 Vocational education and training as a share of the upper secondary sector (ISCED 3), 2006

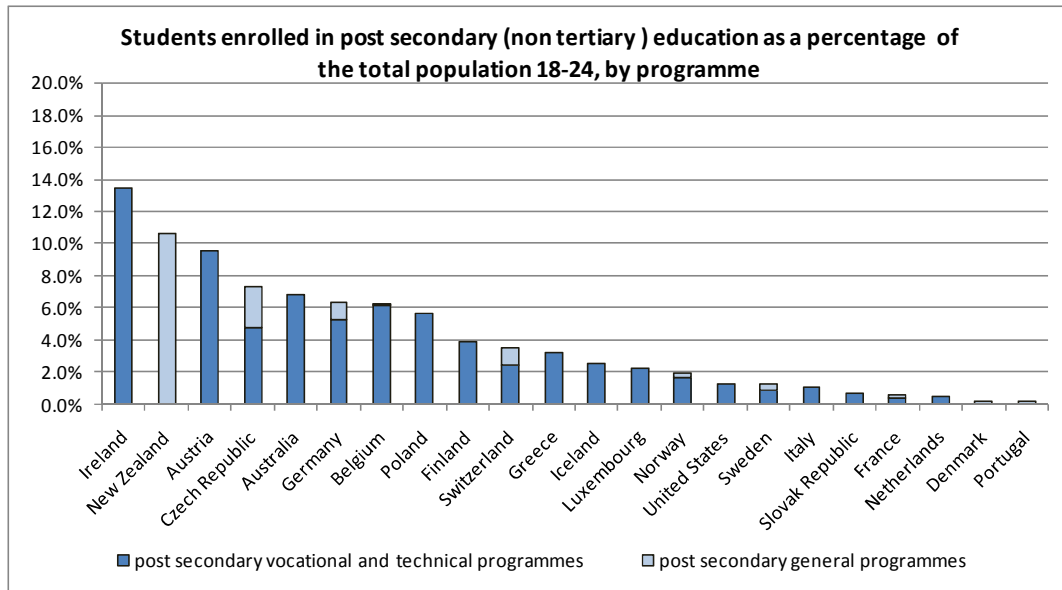


Source: OECD (2008), *Education at a Glance 2008: OECD Indicators*, Table C1.1, OECD, Paris.

Note: In Hungary, the Ministry of Education assesses the share of students participating in vocational training schools as 23% in 2007/8.

Figure 1.2 Vocational education and training between school and university

Post-secondary students (non- tertiary) as a percentage of those aged 18-24

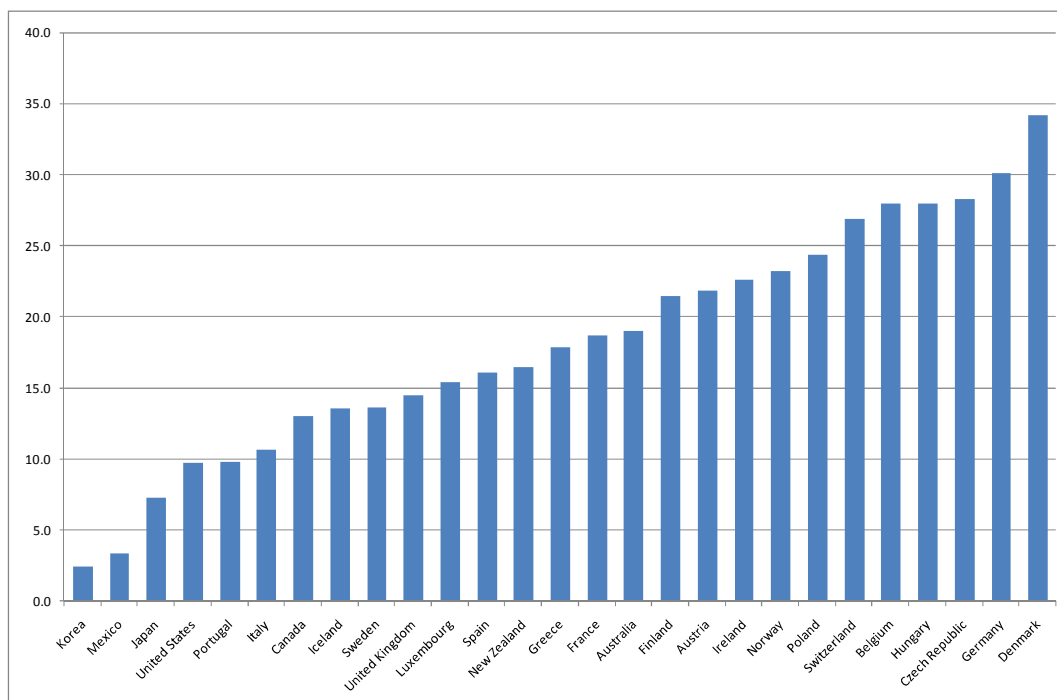


Source: OECD education database

Less well understood is the great variety within families of VET systems, for example the somewhat different approaches to apprenticeship in Germany and Switzerland (see Section 4.1) or the radically different approaches to upper secondary VET in Sweden (where upper secondary VET involves a limited amount of workplace training) and in Norway (where most upper secondary VET students pursue an apprenticeship). Many of these differences in education systems are strongly reflected both in labour market structures, and in attitudes, for example in occupational aspirations. There are striking parallels between the scale of upper secondary VET in countries and the aspirations of 15-year-olds towards high-skilled blue-collar occupations (see Figure 1.3). These high skilled blue-collar occupations include traditional trades like plumbing and electrical trades. At the same time most OECD countries are also seeking to develop VET in new technical white-collar occupations including healthcare and computing.

Figure 1.3 The jobs that young people expect

The jobs that 15-year-olds expect to have by age 30: percentage expecting to have high-skilled blue collar jobs.



Source: OECD (2004), *Education at a Glance 2004: OECD Indicators*, OECD, Paris.

Labour market contexts are equally diverse. In some countries, a combination of minimum wages, collective wage bargaining and strong employment protection legislation means that the costs and risks of recruiting a new employee are high, so employers will be reluctant to recruit untrained workers. Unless the initial VET system can compensate, by ensuring that young people emerge from initial VET “job-ready”, there may be a difficult transition between school and work, and higher youth unemployment. The implication is that a strong initial VET system may be more desirable in labour markets that are more highly regulated in the respects described. Some of these issues are examined in the OECD’s *Jobs for Youth* study. Launched in 2006, this review is examining 16 countries. (For more information, see www.oecd.org/employment/youth.)

There is a complementarity between enterprise training for adults, and the requirement on initial vocational training. A firm’s motivation to invest in vocational training depends on characteristics such as its size, structure and methods of production. In some countries, small and medium-sized enterprises (SMEs) may pursue little employee training – probably because their employees who gain better skills have fewer opportunities to obtain promotion within the company than in large firms, and they may therefore leave for a better job elsewhere (for the case of Korea, see Kuczera, Kis and Wurzburg, 2009). Low-technology firms that rely on intensive use of cheap unskilled labour on fixed-term contracts tend to invest less in skills than companies with highly skilled workers and new technologies (see for example Gashi, Pugh and Adnett, 2008). Under these circumstances initial VET may be proportionately more important because it compensates for market failures which undersupply training among adults.

Given the absence of systematic comparative evidence on the differences between national VET systems, one element in this study was the use of a questionnaire administered to national authorities, designed to identify the main characteristics of national VET systems – including how practical training is conducted, funding, the involvement of the social partners and decentralisation of control (see Box 1.3). This study addresses the difficult challenge of comparing the characteristics of VET systems in different countries. This means summing different VET programmes within countries into aggregate measures which can be compared internationally. This does mean that the internal diversity of individual countries and their institutions is not visible in these tabulations, but this is the price of meaningful international comparisons. The results are used extensively here.

Box 1.3 The OECD International Survey of Vocational Education and Training Systems

In this exercise the OECD put a wide variety of questions to participant countries about their VET systems, regarding teaching and training staff, consultation with the social partners, funding and decentralisation of control. The questionnaire is in three parts, covering upper secondary VET, continuing VET and cross-sectoral issues.

In order to compare different countries, the results from different programmes have to be aggregated. Many of the results are presented in terms of the percentage of national VET programmes to which the response applies. This is calculated as a weighted average of enrolment in different programmes.

Full details will be published in Kuczera, M. (forthcoming).

Many things other than initial VET help to meet labour market needs. These include not only education and training systems, but also formal and informal enterprise training, informal learning, migration flows, and labour force participation, influenced as it is by factors such as pensions arrangements and childcare provision. This has two significant implications. First, in the face of any given labour market need, many public policy instruments are potentially relevant – some labour market needs may be best met by allowing an increased migration flow, or by reforming pension arrangements, rather than through initial VET. Second, for any government to make these choices requires high quality co-ordination across the range of government departments responsible for these different policy areas. This is a major challenge.

Taking account of previous and parallel work

Analytic work on VET has been conducted in universities, national institutes, in international bodies such as United Nations Educational, Scientific and Cultural Organization (UNESCO) and the International Labour Organisation (ILO) and the agencies of the European Commission in the European Centre for the Development of Vocational Training (CEDEFOP) and the European Training Organisation (ETF). Previous OECD work is summarised in Hoeckel (2008). There remain many big gaps in this range of work. One is comparative policy analysis, undertaken across a range of different countries to identify policy solutions that work. This is thin on the ground despite some useful initiatives such as a recent study undertaken by the Bertelsmann Foundation (Rauner, 2009).

The second big gap is data. ISCED remains a weak instrument for identifying VET in secondary and tertiary education, so data on the percentage of the cohort that enters VET remains patchy. Tying VET tracks to labour market outcomes remains impossible at an international level. While these data weaknesses represent a large and continuing challenge, new programmes of work on VET statistics both in the OECD and in the EU context aim to address them.

An initial scoping exercise for this review identified a very large range of potential issues for examination (Grubb, 2007). These include many issues on topics like governance that are not dealt with here. To ensure that the study preserved its focus and responded to country demands, a single objective was identified – that the study should aim to help countries improve the responsiveness of their VET systems to labour market needs. This sounds simple but disguises many ambiguities. We here propose to interpret this objective as follows:

Ensuring that VET students are provided with the skills necessary to work in an “entry” set of occupations, and the broader and flexible competencies necessary to sustain a fulfilling career, in the context of rapid and sometimes unpredictable changes in occupational circumstances.

Defining the scope

The main, but not exclusive focus of this report will be on initial VET for young people. This is for two reasons. First, the OECD has previously given attention to VET in the context of adult learning, notably in the thematic review of adult learning (OECD, 2005). Second, in the country reviews the main policy focus requested by countries reviewed so far has been initial VET. The main policy messages from this study also concern initial VET – programmes mainly designed for and used by young people. These policy messages do not therefore concern the training of employees by enterprises. Upper secondary VET (ISCED level 3) was the focus in many, but not all the initial reviews.

This report is inevitably selective in its coverage. The guiding principle has been to include material when we believed we had something useful to say, leaving many important areas inevitably untouched. In the process we have also identified a number of areas which will be covered in further work and the final version of the comparative review. These include:

- General skills in VET: numeracy and literacy.
- Further analysis of career guidance issues.
- Dropout.
- Comparative costs of apprenticeships in different countries.
- The labour market context for workplace training.
- Tax incentives for employers to offer workplace training.
- The role of qualification frameworks.
- Helping VET systems to cope with the downturn.

In some aspects of VET there is a policy consensus, for example that employers should be engaged in VET, and that workplace training is very important. Often the real challenge here is implementation – making policy reform happen. Policy implementation

is important in all policy areas, but perhaps particularly in the area of VET, because of the need to engage with stakeholders with diverse interests, in particular employers. Countries are highly variable in their success – or failure – in engaging employers and the institutional preconditions of good employer engagement are discussed in Section 5.5. Increased attention will be given to issues of policy implementation as the work develops.

Structure of the report

In the chapters which follow, this report develops a simple policy message. It argues that in order to meet labour market needs, the gulf between VET and the world of work needs to be bridged. Chapter 2, *Meeting labour market needs*, discusses how VET systems can provide the right numbers of trained people, with the right mix of competencies. Chapter 3, *Effective teachers and trainers*, describes measures to sustain and develop the trainer labour force, and to use national assessment frameworks to enhance quality in VET provision. Chapter 4, *Taking advantage of workplace training*, explains the many advantages of workplace learning, suggests some ways of encouraging employers to offer workplace training and proposes some features of effective apprenticeships. Chapter 5, *Tools to support policy*, explores some structural preconditions of effective learning for jobs. These include better data on the labour market outcomes of VET, backed throughout by effective career guidance, a more systematic approach to evidence-based policy making and institutions to engage the social partners.

References

- Becker, G. S. (1975), *Human Capital: A Theoretical and Empirical Analysis, with Special Reference to Education*, Columbia University Press for NBER, New York.
- Brunello, G. (2009), *The Effect of Economic Downturns on Apprenticeships and Initial Workplace Training: a Review of the Evidence*, OECD, Paris. Available at: www.oecd.org/dataoecd/51/41/43141035.pdf.
- Finegold, D. and D. Soskice (1988), “The Failure of Training in Britain: Analysis and Prescription”, *Oxford Review of Economic Policy*, No.4, pp. 21-53.
- Gashi, A., G. Pugh and N. Adnett (2008), “Technological Change and Employer-provided Training: Evidence from German Establishments”, *Working Paper No. 26*, Swiss Leading House.
- Grubb, N. (2007), *Vocational Education and Training: Issues for a Thematic Review*, OECD, Paris
- Hoeckel, K. (2008), *Key Evidence on Vocational Education and Training Policy from Previous OECD Work*, OECD, Paris.
- Kuczera, M., V. Kis and G. Wurzburg (2009), *Learning for Jobs: OECD Reviews of Vocational Education and Training: Korea*, OECD, Paris. Available at: (www.oecd.org/dataoecd/53/49/42689417.pdf)
- Kuczera, M. (forthcoming), *The OECD International Survey of VET Systems*, OECD, Paris.
- Meer, J. (2007), “Evidence on the Returns to Secondary Vocational Education”, *Economics of Education Review*, No. 26, pp. 559–573.
- OECD (2004), *Education at a Glance 2004: OECD Indicator*, OECD, Paris.
- OECD (2005), *Promoting Adult Learning*, OECD, Paris.
- OECD (2008), *Education at a Glance 2008: OECD Indicators*, OECD, Paris.
- OECD (2009), *Working Out Change: Systemic Innovation in Vocational Education and Training*, OECD, Paris.
- Rauner, F. (ed.) (2009), *Steuerung der beruflichen Bildung im internationalen Vergleich*, Verlag Bertelsmann Stiftung, Gütersloh.
- Wolter, S. C. and B. Weber (2005), “Bildungsrendite – ein zentraler ökonomischer Indikator des Bildungswesens“, *Die Volkswirtschaft*, No. 10, pp. 38-42.