



Learning for Jobs OECD Reviews of Vocational Education and Training

Australia

**Kathrin Hoeckel, Simon Field, Troy R. Justesen
and Moonhee Kim**

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ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

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Table of Contents

Summary: Strengths, Challenges and Recommendations	5
Strengths	5
Challenges	5
Recommendations	6
Chapter 1 Introduction	7
1.1 The OECD policy review of Australia	8
1.2 The structure of the report	9
1.3 A snapshot of VET in Australia	9
1.4 Strengths of the Australian VET system	11
1.5 Challenges confronting the Australian VET system	12
Chapter 2 Policy Recommendations	15
2.1 Clarifying responsibilities for VET	16
2.2 Funding reform	17
2.3 Making the market work for VET	21
2.4 Planned provision and skills forecasts	24
2.5 Putting VET data to work	28
2.6 Improving the apprenticeship system	32
2.7 Reforming training packages	35
2.8 Investing in the VET teacher and trainer workforce	40
References	45
Annex A: Background Information	51
1. Terms of reference for Australia	51
2. Biographical information	52
3. Programme of the review visits	53
Annex B: International and National Statistics	55
Tables	
1.1. Australian Qualification Framework categories by sector, and ISCED equivalents	11
B.1. Performance of 15-year-olds in science, reading and mathematics	57
B.2. Attractiveness of Australian universities to international students	58

Figures

1.1. Number of apprentices and trainees in training, at the end of each quarter, 2002-07	10
B.1. Highest qualification level of the population aged 15-64 (% of the population).....	55
B.2. Unemployment rate, Australia, 1980–2007	55
B.3. Labour force participation rate, Australia, 1980–2007	56
B.4. Projection of population ageing, Australia, 2006–2051	59

Boxes

1.1. Learning for jobs: the OECD policy review of vocational education and training	8
2.1. Funding of VET students in Australia.....	18
2.2. User Choice in Australia	22
2.3. The College Navigator in the United States	24
2.4. Skills forecasting for career guidance in the United States	27
2.5. Making data available to VET users in the United States	30
2.6. Approaches to support for apprenticeships	35
2.7. The process of developing and revising training packages	38
2.8. Developing VET teachers and trainers in the Netherlands.....	41

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Summary: Strengths, Challenges and Recommendations

This review of vocational education and training (VET) in Australia is part of “Learning for Jobs”, the OECD policy study of VET – a programme of analytical work and individual country reviews designed to help countries make their VET systems more responsive to labour market needs. The review assesses the main challenges faced by the VET system and presents an interconnected package of policy recommendations, in terms of the challenge, the recommendation itself, supporting arguments and suggested aspects of implementation as well as potential resource implications.

Strengths

Australia has a very well developed VET system, which enjoys a high degree of confidence. In particular:

- The engagement of employers is strong.
- The national qualification system is well established and understood.
- The VET system is flexible and allows for a fair amount of local autonomy and innovation to adapt learning to local circumstances.
- The data and research on most VET issues are good.

Challenges

At the same time there are a number of challenges:

- The division of responsibilities between the Commonwealth and state and territory governments is unclear.
- Principles underpinning funding are not apparent and are inconsistent with human capital policies and principles.
- The use of skills forecasting creates some difficulties.
- There are some weaknesses and gaps in the relevant data.
- Apprenticeships are rigid and seem to depend on duration rather than competence.
- Training package development and implementation processes are inefficient.
- The ageing of the teacher labour force is a serious problem.

Recommendations

1. Commonwealth, state and territory governments should seek to agree common principles for VET funding and provision and to achieve as much administrative consistency as possible, bearing in mind the appropriate interests of local democracy in a context of devolved government. Costs and benefits arising from local variations and from duplication of responsibilities should be quantified.
2. Students should be entitled to pursue VET qualifications without charge up to the level normally attained at the end of schooling, that is, up to Certificate II or III. Fees for higher-level VET qualifications should be levied on the same broad basis as for higher education and defrayed through HECS income-contingent loans.
3. Students entitled to funding should be able to choose VET providers. Open competition should be accompanied by support measures designed to ensure that a good range of provision is accessible to all, including disadvantaged groups, that better information is available to potential students on the quality of providers, and that different types of providers can compete on a fair basis.
4. Skills forecasts are often unreliable and should not be the foundation of central planning. In future, there should be more emphasis on a system driven by student demand balanced by employer willingness to offer workplace training.
5. A broader range of quality and outcome data at the provider level should be developed and made available. This will support student choice and provision driven by student demand. Data should become a systematic element of programme and policy decision making. Efforts should be made to fill the data gaps, including an extension of the Student Outcome Survey.
6. We commend the reforms which base apprenticeships on competencies. These reforms now need to be translated into action, allowing flexibility in the length of apprenticeships and supporting that through a common procedure for their assessment. Costs and benefits of apprenticeships should be analysed, reforms should be evaluated and the results used for policy planning. Ways of integrating apprentices into the production process earlier during their training should be explored.
7. Training packages should be replaced by simple and much briefer statements of skills standards. Consistency in standards throughout Australia should be achieved through a common assessment procedure to determine whether the necessary skills have been acquired.
8. Initiatives in which trainers work part-time in VET providers and part-time in industry should be encouraged. Innovative strategies are necessary to sustain the numbers and skills of the teacher and trainer labour force in providers. Better data on VET teachers and trainers should be systematically collected, published and used for planning and evaluation purposes.

Chapter 1

Introduction

This chapter describes OECD work on VET and the review in Australia, summarises the main features of the Australian VET system in post secondary schools and assesses its strengths and challenges.

1.1 The OECD policy review of Australia

This review is one of a series of reviews of vocational education and training (VET) in OECD countries (see Box 1.1). The terms of reference can be found in Annex A.

Box 1.1. Learning for jobs: the OECD policy review of vocational education and training

This exercise 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.

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 (Flemish Community), the Czech Republic, Germany, Hungary, Ireland, Korea, Mexico, the Netherlands, Norway, Sweden, Switzerland, the United Kingdom (England and Wales), and the United States (South Carolina and Texas), between the end of 2007 and 2010.

The results of both the analytical work and the country reviews will feed into the initial comparative report which will be available on the OECD website in 2009.

The final comparative report, drawing together all the conclusions of the study will be published in 2010.

See also: www.oecd.org/edu/learningforjobs.

The review follows a standard methodology. At the outset, the Australian authorities were invited to complete a detailed questionnaire. Equipped with the responses and other background information, two members of the OECD Secretariat visited Australia on 7-18 April 2008 for two weeks: one week of fact-finding visits to assemble information on the characteristics of VET and, within the terms of reference, to identify the main policy challenges; and one week of policy visits, during which the Secretariat team was joined by two experts (see Annex A for biographical details) to conduct further interviews in various parts of Australia (see Annex A for the programme of visits) in order to develop policy recommendations. This review presents their recommendations, with supporting analysis and data.

This review deals with a deliberately limited set of issues. The topics addressed were defined by the terms of reference agreed with the Australian authorities, and limited to issues on which the review could draw on international experience or could otherwise usefully add value to the domestic policy debate.

The review occurred at a time of change in Australia's government and of openness to reform and collaboration. The fact that currently (October 2008) eight of the nine governments (the Commonwealth, six states and two territories) are of the same political persuasion creates an opportunity that should be grasped. A new national body for VET, Skills Australia, was announced at the time of the visit and has the potential to support the introduction of reforms. A review of higher education in Australia has also been commissioned; the results are expected by the end of 2008.

1.2 The structure of the report

This first chapter places the Australian review in the context of the OECD programme of work on VET, outlines the structure of the report, describes the main features of the Australian VET system, and discusses its strengths and challenges. The following chapter proposes policy recommendations.

Each policy recommendation is set out as follows:

- *The challenge* – the problem that gives rise to the recommendation.
- *The recommendation* – the text of the recommendation.
- *The supporting arguments* – the evidence that supports the recommendation.
- *Implementation* – a discussion of how the recommendation might be implemented.
- *Resource implications* – the costs to different parties.

1.3 A snapshot of VET in Australia

Since the 1990s, the Australian VET system has moved from a system largely run by the states and territories to one in which many features are determined at the national level. A national competence-based system of qualifications has been established. During this time the proportion of working age population with vocational qualifications has risen and the workforce has adapted to Australia's changing economic circumstances, such as increased global trade and industry restructuring (see Figure B.1 in Annex B). For example, VET has helped train employees in the emerging finance sector, and in creative and service industries.

Industry is actively involved in VET policy making and in the development of standards and delivery. The national training system is underpinned by a commitment to competency-based training based on standards defined by Australian industry. VET competencies and qualifications cover around 80% of occupations in Australia. Over half of employers reported having used the VET system in the previous 12 months because they had jobs requiring a VET qualification, employed an apprentice or trainee, or had staff that undertook other nationally recognised training (NCVER, 2008a).

Several market-based approaches have been adopted in the Australian system. Entry of non-public providers has been encouraged, and employers and their apprentices are able to select the provider and type of delivery for public funding of training. Under national quality arrangements, qualifications issued by a registered provider are recognised across all states and territories.

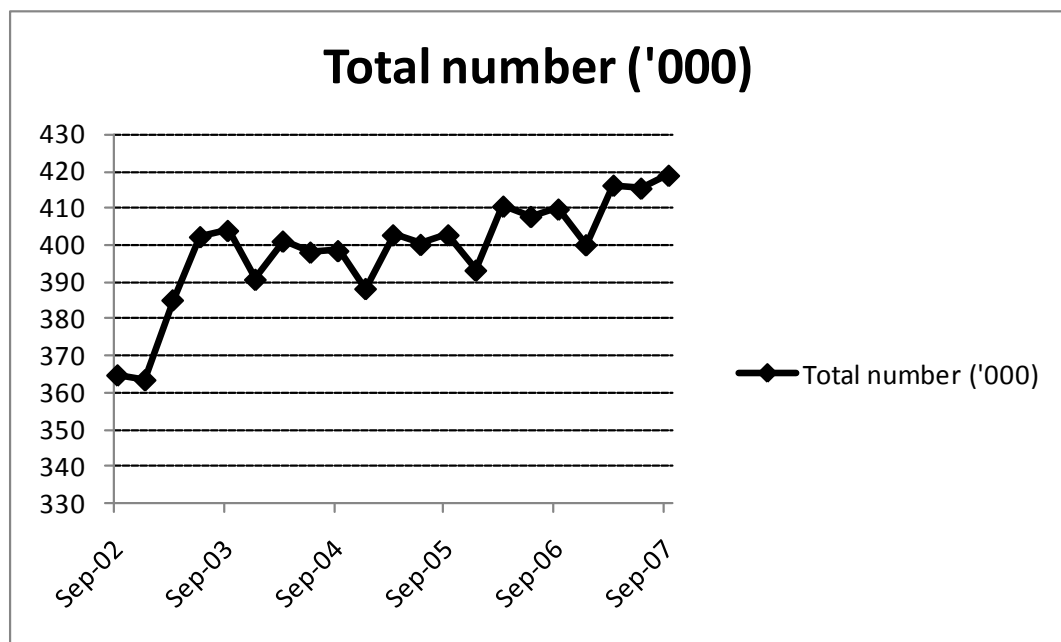
The Australian VET system is characterised by its flexibility, allowing people of all ages to participate. In 2007, 11.3% of the population between 15 and 64 years participated in some form of VET; 88% of VET students study part-time and the age spread is wide (NCVER, 2007d). VET programmes range from a single module or unit of competency to advanced diplomas. The types of training range from formal classroom learning to workplace-based learning and may include flexible, self-paced learning or online training. VET takes place in both private and public registered training organisations (RTOs), in schools, universities or other higher education providers, adult or community education, and various cultural, religious or other bodies providing specific

training in language, religion, etc. Australia currently has over 4 000 RTOs. Most publicly funded training takes place in the public institutes of Technical and Further Education (TAFEs).

VET policy making and planning is the responsibility of the Ministerial Council for Vocational and Technical Education (MCVTE). In addition, the Council of Australian Governments (COAG), composed of the Prime Minister, the premiers of the six states and chief ministers from the two territories, also provides a platform for driving high level reform of VET among the nine governments. Various bodies at national level – the National Quality Council, the National Industry Skills Committee, TVET Australia, including the National Audit and Registration Agency – provide a national framework for the VET system. Employers are represented in several of these bodies and are organised on the sectoral level through the sector skills councils.

Australia has a well-developed apprenticeship system that includes both traditional apprenticeships in traditional trades and “traineeships” in other often more service-oriented occupations. While both types involve a legal contract between the employer and the apprentice and provide a combination of school-based and workplace training, they differ in duration (apprenticeships typically last three to four years, traineeships only one to two years) and in the types of occupation they cater for. Apprentices and trainees receive a wage which increases as they progress. Australian Apprenticeships (including both apprenticeships and traineeships) have become increasingly popular (see Figure 1.1).

Figure 1.1. Number of apprentices and trainees in training, at the end of each quarter, 2002-07



Source: NCVER (2008b), *Australian Vocational Education and Training Statistics. Apprentices and Trainees 2007*, September Quarter, NCVER, Adelaide.

The Australian Qualification Framework (AQF) divides VET into eight levels: Certificates I-IV, VET diplomas and advanced diplomas, VET graduate certificate, and VET graduate diploma (see Table 1.1). Consistent national standards are pursued through

the Australian Quality Training Framework (AQTF), which was updated in 2007. Its three components are: standards for the registration of training organisations, standards for state registration bodies, and a voluntary excellence framework.

Table 1.1. Australian Qualification Framework categories by sector, and ISCED equivalents

Post-compulsory secondary education accreditation	VET accreditation	Higher education (HE) accreditation	International standard classification of education (ISCED) equivalent (a)
Statement of attainment (for partial completion of a full qualification)			None
Senior secondary certificate	Certificate I		2C
	Certificate II		2C
	Certificate III		3C
	Certificate IV		4B
	VET diploma	HE diploma	5B
	VET advanced diploma	HE advanced diploma or Associate degree	5B
		Bachelor degree	5A
	VET graduate certificate	HE graduate certificate	5A
	VET graduate diploma	HE graduate diploma	5A
		Masters degree	5A
		Doctoral degree	6

Source: NCVER (2007a), *Did you know? A Guide to Vocational Education and Training in Australia*, NCVER, Adelaide.

1.4 Strengths of the Australian VET system

Strengths of the general context

- Economic conditions in Australia are good: at the end of 2007, GDP trend growth was 4.0%, workforce participation was high by international standards, and unemployment rates were at a 30-year low of 4.4% (see Figure B.2 and Figure B.3 in Annex B).
- The political alignment of nearly all Australian governments provides an opportunity to adopt consistent policy approaches across Australia.
- Strong basic schooling, as PISA data demonstrate (see Table B.1 in Annex B) provide a good foundation for individuals entering post-school VET.
- There is a good system of tertiary education, as evidenced by the many overseas students choosing to study in Australia (see Table B.2 in Annex B).

Strengths of the VET system

- There is a high level of support for the VET system. Industry bodies strongly influence policies and priorities, and employer surveys show that they are very satisfied with the quality of graduates. (NCVER, 2007c). Student surveys show similarly positive results (NCVER, 2007b).
- The system is flexible and able to satisfy many different needs at many different points in people's lives whether they are preparing for a first career, seeking

additional skills to assist in their work, pursuing learning outside of their work needs or catching up on educational attainment.

- The qualifications system is clear and consistent across the states and territories.
- The apprenticeship system appears to be reasonably well supported by employers and the number of apprentices is growing in spite of the declining overall use of the VET system (NCVER, 2007c).
- The system allows for a fair degree of local autonomy and experimentation at both state and institution level. However, there are marked differences among states and territories.
- Australia has quite a strong research and information base and a clearing house of research and data in NCVER.
- The immense challenges facing Australia's indigenous people have been recognised, and there are serious attempts to address their needs in many parts of the VET system.

1.5 Challenges confronting the Australian VET system

The economic and demographic context

- VET-trained workers are needed in the Australian economy both to replace retiring skilled workers and to assist the Australian economy to move into higher value-added areas. At the same time the strong labour market means that some young people prefer to enter the labour market directly, rather than pursue VET.
- The sustained economic boom has caused some skills shortages, particularly in parts of Australia affected by the boom in the export of natural resources. Employers often consider difficulties in recruiting staff as their key challenge (ACCI, 2007).
- The ageing of the population will decrease labour force participation in both the short and longer term (Intergenerational Report, 2007, see Figure B.4 in Annex B).

Within the VET system

- There is some lack of clarity, and potentially duplication, in the respective roles of Commonwealth, states and territories in planning the VET system and delivering services.
- Contrary to other parts of the education system, there are no clear and simple rules on entitlement to funding.
- For higher level VET, there is no clear rationale for why the funding regime is different from that applying to higher education.
- There are difficulties in providing a reliable foundation in skills forecasts for planned VET provision.

- Despite the strong evidence base, there are gaps in the available data, and the data currently available are not as fully exploited as they might be.
- Training packages are large and cumbersome making them difficult to use.
- Despite a common national qualifications system, there are wide variations in the assessment standards which are applied.
- The workforce of VET trainers in training providers is ageing, and trainers' knowledge of the modern workplace is sometimes inadequate.

Chapter 2

Policy Recommendations

Overall, the Australian VET system has great strengths but also requires reform. We therefore offer an interconnected set of eight recommendations for making a step improvement in what is already a strong system.

Tangled state and Commonwealth responsibilities linked to complex funding arrangements require unravelling and the establishment of clearer principles and a simpler architecture. Bringing state and Commonwealth governments together to seek agreement on these principles – as is already happening – will help to reach a solution. Entitlement to funding should be clarified by defining entitlement in terms of specific categories of individuals seeking particular types of training as the centrepiece of a demand-led system. Funding would thus flow primarily to or through entitled students rather than through providers. This is preferable to planned provision driven by (fallible) skills forecasts or by hard-to-interpret measures of skills shortages. Entitlement would underpin a fair market in the provision of training, if supported by good data on quality and outcomes and if access to VET is available to all. This requires strengthening VET, most notably through measures to sustain both the numbers and skills of the trainer workforce.

Three further recommendations are designed to improve the quality of provision: that apprenticeship systems should become more flexible, that learning outcomes should be supported and standardised through a common assessment procedure across Australia, and that training packages should be replaced by much briefer statements of skills standards.

2.1 Clarifying responsibilities for VET

The challenge

While states and territories continue to determine a large part of the Australian VET system, the Commonwealth plays an increasingly important role and a number of national bodies have emerged. At the same time, the current division of responsibilities between the Commonwealth and the states reflects many accidents of history as well as local preferences and needs. One consequence is some confusion among industry, providers and students and a constant need for consultation and renegotiation of responsibilities.

In Australia, development of VET policy typically requires consultation and consensus building at different levels of government, VET stakeholders in industry, providers and students. Such consensus-building is very important in sustaining the engagement of industry and other stakeholders in the VET system but it is also a slow and somewhat cumbersome process, particularly in view of the considerable variation in regulatory regimes and provision in the states and territories. The results may reflect local needs and preferences, but may also result in wasteful duplication.

Recommendation 1

Commonwealth, state and territory governments should seek to agree common principles for VET funding and provision and to achieve as much administrative consistency as possible, bearing in mind the appropriate interests of local democracy in a context of devolved government. Costs and benefits arising from local variations and from duplication of responsibilities should be quantified.

Supporting arguments

There are two arguments for this recommendation. First, a fragmented system may sometimes impose unnecessary additional costs, on either government or stakeholders. An analysis of such costs needs to be undertaken as a basis for dealing with them. Second, discussions by Australian governments should identify which elements of the system vary because of local preferences and needs and which might usefully be standardised.

Costs arise from lack of clarity in responsibilities and from duplication

The OECD team heard complaints from several stakeholders about a lack of clarity in the system and various related costs. Employers are sometimes confused, for instance, by the many bodies and funding structures. In particular, larger employers working across state boundaries have to adapt to different regulatory systems. This increases their administrative costs, for example, when they need to operate different apprenticeship systems in different states.

Providers reported additional costs arising from differences in regulatory arrangements in different jurisdictions. The National Audit and Registration Agency (NARA), established in 2007, is supposed to facilitate provision and recognition of VET and to decrease the regulatory burden for registered training organisations (RTOs) operating in more than one state. However, this body is not yet fully operational. NARA

operates on a fee-for-service basis and under delegation from the state and territory registering bodies, but by February 2008 only South Australia and Queensland had agreed to national instead of state registration and auditing. NARA needs to be made fully functional.

Competition on a national level among providers from different states, insofar as it occurs, is potentially biased if providers operate under unequal conditions, such as different degrees of autonomy and regulations that vary from one jurisdiction to the other.

The costs and benefits of local variations in provision should be transparent

The benefits of local variations in provision are not always obvious, but may include the capacity to adjust the system to meet local labour market needs. For example, the recent reform of the apprenticeship system in Western Australia, which reduced most apprenticeships from four to three years, may have helped to accommodate a very tight local labour market. If the additional costs of regional diversity reflect different local needs or preferences, they may represent an efficient use of resources.

Australian governments should discuss the different elements of the VET system with this point in mind and with relevant data on costs and benefits. In some cases they may conclude that the variations are justified. In others, if the variations seem simply fortuitous, commonwealth and state governments should use their current shared political orientation to achieve more standardisation.

Implementation and resource implications

A study to quantify costs and benefits should be undertaken in order to understand whether or not the costs are justified. This would involve a study of costs for governments and a study of large national employers to assess the costs of managing multiple regulatory arrangements, alongside an assessment of potential benefits.

The MCVTE could oversee such a study with advice from Skills Australia. The resulting evidence should be used to deal with these costs as needed.

2.2 Funding reform

The challenge

From the point of view of the individual VET student, fees, and the different options for obtaining help with those fees, may appear bewilderingly variable and complex. For example, in 2003, the average annual tuition costs for publicly subsidised courses at a TAFE for a full-time VET course (540 hours) ranged from AUD 500 in Victoria to AUD 1 128 in South Australia (Watson, 2003). Some courses that are not subsidised and require costly equipment and materials charge more than AUD 6 000.¹ Different policies on exemption from tuition and concession rates in different states add to the complexity (see Box 2.1).

¹ For example, Brisbane's Southbank Institute in Queensland offers training in multimedia at AUD 6 060 (Chapman *et al.*, 2007).

Box 2.1. Funding of VET students in Australia

While the public VET sector has traditionally been regarded as free post-school education, some changes have occurred in recent years:

- Many students pay a small fee, per hour of tuition, for publicly funded places, plus a small administration and materials fee. Such fees have risen sharply in recent years, although they tend to have a cap at around AUD 1 000 a year for a full-time student.
- Of those in publicly funded places, many (up to half) receive fee discounts owing to special circumstances (*e.g.* for those on income support). Students enrolled in VET full-time who meet income thresholds are eligible for income support, but because many work while studying part-time only a small share receive such support.
- Some students are in full-fee places which require private upfront contributions. These exist for several reasons: because the number of publicly funded places is oversubscribed; because the course (place) is designated as full fee for service, probably because it is a niche course or popular enough to attract students paying full fees; or because it is a postgraduate course and public funding is available only for the first-level qualification.

Support is available from different sources:

- For many Australian Apprenticeships, where User Choice is not available the employer often pays the fees (on behalf of the student) for the off-the-job component of the training. In addition, the Australian Government has several programmes that help pay student fees for priority skill areas, and now gives incentives directly to apprentices in priority skills areas, such as a bonus for the completion of first or second year of training or a toolkit.
- VET students wishing to pursue higher-level VET qualifications (diploma level and above) that are not available through a publicly subsidised place (*i.e.* full fee) can access a government-supported income-contingent loan called FEE-HELP. It is similar to, but separate from, the HECS arrangement for income-contingent loans for students in higher education, who normally pay about one-third of the cost of their tuition.²

Some of the funding complexity is due to the fact that the VET system currently straddles many boundaries. Alongside higher education, it is the second main source of post-school education, but it also provides a range of Certificate II/III qualifications (including apprenticeships) at the same level as school completion qualifications. Both the Commonwealth and state governments are extensively involved in funding of VET, but the Commonwealth takes the lead role in the funding of universities, while states take the lead role in school provision.

The current funding framework has a number of inconsistencies. It is unclear why, on public policy grounds, pupils in schools studying for Certificate III qualifications (the level of qualification for those leaving school and seeking entry to higher education) pay no fees at state schools, while those studying for VET Certificate III qualifications in VET institutions do (albeit a modest one). Equally, at higher levels, it is unclear why

². HECS (Higher Education Contribution Scheme) requires students in government supported courses to make a financial contribution to the cost of tuition. FEE-HELP allows students to access full fee courses outside of government supported courses. Under both schemes students can access loans from government with repayments contingent upon reaching personal income above a certain threshold. Discounts apply for early payment by students.

higher education students should pay about a third of the cost of tuition, repayable through the HECS income-contingent loan scheme, while VET students typically pay either a lower fee (but are not eligible for an income-contingent loan) or pay full fees on the basis of criteria which vary widely among states and provider institutions. Although these VET students are now eligible for income-contingent loans under FEE-HELP arrangements, they are more likely than higher education students to pay fees. The visiting OECD team was told that the different funding regimes distorted incentives, so that students might choose between higher education and VET on the grounds of funding rather than substance. Unlike schooling and higher education, VET has no simple entitlement principles to establish eligibility for free or subsidised education.

The challenge is to establish principles of VET funding, based on a clear underlying rationale, and thereby to clarify entitlement to funding. Such a reform would also help to clarify the respective responsibilities of the Commonwealth, states and territories.

Recommendation 2

Students should be entitled to pursue VET qualifications without charge up to the level normally attained at the end of schooling, that is, up to Certificate II or III. Fees for higher-level VET qualifications should be levied on the same broad basis as for higher education and defrayed through HECS income-contingent loans.

Supporting arguments

There are four arguments for this recommendation. First, free education through Certificate II or III is consistent with provision in basic education generally and would improve equity. Second, there are strong arguments for assimilating higher-level VET funding to the widely commended HECS arrangements for the funding of higher education through income-contingent loans. Third, the overall effect would be to clarify entitlement to funding among students and therefore improve uptake. Fourth, given appropriate entitlement criteria, the net costs of these arrangements might be modest.

Basic education should be free up to Certificate III

In OECD countries, basic education is normally free at the point of delivery and the strong equity and efficiency rationale for this arrangement is well established. Many OECD countries are now seeking to make upper secondary education the normal minimum for young people. Norway, for example, has created an entitlement to upper secondary education (including vocational training) for all Norwegian citizens, which they can exercise at any point in their lives. The recommendation to make all Certificate III courses free at the point of delivery is in line with this position. Freedom from all tuition fees – even low ones – would be a useful incentive to encourage those with very low levels of qualifications to obtain further education or training.

Consistency of funding arrangements for post-school provision should be established

The Australian HECS system in higher education provides students a co-contribution to the cost of education through income-contingent loans. The rationale for this widely praised model is that students, as the main beneficiaries of the education, should make a significant contribution to the costs, subject to a loan system that ensures that upfront

costs are not a barrier to access. Similar arguments apply to higher-level (above Certificate III) VET courses. Full harmonisation would imply somewhat higher fees for higher-level VET courses (since they are currently somewhat lower than for higher education), offset through HECS arrangements. There is a judgement to be made about the appropriate level of fees, but whatever the outcome, it would be difficult to argue that fees for a given level of qualification ought to be higher or lower simply because they are classified as VET rather than higher education.

A Commonwealth Treasury Working Paper (Chapman, Rodrigues and Ryan, 2007) has already explored the arguments for extending HECS to the VET system and concludes that it would be advantageous, since *i*) some prospective VET students may be inhibited from participating because of upfront costs, *ii*) the economic returns to higher-level VET courses are sufficient to justify the application of HECS, and *iii*) introducing such loans would be administratively straightforward because the infrastructure is already in place.

The evidence from experience with HECS is that its introduction did not substantially affect the social mix of entrants to higher education (Chapman and Ryan, 2002), and, while the baseline social mix of VET students is different, it would be surprising if the impact were any different. In any case, the option of retaining fee waivers for students from poor or disadvantaged backgrounds would remain.

All successful applicants for higher-level VET courses (other than overseas students) should, as in the university system, be subject to the same fees, rather than maintaining the current two-tier system of full-fee and reduced fee students. The criteria for distinguishing these two groups are often unclear or unfair.

There is a need for clear entitlements

The variability of funding regimes means that, for the individual student, entitlement to public support is often not clear, and even when it is, it is not obviously principle-based. Fees for VET courses vary widely among both VET providers and states. This generates uncertainty and actual and perceived injustice, which is undesirable in itself, and a potential deterrent to the uptake of training options.

Implementation and resource implications

The recommendation does not address the source of funds and the balance of responsibilities between the Commonwealth, the states and territories. Implementation of the entitlement would necessarily involve some renegotiation of roles and responsibilities. However, the principle would remain consistent with specific state arrangements, such as provision of additional funding for particular sectors or regions. Nonetheless, the recommendation implies an Australia-wide minimum level of provision.

The entitlement principle advanced here has two further implications. First, money would have to travel with the “entitled” student to the training provider selected by the student. This would almost inevitably expand user choice, as recommended in Section 2.3, but would also mean that some limits might be needed to avoid excessive shock to the supply framework. Second, the entitlement model, linked to expanded user choice, would grant students a key role in choosing providers and programmes, as recommended in Section 2.4, as an alternative to planned provision on the supply side.

The willingness of employers to offer apprenticeships and other forms of training places would continue to constrain many forms of provision to labour market requirements.

Making senior secondary equivalent VET courses free and extending student loans (through HECS or FEE-HELP) would entail costs that would be balanced by increased fees for higher-level VET, depending of course on the level of fees fixed. In addition, if entitlement increases the uptake of VET courses, there might be some additional costs. Rationing of provision would continue but through entitlement criteria rather than through limitations on the number of VET-funded places, for example by limiting funding for those who already have senior secondary equivalent qualifications. Overall, therefore, the reform might be managed so as to have minimal implications for net public expenditure.

2.3 Making the market work for VET

The challenge

Since the Hilmer recommendations in 1993,³ elements of competition have been introduced into the Australian training market. Currently, there are competitive markets in VET provision at two levels. First, funds for off-the-job training associated with apprenticeships and traineeships are identified as being subject to “user choice” at the state level, under a programme which has been implemented in different ways by states and territories since its inception in 1998 (see Box 2.2). Here, apprentices and trainees, together with their employers, may choose the provider, thereby exercising user choice in a relatively narrow area: this process only represents 6% of VET funding across Australia. Second, when states organise the provision, they may “buy” places from providers through a competitive tendering process. Provision is still planned, but it may result in more cost-effective delivery of training.

Currently a TAFE typically receives funding for a certain number of training places. Beyond that number, students may be turned away or asked to pay full fees. Under such a framework, full competition is difficult, since the providers are in effect guaranteed a supply of students within a highly regulated market. However as discussed in Section 2.2, under an entitlement framework, as recommended, a student entitled to funding can shop around for a provider.

³. National Competition Policy Report (1993), known as the Hilmer Report.

Box 2.2. User Choice in Australia

User Choice funding is operated by the states and territories according to a nationally agreed policy on apprenticeships and traineeships. Under this policy the employer and the apprentice/trainee can choose the training provider and the form of training delivery. States and territories implement the policy in different ways:

- Some states define which apprenticeships or traineeships are eligible for User Choice funding, primarily as a strategy for rationing places and ensuring continuing quality of provision. Typical restrictions include:
 - Only entry-level apprentices or trainees are eligible.
 - Some qualifications are excluded, for example because of weak labour market demand for the skills.
 - Some geographic areas are excluded on the grounds that the market is “thin”, with few non-public providers.
- Governments do not allow public providers from other states to compete directly for User Choice places, *i.e.* to set up an operation in their jurisdiction. However, many TAFEs operate in other states or territories under sub-contracting arrangements with providers in those states or territories.

Although User Choice is a national policy it is not consistently applied. This causes particular problems for national employers of apprentices and trainees.

Recommendation 3

Students entitled to funding should be able to choose VET providers. Open competition should be accompanied by support measures designed to ensure that a good range of provision is accessible to all, including disadvantaged groups, that better information is available to potential students on the quality of providers, and that different types of providers can compete on a fair basis.

Supporting arguments

There are five arguments for this recommendation. First, enhanced student choice should make VET provision more responsive to labour market needs. Second, the recommended entitlement framework makes a competitive arrangement necessary and desirable and would help to address equity issues. Third, competition increases the need for greater availability of information about providers. Fourth, measures would be needed to ensure competitive neutrality among providers. Fifth, this recommendation is supported by Recommendation 4 below.

Choice should increase labour market responsiveness

Choice should improve labour market responsiveness in a number of dimensions. Users can choose their field of study, the institution at which to study and the form of provision (for example, evening or weekend courses) and in this way mould provision to

match their needs and wishes. In all these respects, provision would be driven less by supply and more by demand.⁴

In an idealised world of perfect competition, competitive pressures increase cost effectiveness and student performance, and create a system better tailored to student needs (Bradley *et al.*, 2001; Woodfield and Gunby, 2003). In countries such as England or New Zealand in which quasi-markets have been designed with the intention of delivering these benefits, reliable quantitative (*e.g.* rankings) and qualitative (*e.g.* detailed reports on individual schools) data are easily accessible, strong external accountability systems (*e.g.* final exams, school inspections) are in place and affordable transport is supposed to ensure that user choice actually exists. In the Australian context, the last issue may be particularly important, because markets are separated by large distances.

However, competitive pressures may decrease student performance if market mechanisms and provider autonomy are not matched by an adequate accountability system (Wössmann *et al.*, 2007). They may also limit the quality and quantity of provision to hard-to-reach groups (indigenous people, migrants and female students in certain occupations) and create more segregation (Bradley and Taylor, 2002). Corrective policies often take the form of extra funding that must deal with more costly tasks such as educating students whose native language is different from the language of instruction or the granting of additional rights to hard-to-reach groups.

Entitlement and markets should be linked

Under an entitlement framework, as recommended in Section 2.2, all students who meet certain eligibility criteria would have funded places in VET. Since entitlement ties funding to the student rather than to the provider, it is a natural basis for a market, as it implicitly allows students to buy their training services from the providers of their choice. Equity requirements are addressed directly through the entitlement criteria, for example for those with low incomes or for indigenous students. While entitlement to funding does not in itself guarantee access to provision, it should at least reveal gaps in provision for certain groups or for those with particular needs. If the open market is unable to deal with such gaps, direct funding measures may be necessary, for example to ensure a reasonable level of provision outside large population centres.

Better information should be provided to users

It is sometimes argued that free markets give insufficient attention to quality because it is difficult to measure (it is also a problem for making public provision accountable, even in the absence of markets). Therefore, training providers should be obliged to provide full data on outcomes, which would serve as the information base for user choice (see Box 2.3 for an example from the United States). In Australia, the National Training Information Service (NTIS) has been established to provide VET consumers with information about providers and their courses but many gaps remain, particularly covering outcomes from training (see Section 2.5).

4. The recommendation to enhance student choice is in accordance with recommendations put forward in a recent OECD Economic Survey of Australia (OECD, forthcoming). Similar recommendations have been put forward by Boston Consulting Group (2007).

Box 2.3. The College Navigator in the United States

The US Department of Education launched the College Navigator in 2007 to help students and parents make informed decisions about postsecondary education options (<http://nces.ed.gov/collegenavigator/>). It allows users to search for and compare hundreds of public and private post-secondary education and training providers using a range of criteria including total enrolment, programme offerings, degrees and certificates conferred, graduation and tuition rates, and geographic location. The College Navigator promotes student choice and accountability by making reliable information on colleges and universities available to consumers and the public at-large.

Competitive neutrality should be ensured

In an open market, competition between providers, both private and public, should be fair, as this ensures good value for money. When a community service obligation falls on providers, or on public providers alone, this needs to be properly recognised and recompensed. At the same time, a strong capital base in a public provider, combined with some economies of scale, should not preclude market entry by competitors.

Student demand should be favoured over planned supply

As argued in Section 2.4, there are many potential pitfalls in systems that plan provision on the basis of forecasts of skills needs, as is presently the case in Australia. The entitlement model opens the choice of field of study and of qualification to the market, so that within certain limits, students may choose their training in response to their own assessments of future labour market needs. This has the advantage, already mentioned, of taking account of students' own wishes and interests and their assessments of their own skills and potential. In addition industry and business can also utilise incentives to attract students into training areas where workers are required.

Implementation and resource implications

Implementation of this recommendation would be inextricably linked to funding reform as discussed under Section 2.2 above. It would need to be accompanied by close monitoring of market developments to ensure that the full benefits of competition are being realised, while preserving and developing access to VET for all groups.

There are no obvious resource implications other than the costs of improved information for potential consumers, discussed below.

2.4 Planned provision and skills forecasts

The challenge

The Australian government argues that skills shortages are a key potential obstacle to economic growth. To tackle this challenge, much VET provision in Australia is currently planned on the supply side rather than defined by demand. The Rudd government has promised to fund more than 450 000 additional VET places over four years to close the skills gap. Most public funding is “profile funding”: an allocation to each provider of an

agreed number of funded training places for qualifications that are government priorities. These allocations are based on the provider's activity during the previous year but take account of government priorities, including the forecast demand for skills prepared through MONASH forecasting and industry surveys and assessments of particular skills shortages (Keating, 2008).

Additionally, the Commonwealth identifies shortages in certain occupations (Priority Occupations for the Productivity Places Programme) based on surveys of the recently advertised vacancies and occupations that are most difficult to fill. Students in the associated training courses receive public funding from the government (DEEWR, 2008).

The planning arrangements based on an analysis of current and future skills requirements raise a number of issues:

- The skills forecasts they are based on may be unreliable.
- The skills shortages identified in the process of skills forecasting may be due to unpopular or low-wage jobs as well as to the VET system's failure to supply relevant skills.
- Planned provision, based on an analysis of skills needs, leaves little scope for students and employers to fashion the supply of training according to their needs or their expressed demand. However, Recommendations 2 and 3 above are designed to underpin a more demand-led VET system in Australia.

Recommendation 4

Skills forecasts are often unreliable and should not be the foundation of central planning. In future, there should be more emphasis on a system driven by student demand balanced by employer willingness to offer workplace training.

Supporting arguments

There are five arguments for this recommendation. First, labour market forecasts may be unreliable. Second, so-called skills shortages require cautious examination. Third, students themselves may be better than planners at deciding on their training programme because they know their own skills and preferences best. Fourth, forecast information is better used by students than by government planners. Fifth, skills supply may drive the development of the labour market as well as skills needs determined by the labour market.

The reliability of skills forecasts is questionable

Many OECD countries, such as Canada, Germany, the Netherlands and the United States, forecast future skills needs mainly by occupational categories.⁵ However, these forecasts are often unreliable. Labour market demand depends on factors that are volatile and difficult to predict, such as technological innovation, global economic conditions, and

5. For instance, Canada has developed comprehensive occupational forecasting models at national and provincial levels to diagnose future skill shortages (OECD, 2004a). A recently published report about the future skill needs for 27 European countries presents medium-term forecasts for skills in the European economic bloc as a whole and in each individual country within the bloc for 2015 (CEDEFOP, 2008).

government policies. Richardson and Tan (2007, p. 9) conclude: “Our own comparisons of projections with outcomes for the MONASH model confirm that, over a nine-year period, its projections diverged substantially from the actual outcomes for a number of occupations. Indeed, even at the major occupational group level, the direction of change was in some cases incorrect projecting growth when there was decline and vice versa.” Moreover VET planning based on skills forecasts still leaves skills shortages and mismatches in areas such as nursing and education service businesses.⁶

In addition, even when it is possible to forecast the future occupational mix – *e.g.* so many cooks and so many childcare workers – this does not necessarily translate into an equivalent mix of training requirements, except on the assumption that all cooks need training as cooks, and all childcare workers need training as childcare workers. In fact, people trained in one field often work in another, and this may be a good thing, as it allows for the evolution and development of careers and for the cross-fertilisation of fields and ideas (Cörvers and Hensen, 2004).

Interpreting skills shortages is difficult and potentially misleading

Skills shortages are typically identified when employers have difficulty recruiting workers with appropriate skills, as indicated, for example, by a high vacancy rate. However, these recruitment difficulties may reflect unattractive working conditions or the fact that the firms cannot afford to pay adequate wages for the needed skills, in effect, a wage or profit shortage rather than a skills shortage (Richardson, 2007). The optimal response might be (painful) economic restructuring to shift industry towards areas in which Australia has a comparative advantage rather than increasing the supply of VET graduates for an industrial sector or occupation which may be doomed to decline. The results from employers’ surveys should therefore be interpreted with care, since employers would understandably be reluctant to reach the latter conclusion (Veneri, 1999).

Students know their own skills and preferences best and choose accordingly

The strong focus on central planning based on skills forecasting should be moderated in the future. When it comes to choosing fields of study, students have two advantages over planning authorities. First, they often have a clearer idea of their own skills and the characteristics that may make them better suited to one job than to another. Second, they know more about what they enjoy doing. This may mean jobs that are not in great demand in the labour market but would nevertheless be wise career choices in light of these preferences. Moreover, forecasting information takes time to be taken up by providers and prospective students and this results in a lagged response to skills shortages.

However, to avoid major mismatches between student’s study preferences and labour market opportunities, such choice should be balanced by a measure of employer interest in or demand for the skills acquired – demand which is reflected in employer willingness

⁶ In 2005, the percentages of those completing VET qualifications in health and education were 3.4% and 5.7%, respectively, while the percentages of those employed in health and education businesses were 10.2% and 7%, respectively (DEST, 2007; Australian Bureau of Statistics, 2008) indicating that there are insufficient graduates to replace natural attrition from these occupations.

to offer workplace training. This balance of demand and supply features is present in apprenticeship systems in Australia and many other countries.

In Sweden, the OECD review of VET argues that upper secondary VET, free of student fees and driven entirely by student choice, does not respond adequately to labour market demand. It therefore needs to be constrained to courses which can attract offers of workplace experience by employers (Kuczera *et al.*, 2008). For similar reasons, Australia should not rely entirely on student demand, and VET programmes should so far as possible embody the workplace training which signifies employer engagement in the programme. However, we are also mindful that Australian VET students are typically older than upper secondary students in Sweden and that they very often pay fees (unlike in Sweden). Both factors mean that Australian students are less likely to pursue interests unrelated to the realistic prospect of labour market returns.

Information from forecasts should inform user choice not government planning

As Adams *et al.* (1992) noted, a demand-driven system changes the role of skills forecasts (Burns and Shanahan, 2000; Borghans and Willems, 1998). In this context, despite their methodological problems discussed above, skills forecasts can provide some useful information to labour market actors who remain free to make their own decisions. Neugart and Schömann (2002) argue that forecasting helps to reduce adjustment costs by providing labour market actors with the information they need to make sensible human capital investments (see Box 2.4 for an example of how skills forecasts can be used to inform users).

Box 2.4. Skills forecasting for career guidance in the United States

The *Occupational Outlook Handbook* (OOH), published by the Department of Labor, compiles information on education and training requirements, growth projections, working conditions, and earnings for the over 250 occupations that comprise nine out of ten jobs in the US economy (www.bls.gov/OCO).

The *Career Guide to Industries* (CGI) complements the OOH by providing information on earnings, expected job prospects, working conditions, and education and training requirements for 40 industries that generate two out of every three jobs in the US economy (www.bls.gov/oco/cg/).

Career Voyages, a joint project of the Departments of Education and Labor, aims to provide information on in-demand occupations and related education and training requirements. It provides resources and career decision-making guides for students, parents, career changers and career advisers, and gives lists of apprenticeships and tertiary programmes linked to jobs in high growth industries (www.careervoyages.gov/).

In many OECD countries, shifts towards a more demand-driven system have already occurred in tertiary education. *Tertiary Education for the Knowledge Society* (OECD, 2008), the final report on the OECD Thematic Review of Tertiary Education suggests that institutions can best meet the needs of the labour market through guidance to students rather than by rigidly establishing centrally the number and composition of study places. This applies equally to the VET sector.

The supply of skills also affects the characteristics of the economy

Finally, while the economy drives current skills demands, the reverse is also true: the mix and amount of skills available also determine features of the economy, particularly over the medium term. Finland and Korea, for example, partly owe their current economic prosperity to a skills-driven development strategy.⁷ The skills *mix* can also determine the industrial structure – a high level of computer literacy, for example, may make it quicker and easier for enterprises to adopt new information technology. In Germany, for example, retailing is affected by the supply of well-trained retail staff in various sectors, which moulds customer expectations of the quality of advice they can receive in a shop.

Implementation and resource implications

Implementation of this recommendation would be part of the creation of a demand led system as discussed under Sections 2.2 and 2.3 above.

Potentially there are savings if skills forecasts are less vigorously pursued, and if the associated state planning mechanism is modified.

2.5 Putting VET data to work*The challenge*

Australia invests heavily in data collection and research on VET through the core funding of the National Centre for Vocational Education Research (NCVER) and the statistical and analytical tasks contracted to it and to other research agencies. Regular data collections and surveys managed by NCVER include information on VET providers, VET in schools, finance, employers' use and views of the VET system, apprenticeships, students' outcomes, qualifications, courses and indigenous students (Wood and Virk, 2007). The Australian National Data Service (ANDS) supports researchers in locating, accessing and analysing research data (DEST, 2007).

Previous sections have recommended a more demand-led VET system, with students choosing freely among providers. If this is to be efficient, students need to be well informed about the quality of different providers and the likely labour market outcomes. The Student Outcomes Survey, a national survey conducted annually since 1999, obtains information on students one year after they leave the VET system. Its scope has recently been extended, but it still provides only partial coverage of private and community providers and of fee-for-service VET schools.⁸ More fundamentally, there is no further follow-up of respondents, so that very little information is available on the medium- and longer-term outcomes of VET. This is a serious weakness.

7. According to the World Bank (2006), the gap in economic growth between Korea and Mexico from 1960 to 2003 is mainly due to knowledge accumulation or an increase in total factor productivity (TFP). Educated and skilled labour forces are an essential factor for both.

8. The Australian Quality Training Framework (AQTF) 2007 sets out quality indicators for all registered training organisations (RTOs), however, these are collected and held individually by the RTO for continuous improvement purposes.

www.training.com.au/portal/site/public/menuitem.7f6d0b4ce2611bea3771b51017a62dbc/

Other gaps in the data are linked to the lack of regular longitudinal data on the outcomes of apprenticeships (both completers and non-completers), on pathways between VET sectors, and on relations between VET and higher education. While some data in this field exist and are partly publicly available for instance through the National Training Information Service, they are not quite fully exploited and operational. Data on the VET teacher and trainer workforce are also limited (see Section 2.8).

Putting the data to work also remains a challenge. In discussions with different stakeholders, the OECD team found that statistical indicators were not routinely considered when developing policy at the federal, state and local levels. The use of pilot projects is not very widespread in Australia, and evaluations of new policies are not routinely conducted, or, if they are, the results are not necessarily used as has been underlined by a recent OECD study on systemic innovation in VET (OECD, forthcoming).

Recommendation 5

A broader range of quality and outcome data at the provider level should be developed and made available. This will support student choice and provision driven by student demand. Data should become a systematic element of programme and policy decision making. Efforts should be made to fill the data gaps, including an extension of the Student Outcomes Survey.

Supporting arguments

There are three arguments for this recommendation. First, better data on outcomes and quality will facilitate users' choice and delivery by providers. They are particularly needed to support the increased choice recommended in Section 2.3. Second, a number of countries have developed or are developing effective systems for obtaining better data on labour market outcomes. Third, better exploitation of data will improve policy making.

Better data on outcomes and quality are needed to inform user choice

Very often choices among training providers are made on the basis of hearsay and location. This is understandable, because hearsay is often the only information source other than the providers themselves, with their inherent bias. It is extremely difficult to obtain systematic information about the quality of different providers. If user choice is to be extended, as recommended in Section 2.3, and leads to real benefits, action is needed to fill this information gap. In particular, students need information from former students about the quality of teaching and about the likely labour market outcomes of their training.

The student outcomes survey is currently a roughly 10% sample and does not permit analysis at the level of individual courses and training providers, that is, the level that would allow students to choose between alternative providers. One option would be to make this a census and to publish information on individual courses and providers along the lines of Australia's higher education destinations survey. Given that detailed information is already collected on the perceived quality of teaching, this would greatly help students to choose among courses and providers, and would give providers a powerful incentive to monitor teaching closely with a view to enhancing quality.

Other countries already follow up on labour market outcomes

At present, analysis of student trajectories over time is difficult because most longitudinal VET data gathered by NCVER are not prepared on an individual basis.⁹ A number of countries have sought to tackle this challenge by creating a register based on individual student identifiers. These are linked to administrative data sets on VET and education, as well as to labour market data sets, including tax and employment records. This makes it possible to track individual education and employment histories and thus to analyse the links between VET and subsequent labour market experience. For example:

- In Sweden, a central population register includes a unique personal identifier and some basic personal information (sex, age, etc.). This is then linked to other individual-level administrative data covering labour market information such as income and educational status. This allows for individuals or groups to be tracked through their school years and into the labour market. The use of these personal data is authorised by law and commands relatively wide public support. If privacy issues arise, they are discussed publicly and the government tackles them actively (United Nations Economic Commission for Europe, 2007).
- In Switzerland, from 2010, an individual student number will link data on education and working life, thereby meeting a number of data needs, ranging from precise nationwide data on drop-outs or success and failures in examinations, to the possibility of tracing individual students' careers and trajectories between VET and tertiary education, to information on VET teachers. While these data are not generally public, aggregate data might be used for research purposes.

Lack of relevant data on outcomes limits useful advice on careers. Australia provides a Job Outlook website with information on labour market perspectives for students, but the information is limited and comes in part from skills forecasting, which is not without problems, as discussed in Section 2.4. Some examples from the United States on making data available are described in Box 2.5.

Box 2.5. Making data available to VET users in the United States

West Virginia prepares a report card with a statistical picture of the state's performance and of outcomes of individual institutions. The report card is posted on the website of the West Virginia Higher Education Policy Commission and presented to the legislature each year.

The Arkansas Department of Workforce Education (DEW) is similarly committed to making information on the quality and effectiveness of VET programmes available for public review. The DEW uses district report cards to rate VET providers on their success in meeting performance standards for attainment of technical skills and academic skills (literacy and geometry), on their graduation rates, and on completion of programmes and postsecondary placement rates.

The report cards are available at
<http://dwe.arkansas.gov/CTEStatusReportDistrictMain.html>.

⁹ The Longitudinal Surveys of Australian Youth (LSAY) tracks students as they move from school into further study, work and other destinations. They make it possible to analyse education outcomes at the macro level but do not allow for very detailed evaluation of different VET pathways.

Data should be used to improve policy making

More broadly, in a number of areas, better analysis, if carried out and used effectively by policy makers, might usefully support VET policy making. This would imply rigorous policy evaluation and evidence-based economic arguments to convince stakeholders, particularly in industry.

While data are readily available locally, the OECD reviewers observed a lack of solid and systematic policy evaluation on which policy at the national level was based (see also Dawe, 2003). In the United States, for instance, the National Assessment for Vocational Education (NAVE) is a periodic, congressionally mandated study that examines the implementation and effects of federal vocational education policy.¹⁰ The latest report compiles evidence on the implementation and outcomes of the reform of VET policy (the 1998 Perkins Vocational and Technical Education Act), the effectiveness of VET in improving student outcomes, the consequences of new funding and accountability provisions for programmes and participants, the quality of VET, and the extent of its alignment with other reform efforts. The report also provides options for the future direction of vocational education legislation. Australia could learn from such examples to improve the way evidence is used to support policy making.

Implementation and resource implications

Implementation of this recommendation would involve an action plan comprising:

- Costing of alternative options for improving the data, including destination survey and individual student identifier options.
- Development of a plan to provide better information, through a web-based tool, on the quality of outcomes of courses of individual providers.
- An action plan to ensure that new policy initiatives are routinely appraised and evaluated.
- A broad action plan to ensure that data and analysis are routinely used when appraising new policy initiatives and proposals.

Better data costs money and better data also implies spending more on analysing and interpreting the data. Given the scale of public resources currently invested in VET in Australia, resources devoted to making the market more efficient or better targeting policy and practice is likely to be money well spent. That said, it would be necessary to explore and cost a range of options for enhancing the data, in particular to look at the costs and feasibility of follow-up surveys on outcomes compared to the costs and feasibility of collating longitudinal data through an individual student number, before making decisions.

¹⁰. www.ed.gov/rschstat/eval/sectech/nave/index.html.

2.6 Improving the apprenticeship system

The challenge

In Australia traditional trade apprenticeships have existed for many decades and are supported by well-developed institutional arrangements among unions, industries, providers and state regulatory authorities. They offer three to four years of training and have a high level of recognition and acceptance. Apprenticeships, including wages, are enshrined in specific agreements with industrial sectors and individual states and territories. Remuneration of apprentices varies widely. In December 2006 the weekly rate for apprentices in their first year ranged from 47 to 75% of the minimum wage depending on the industrial sector; by the fourth year all apprentices receive the federal minimum wage or more (Bittman *et al.*, 2007; Australian Fair Pay Commission, 2006).

While this section concerns apprenticeships, “traineeships” also play a growing role. They were established in the late 1980s as a programme to help young people enter the labour force through initial on-the-job training. They typically last between 18 months and two years and, like apprenticeships, involve a contract with an employer. However, these contracts will be less effectively binding than those for apprentices. In recent times traineeships have expanded into new areas and into higher-level qualifications that require some form of on-the-job training. Apprenticeships and traineeships are collectively described as “Australian Apprenticeships” to indicate their equal status as a training pathway.

In the context of a tight labour market, the number of students in apprenticeship training has risen steadily in recent years against the trend of declining numbers of VET students in general (NCVER, 2008b). At present, the apprenticeship system faces three main challenges:

- In principle, the Australian Apprenticeships system is now, following reform, based on the acquisition of competencies such that apprenticeships might vary in length, depending on the occupation and the individual. However, in practice apprenticeships tend to have standard lengths. There is no nation-wide Australian assessment procedure to judge the acquisition of competencies.
- While a growing economy and labour shortages in certain areas currently provide favourable conditions for proposing apprenticeships, there are no strategies to mitigate the effects of a potential economic downturn which might lead employers to stop offering apprenticeships. The relation between the costs and benefits of apprenticeships to various stakeholders is not clear, so that it is difficult to target interventions (*e.g.* incentives) and to assess the productivity levels of apprentices.
- Around 40% of apprentices drop out before completing their apprenticeship (Karmel, 2007).

Recommendation 6

We commend the reforms which base apprenticeships on competencies. These reforms now need to be translated into action, allowing flexibility in the length of apprenticeships and supporting that through a common procedure for their assessment. Costs and benefits of apprenticeships should be analysed, reforms

should be evaluated and the results used for policy planning. Ways of integrating apprentices into the production process earlier during their training should be explored.

Supporting arguments

There are four arguments for this recommendation. First, a truly competence-based system is more flexible and might encourage apprentices to become competent more quickly. Second, a common assessment procedure would help to ensure quality and consistency in outcomes. Third, more information about costs and benefits would help the government and the social partners to construct an optimal apprenticeship package. Fourth, making apprentices more productive can help reduce net costs and convince employers to provide places.

Apprenticeships should be firmly based on the acquisition of competence

Swiss research has revealed, unsurprisingly, that the time required to reach a given level of productivity varies, depending on the skills requirements of different occupations (Mühlemann *et al.*, 2007). Australia has already reformed its apprenticeship system and abolished time based assessment. However, fuller reliance in practice on competence rather than on duration would make it possible to adapt individual apprenticeships more flexibly to the needs of specific occupations. It would also give students an incentive to acquire the necessary competencies swiftly rather than to “serve time” to obtain the qualification.

A common assessment procedure improves quality and efficiency

A fully competence-based apprenticeship would be supported by the introduction of a common assessment procedure. This would make it possible to ensure quality and consistency throughout the country and allow for greater flexibility in the length of apprenticeships, since the duration of the apprenticeship would depend on achieving the required level of competence as defined in the assessment procedure.

A common national assessment procedure would also ensure that the skills acquired during an apprenticeship are not too firm-specific. This would make it easier for individuals to move between firms and geographic regions. Employers unable to observe the true capacities of job applicants often rely on signals such as educational attainment. It has been said that diplomas based on central exit exams are valued more highly by employers, because they give better information about applicants’ capacities (Wössmann, 2005; Backes-Gellner and Veen, 2008).

In Canada for example, centralised final exams were introduced to increase the mobility of skilled workers between provinces. The Interprovincial Standards Red Seal Program sets standards for trades and professions, unifies final assessments, provides comparable information on apprenticeship training programmes across Canadian provinces and territories, and encourages further harmonisation (CCDA, 2006). The Red Seal diploma allows workers to practise their trade anywhere in Canada where that trade exists, without further examinations (CCDA, 2006). As a result, inter-provincial labour mobility has greatly increased, alleviating labour shortages in fast-growing provinces like Alberta (Pereira *et al.*, 2007; Finnie, 2000).

A common assessment procedure can also improve student performance. In a system of local exit examinations, students may be able to achieve a given level with less effort than when they are judged on the basis of national examinations. Exit examinations assessed externally at national level tend to have a positive impact on student behaviour because students tend to study more and thus improve the skills they acquire (Bishop, 2004).

Innovation in apprenticeships, supported by good evaluation and analysis, should be encouraged

Pre-apprenticeships or trade diplomas (fast-track apprenticeships that make it possible to specialise and gain a higher and potentially more respected qualification) are examples of current innovations. However, more carefully evaluated innovations and reforms might be encouraged, supported by good data and analysis. In particular, not much is known about the precise costs and benefits of apprentices to employers.

The OECD team heard that fourth-year apprentices are highly valued because they are effectively fully trained and yet are paid less than qualified employees. If this is true, it would suggest that employers' incentives to take apprentices may need to be repackaged. Currently employers receive back end loaded incentives, AUD 1 500 at commencement and AUD 2 500 on completion, an incentive mainly useful to prevent drop out. Incentives to shorten the apprenticeship period could be established for instance by providing government funding only the first three years of the apprenticeship, making it less advantageous for employers to extend the apprenticeship contract excessively.

A study in Germany and Switzerland has demonstrated that the cost-benefit relationship largely depends on apprentices' productivity (Dionisius *et al.*, 2008). Swiss employers pay their apprentices more but reap net benefits, while the low productivity of German apprentices means a net cost to employers. More information about this relationship in Australia would help to target government intervention and employer incentives. Results could also be used, as in Switzerland, to convince employers to engage apprentices if they can expect net benefits. This is particularly relevant in times of economic downturn when firms are less likely to provide VET voluntarily. A forthcoming NCVER report¹¹ sets the costs of apprenticeships in the plumbing and electrical trades against the benefits of their productive contribution. This is a welcome initiative and should be extended.

There are several ways to make apprenticeships more productive

Modified or shortened apprenticeships may increase productivity. A recent study of shortened apprenticeships in the automotive sector (Callan, 2008, p. 3) argues that “to achieve results in shorter time frames, accelerated apprenticeships must incorporate innovative up-front training; intensive pre-apprenticeship training; the full application of recognition of prior learning; intensive forms of off-the-job-delivery; and industry investment in workplace mentors”.

Other OECD countries have developed innovative approaches to increasing the productivity of apprentices (Box 2.6). Switzerland, for instance, has introduced so-called

¹¹. The forthcoming report is summarised in the NCVER e-journal *Insight*, of 30 June 2008, www.ncver.edu.au/newsevents/insight/issue30/22064.html

“industry courses” (*überbetriebliche Kurse*), in which providers offer all apprentices in an occupation training in basic workplace skills. As a result, apprentices are able to contribute to production from the start of their apprenticeship. This is particularly useful for small employers that lack the resources to train new apprentices fully.

Box 2.6. Approaches to support for apprenticeships

In Switzerland, for most upper secondary VET programmes, basic practical skills are taught in industry vocational training courses (*überbetriebliche Kurse*). These are funded by employers and are designed to complement the theoretical knowledge acquired in VET schools and specific practical training in the workplace. The aim is to broaden apprentices’ skills acquisition beyond the narrow focus of their training firm and to make them more productive.

The courses are mandatory for most occupations and part of the qualification process. Each VET student has to attend 20 course days (16 for the two-year VET programmes) divided into eight days of general course and 12 days of a specific course. These courses are offered throughout the VET programme except in the last semester. Each course day lasts eight hours, a regular working day in a Swiss enterprise. They may also take place during school holidays.

Similar institutional arrangements exist in Germany (*überbetriebliche Ausbildungsstätten*) and Norway (*Opplæringskonto*). However, they are more directed towards helping small and medium-sized enterprises (SMEs) meet the requirements for employing apprentices and reaping the benefit of VET provision (Hippach-Schneider *et al.*, 2007; CEDEFOP, 2006). In both cases, chambers and social partners at the local level play a decisive role in provision, planning, and administration. Extra public funds are essential for making such institutional arrangements work (Bundesministerium für Bildung und Forschung, 2001).

Implementation and resource implications

Implementation of this recommendation might initially mean some strengthening of the information base, particularly on the costs and benefits of apprenticeships and how the productivity of apprentices increases over time. It would also involve the development of common assessment procedures. These two elements would provide the foundation for a more flexible apprenticeship system which allows some variation in the length of apprenticeships depending on the level of skills required in a given occupation as well as in the length of apprenticeships to allow those who learn more quickly to graduate earlier.

Such variations might be introduced to make learning more efficient, but any reform of apprenticeship arrangements would need to continue to allow employers to offer training. To ensure that apprenticeships remain attractive to employers, the apprentice wage would have to be structured so that more rapid learning would benefit the employer as well as the apprentice.

Potentially there would also be long run efficiency savings arising from increased incentives to develop more efficient ways to learn (incentives that are absent in a “fixed length” apprenticeship).

2.7 Reforming training packages

Training packages, first introduced in 1997, provide a comprehensive list of the competencies required to work in an industry sector and ways to assess them, their aggregation into qualifications, and support material (resources for learners, employers, trainers and assessors). The 81 training packages, endorsed by the National Quality

Council and implemented by the states and territories, cover approximately 80% of the workforce and around 1 400 qualifications. Nearly all apprenticeships are in qualifications listed in the training packages.¹² Through the Industry Skills Councils (ISCs), industry has taken the lead in establishing the packages, and this has been vital in securing labour market recognition of the qualifications. The packages are reviewed every three years in a process of industry consultation.

Nonetheless, there are some significant problems:

- Since the ISCs have to consult broadly with employers and unions, there is a natural tendency for the training packages to expand in order to accommodate every interest and concern. Indeed, many are hundreds of pages in length and thus difficult to deal with. Some providers report that they plan to use higher education qualifications, which they find more manageable. Employers too appear unhappy with the current form of training packages and would welcome reform.
- The heavy upfront investment in training packages presupposes that they will be sufficiently long-lasting to recoup the investment. In rapidly evolving industrial sectors, however, skills requirements may change frequently. As training packages are designed around certain jobs rather than generic tasks, they are not useful for students who want to study in a certain area but do not have a particular job in mind. They also do not work effectively for international students because they train specifically for Australian jobs.
- Many training packages are little used. While the proportion of students taking training package qualifications compared to those taking other accredited courses is increasing,¹³ about 80% of all publicly recorded enrolments in 2006 were in just 180 qualifications (out of the 1 709 available). Around 70 qualifications were not used at all in 2006 (NSOC, 2008, pp. 16-17).
- The size and comprehensiveness of training packages mean that they are only applied selectively. This creates a risk that the qualification effectively obtained may be of uncertain value and relevance.
- The packages they produce are frequently too complex to follow for teachers and trainers, who are not involved in their development.
- Owing to the absence of national assessments, there is no standard to ensure that a particular set of skills has in fact been acquired.
- The visiting team heard complaints that those who develop the training packages are often no longer in touch with the real needs of industry.

^{12.} Annual National Review of VET, 2006, p. 112. www.dest.gov.au/NR/rdonlyres/AA26CEA5-5CA9-49CB-B968-27F5EFC47C2D/22440/2006ANR.pdf

^{13.} The proportion of students taking national training package qualifications as a share of all students in all types of accreditation increased from 41.0% in 2002 to 57.1% in 2006 (NCVER, 2007d).

Recommendation 7

Training packages should be replaced by simple and much briefer statements of skills standards. Consistency in standards throughout Australia should be achieved through a common assessment procedure to determine whether the necessary skills have been acquired.

Supporting arguments

There are three arguments for this recommendation. First, given the range of problems affecting training packages, radical reform is required. Second, common national assessment procedures, as argued in Section 2.6 for apprenticeships, should provide a clear basis for simplified statements of skills standards. Third, international experience offers many examples of national skills standards supported by common assessment procedures.

Training packages need radical reform

Training packages made an important contribution to the establishment of a national VET system in Australia, and helped to move the system from a supply-driven to an industry-led approach. Now that a national system is well established, however, they have outlived their usefulness, particularly in view of the time and effort involved in developing and maintaining them. A review in 2003 already recommended more flexibility and simplification as well as more faith in the professionalism of VET practitioners (Schofield and McDonald, 2003). However, there has been no follow-through on the recommendations.

Recent reforms reduced the number of organisations involved. To formalise the process, there is now an initial scan by the ISCs, upfront identification of relevant stakeholders, quality control and steering by a panel of experts (see Box 2.7). The *Model 2008* reform of the training packages usefully puts government involvement early in the negotiation process so as to solve problems at the outset; this is preferable to a lengthy revision process at a later point. However, it only sets timelines for some of the steps involved, and the overall effort entailed by consultations is still excessive. More radical reforms are needed.

Box 2.7. The process of developing and revising training packages

The process of developing or revising training packages starts with an environmental scan, a consultation of enterprises, employer and employee representatives, licensing and regulatory bodies, the Department of Education, Employment and Workplace Relations (DEEWR), State training agencies (STAs) and registered training organisations. This leads to a 20-page document on industry needs, skills development and use of previous training packages, which is produced by the Industry Skills Councils (ISCs) in order to inform the National Quality Council (NQC). The scan informs the ISCs' Continuous Improvement Plan, a rolling three-year plan which is updated annually on the need for changes in the endorsed components of the packages.

A DEEWR and STA briefing on scope and timetable follows the creation of these documents. This allows the STAs to identify relevant stakeholders for the subsequent national consultation process which is followed by industry validation and stakeholder agreement. The case for endorsement is a comprehensive evidence-based document compiled by the ISCs which National Quality Council members use for their training package endorsement decisions. It is accompanied by an impact statement that sets out the implications of the revised units of competence and the extent of the changes required to enable successful implementation.

Once a new training package has been developed, or an existing one reviewed, the draft package is submitted to the NQC for endorsement. The council has 21 days to consider the case for endorsement. Once the council officially approves the package, it is referred to as endorsed. It is then referred to the Australian government and state and territory ministers who have 14 days to agree to place the training package on the National Training Information Service (NTIS) at www.ntis.gov.au. Any objections raised by the ministers are referred to the National Quality Council for resolution.

Several OECD countries use much simpler standards successfully.

- In the United States VET standards are much briefer and easier to handle. Occupational information covers tasks, tools and technology, knowledge, skills, abilities, work activities and other occupation-related practical information, including wages and employment for each occupation (or occupational group) with simple and clear explanations.¹⁴ If the occupation needs a certain type of certification, individuals prepare related VET certificates and take written and practical examinations to obtain certification.
- In the United Kingdom, the National Vocational Qualifications (NVQs) are work-related, competence-based qualifications based on national standards for various occupations. The national occupational standards, called units within NVQs, are developed by Sector Skills Councils with advice from relevant employers. The standards are much simpler than those in training packages and the assessment of qualifications is well regulated. Individuals gain an NVQ of level 1 to 5 on the National Qualifications Framework by completing a set of units. NVQs are achieved through training and assessment, typically through on-the-job observation and questioning, including written and/or practical examinations if applicable.

¹⁴.

Detailed information is provided in the O*NET Online (<http://online.onetcenter.org/>).

A common national assessment should be introduced

Assessment guidelines are included in training packages. Competence is assessed by individual teachers and supervisors (with Certificate IV qualifications), but this is not truly objective. Section 2.6 argued for a common national assessment of apprenticeship qualifications. Here the argument is extended to all qualifications covered by training packages. A standardised assessment ensures consistency in the mix of competencies acquired across Australia, and consistency in the *level* of competencies necessary to pass the test. It also provides a clear basis for recognition of prior learning, allows competencies to be acquired in diverse ways, encourages innovation and efficiency in the acquisition process, and guarantees common standards for the type and level of competencies acquired.

National assessment already works well in other countries

National exit examinations are used in countries that maintain a relatively centralised system of qualifications in VET such as Japan and Korea. Several less centralised countries with competence-based training also require national or external exit tests to obtain a VET qualification:

- Germany combines local and national assessment methods. This makes it possible to take account of local variations of VET programmes while securing minimum standards and comparability of certificates by combining three final certificates obtained from the employer, the VET school, and through external national examinations. The employer certificate is a work reference based on what the individual did in the work situation measured against the relevant occupational and training standards. The school certificate represents continuous assessment of the student by the local educational institution; each state has its own requirements for this certificate. The external national examination, which counts most of the three, is a uniform test developed by the employer associations of each sector, administered to all applicants and aims to assess minimum competencies (Colardyn and Bjørnåvold, 2005).
- In the Netherlands, the Kwaliteitscentrum examineren (Quality Centre for Examinations in VET) is a quasi-independent agency of the central government that is responsible for examinations in all VET schools. Along with quality assurance it provides support documents (*e.g.* examination material), grants funding to schools to improve their assessment procedures, and facilitates innovation at the school level and dissemination of good practice.

Implementation and resource implications

Implementation of the recommendation to replace training packages with much simpler skills standards could be accompanied by several supporting measures. First, to ensure the quality of training package assessments, an improved monitoring system for providers should be considered.

Second, delivering simplified and flexible standards requires capable trainers and teachers (Down, 2000). The mandatory Certificate IV teaching qualification allows the use of training packages but does not teach the teachers how to develop teaching material. Some learning programmes for teachers are available; their scope could be extended. Development of teaching and learning resources should be supported by the government,

and innovative approaches to support and develop the teacher labour force should be developed (see Section 2.8).

Third, there has been a move to introduce generic employability skills into the training packages. Eight skills have been identified: communication, teamwork, problem solving, initiative and enterprise, planning and organising, self-management, learning, and technology. This trend should be enhanced as employers report difficulties in finding employees with the right soft skills (AIG, 2006).

The simplification of training packages should yield savings to industry skills councils. Skills standards are designed to be much simpler and cheaper to manage.

2.8 Investing in the VET teacher and trainer workforce

The challenge

In Australia as in many other OECD countries, attracting and retaining good VET trainers and teachers is a challenge.¹⁵ The issues are similar to those affecting schoolteachers more generally, such as the proportion of staff over 50 years of age,¹⁶ but there is also the VET-specific problem that providers compete with industry for the practical skills of VET teachers and trainers. In Australia, while a strong economy encourages provision of apprenticeship places, it also makes it particularly difficult for providers to compete for teachers with industry, which offers much higher salaries. Maintaining the skills of VET teachers is also an issue.¹⁷ For many types of VET, technology is changing rapidly and teachers in VET providers need to remain familiar with the modern workplace.

At the national level, there is little information available on the precise characteristics of VET teachers and trainers; ten years ago, the systematic collection of data on teachers was abolished. Today, data are sometimes available at institutional level but less often aggregated at state or national level.

Recommendation 8

Initiatives in which trainers work part-time in VET providers and part-time in industry should be encouraged. Innovative strategies are necessary to sustain the numbers and skills of the teacher and trainer labour force in providers. Better data on VET teachers and trainers should be systematically collected, published and used for planning and evaluation purposes.

15. Cort *et al.* (2004) report that many European countries face a shortage of VET educators or expect to face such a shortage soon.

16. An NCVER study quotes various studies indicating an ageing teacher workforce with average ages of 50 years and over (NCVER, 2004, p. 43).

17. A study by Harris *et al.* (2001b) found that most VET staff development in Australia is *ad hoc* and quotes a VET teacher survey which found that only 28% of full-time teachers and 55% of part-time teachers rated their technical knowledge as up-to-date.

Supporting arguments

There are three arguments for this recommendation. First, part-time trainers and other partnership arrangements between providers and industry may play a key role in maintaining up-to-date workplace skills. Second, a range of innovative strategies is needed to address the shortages of teachers. Third, without good data, it is difficult to tackle the problem of teacher shortages, or even to know exactly where the problems lie.

The part-time trainer workforce should be developed

Some trainers in VET providers, in Australia as in other countries, work part-time as trainers and part-time in industry.¹⁸ The model is particularly attractive because trainers, while based in providers, remain in close touch with the needs of the modern workplace. In countries like the Netherlands, part-timers already represent a growing proportion of trainers (see Box 2.8).

Box 2.8. Developing VET teachers and trainers in the Netherlands

Recent legislation in the Netherlands has expanded the criteria to be fulfilled by companies that train apprentices and amplified the requirements for apprentice supervisors who want to become professional trainers by putting more emphasis on coaching than on conveying professional knowledge (Dinjens and Visser, 2006).

For workplace trainers, the “dual trajecten bve” programme allows participants to develop their skills gradually and without interrupting their work in industry until they earn the teaching qualification necessary for teaching in VET schools (Cort, Härkönen and Volmari, 2004). This career step is further encouraged by accreditation of prior learning and work experience. Both of these initiatives rely on a well-established and transparent system of teacher qualifications defined by essential skills and competencies. Very often the individuals concerned are VET instructors in enterprises that are already in contact with vocational schools and have the aptitude to teach. This can strengthen the links between VET schools and training enterprises.

At the same time, the Netherlands has helped VET teachers to obtain up-to-date knowledge by encouraging traineeship placements in professional practice, preferably in innovative businesses. For many teachers who were frustrated in their jobs, such professional development has been satisfying. This arrangement has also enhanced students’ learning experience because these teachers can provide them with up-to-date knowledge (Dinjens and Visser, 2006).

The pattern of combining work and teaching may appear natural to someone working in industry who wishes to develop a teaching career but retain a job in industry. To promote such arrangements, close collaboration between providers and industry is crucial.

At the same time, VET practitioners in providers should be encouraged to spend time in workplaces and if possible work there at least occasionally. The OECD team heard about several promising initiatives to allow companies to release staff on a rotating basis to teach in TAFEs or other VET providers. These should be promoted more systematically. Cort, Härkönen and Volmari (2004) point to a number of European examples of good practice. They note a trend for teachers to work in companies for two to

¹⁸. In Australia 48.5% of VET practitioners in TAFE in 2006 worked part-time. However, it is not clear to what extent their jobs are relevant to their field of teaching and contribute to updating their knowledge on the subject matter (Mlotkowski and Guthrie, 2008).

three months in order to update their vocational competencies. These teachers create ties with instructors and managers in the companies, ties which can subsequently help trainers, teachers and workplace instructors. In several case studies, Harris, Simons and Moore (2005) analysed VET practitioners' work with enterprises and report that the links created between Australian providers and the enterprise fostered mutual understanding and exchange of knowledge.

Innovative strategies to attract VET teachers and trainers should be promoted

Flexible working arrangements may help with recruitment. The OECD review of teachers (OECD, 2005, p. 177) quotes studies demonstrating that compatibility with private life and a flexible schedule are important factors in teachers' job satisfaction. Greater provider autonomy may allow more part-time teaching, more adaptable salaries and rewards, and the flexibility to work part-time in industry.

In the teaching profession generally, good teacher induction programmes have been shown to be important for attracting new recruits and developing their initial skills (Ryan, 1986; DeBolt, 1992; Camp and Heath-Camp, 1992; Darling-Hammond, 2000; Odell, 2000; Odell and Huling, 2000; Sweeny, 2001). In Australian VET, by contrast, individuals are increasingly held responsible for their initial teacher training and get little support from their RTO (Harris *et al.*, 2001a). In the United States, teacher induction programmes focus on the instructional, professional and personal needs of the novice teacher once they have been hired for their first teaching position. Novice teachers who receive support, performance evaluation and professional development remain longer in the profession, have more positive attitudes toward teaching (Varah, Theune and Parker, 1986; Henry, 1988; Odell and Ferraro, 1992) and continue to develop their teaching effectiveness (Darling-Hammond, 2000). These messages, while based on evidence from the teaching profession more generally, are likely to apply as well to the VET teacher labour force.

Data collection on teachers and trainers should be improved

As the NCVER (2004, p. 37) points out, there is no shortage of data on the VET workforce but it is typically held by individual providers and varies considerably in quality. Currently, there is no single source of workforce information, and state and territory data only consistently cover age and sex (NCVER, 2004; Harris *et al.*, 2001b). Consistent data on the key characteristics of the teaching workforce are needed, including previous career/jobs, attrition and turnover rates, and, ideally, information on why people leave the teaching profession and where they go. Longitudinal data, at least on a sample basis, would help to understand the factors influencing key career decisions.

Improving the data would allow policy makers first to diagnose the scale of the problem, second to predict its evolution over time (given projected retention and recruitment rates), and third, to evaluate the different solutions adopted locally. For example, good data would make it possible to compare the impact and cost of salary increases with other incentive mechanisms.

Implementation and resource implications

The key implementation tool is effective partnerships between providers and industry. Currently, the quality of such partnerships depends heavily on personal relationships

(Harris, Simons and Moore, 2005). While these are important, they need to be systematically supported, perhaps through a small fund for innovative local initiatives. This might lead to innovation and best practice by encouraging the development of links with industry and effective strategies for recruiting VET teachers, which might then be shared at the national level.

The government might commission a national survey of the stock of teachers in order to map the current teacher workforce. This survey could cover demographic data, teaching qualifications, work experience as teachers and in industry, salaries, opportunities to update skills, and views on job satisfaction and career ambitions. Such a survey should then be carried out on a regular basis to develop an evidence base which could be made available for research and serve as a basis for policy making.

Resource implications would depend on the specifics of local initiatives.

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Annex A

Background Information

1. Terms of reference for Australia

Within a contestable training market, the Australia-specific policy objective (consistent with the overall objective of the OECD exercise of improving the responsiveness of VET systems to labour market needs) is to explore how vocational education and training can be used to improve workforce participation¹⁹ and skills, address industry skills needs and increase productivity. Relevant policy levers include:

- **Flexibility and institutional responsiveness** for high-quality delivery. This includes the diversity of training providers (publicly owned, commercial, not-for-profit, including community) and the use of contestable funding and regulatory arrangements that free providers to respond to industry and student demands.
- **Effective finance and funding incentives.**²⁰ This includes the range of national incentives that enable individuals, employers and providers to engage in Australia's national training system of formally accredited, quality-assured training.
- **Mechanisms to promote industry engagement.**²¹ This includes formalised industry advisory structures and the engagement of industry associations and unions.

^{19.} *Workforce participation.* Australia's overall labour force participation rate ranks 12th among OECD nations. There is scope to significantly improve the participation of older workers, single parents and second earners, those with mild disabilities, indigenous Australians, part-time workers willing to contribute more hours, and those with a low skills base. From a policy perspective we are interested in increasing workforce participation from these groups.

^{20.} *Effective finance and funding incentives.* This would include publicly funded places, loans to students, funding to employers for apprentices, and incentives to apprentices themselves. It would also include employer and student contributions to the funding streams.

^{21.} *Mechanisms to promote industry engagement.* The preferred terminology is "industry engagement" as opposed to "employer engagement" so as to encompass a broader view of industry that includes formalised advisory/consultative structures, industry associations and trade unions. This section is not intended to cover provision of training through apprenticeships which would be covered in funding incentives.

2. Biographical information

Simon Field has worked since 2001 as a Senior Analyst in the Directorate for Education of the Organisation for Economic Co-operation and Development (OECD) on issues including vocational education and training (VET), equity in education, and human capital. His previous career in the UK civil service included a period heading the division for higher education, evaluation and international issues in the Department for Education and Skills, and while in the Home Office he was responsible for creating and leading an Economics Unit, bringing the tools of economic analysis to bear on criminal justice issues. He holds a PhD in philosophy and social policy from the University of Cambridge and a M.Sc. in Economics from Birkbeck College London. He was born and brought up in Belfast and holds joint British/Irish citizenship. (*simon.field@oecd.org*)

Kathrin Hoeckel is a policy analyst in the OECD Directorate for Education. She is responsible for country reviews of VET in Australia, Austria, Germany, Ireland, Switzerland and the UK (England and Wales) and for analytical work on costs and benefits in VET. Prior to this activity, Kathrin worked on the issue of school leadership and took part in a thematic review on adult learning at the OECD. Before joining the OECD, she has worked in the field of development cooperation, inspecting and evaluating development projects of local NGOs in Morocco (including on special education and vocational education and training) and carried out research on post-war reconstruction and state-building in Lebanon. Kathrin holds a M.Sc. in history and political science from Munich University (Germany) and a Master's degree in public administration from the London School of Economics and Political Science. Kathrin is of German nationality. (*kathrin.hoeckel@oecd.org*)

Troy R. Justesen is the Assistant Secretary for Vocational and Adult Education at the US Department of Education. He was appointed to this position by President George W. Bush in 2006. Previously, he served in the White House as an associate domestic policy advisor and as Deputy Assistant Secretary for special education and rehabilitative services. He has direct work experience in 46 of the 50 US states and extensive experience in VET policy and implementation. He holds a doctorate in higher education policy from Vanderbilt University and bachelor's and master's degrees from Utah State University. He is a US citizen from a small farming community in the state of Utah.

Moonhee Kim is a Senior Deputy Director at the The Ministry of Education, Science and Technology in Korea and works in the Directorate for Education of the OECD as a secondee. Previously she has worked as a research assistant at the Community College Research Center at Columbia University (New York) and taught at the Education Graduate School of Korea University (Seoul). Moonhee holds an M.A. in Economics from New York University and a PhD from Columbia University on "The determinants of institutional financial aid and its effect on degree completion: The difference between students at public and private four-year institutions". Moonhee is from Korea.

3. Programme of the review visits

Fact-finding visit, 7-11 April 2008

Monday 7 April, Perth

Meeting with representatives of the Department of Education, Employment and Workplace Relations and representatives of the Western Australian Government

Visit to Challenger Institute of TAFE

Visit to Australian Centre for Energy and Process Training (ACPET)

Tuesday 8 April, Perth

Visit Australian Technical College (Perth South Site), meeting with CEO, students and employers of the college's apprentices

Wednesday 9 April, Melbourne

Meeting with representatives of the Australian Chamber of Commerce and Industry

Meeting with representatives of the Australian Manufacturing Workers Union and the Australian Council of Trade Unions

Meeting with representatives of the Australian Industry Group

Meeting with representative of the Australian Education Union

Meeting with representative of the Business Council of Australia

Meeting with the CEO of Technical and Vocational Education and Training Australia (TVET)

Thursday 10 April, Ballarat

Visit to University of Ballarat, site visit and meetings with the Vice and Deputy Vice Chancellor and various University of Ballarat representatives and stakeholders

Friday 11 April, Melbourne

Research forum

Main visit, 14-18 April 2008

Monday 14 April, Melbourne

Meeting with representatives of the Department of Education, Employment and Workplace Relations

Meeting with the Chair of the National Industry Skills Committee (NISC)

Meeting with the Chair of the National Quality Council (NQC)

Meeting with TAFE CEOs, Victorian TAFE Association and university representatives

Meeting with representatives of the Victorian Industry Training Advisory Board and Industry Skills Councils (ISCs)

Meeting with representatives of the Office of Training and Tertiary Education (OTTE)

Meeting with representatives of the Victorian Skills Commission

Meeting with the Associate Director of the Australian Industry Group

Tuesday 15 April, Melbourne

Visit to Box Hill Institute of TAFE

Visit to Automotive Centre of Excellence

Meeting with Deputy Secretary of the Sector Improvement Group, Department of Premier and Cabinet, Victoria

Wednesday 16 April, Sydney

Meeting with representatives of the New South Wales Department of Education and Training

Visit to Northern Sydney Institute of TAFE

Thursday 17 April, Sydney

Provider forum with representatives of different providers of all states and territories

Friday 18 April, Melbourne

Meeting with representatives of the Australian Chamber of Commerce and Industry and selected employers

Meeting with representative of the Queensland Department of Education, Training and the Arts

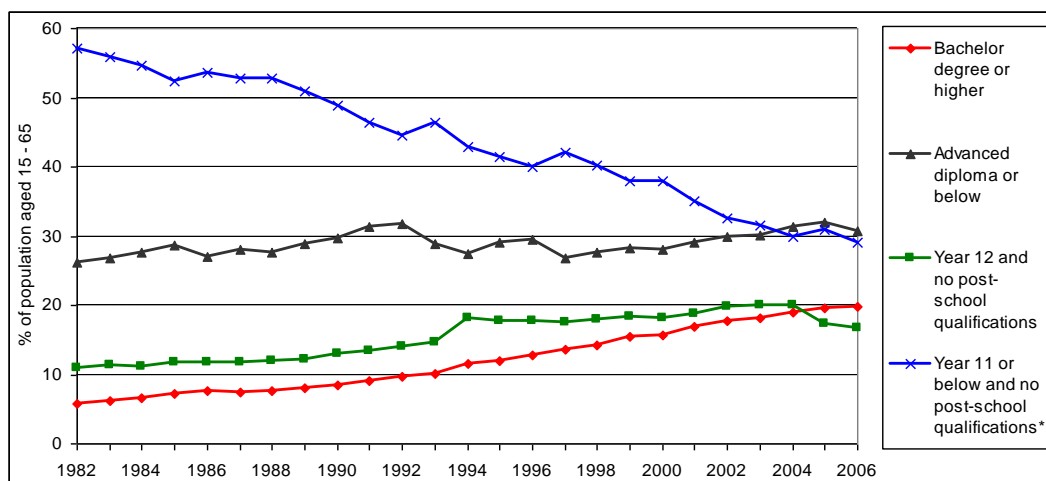
Meeting with representative of the Northern Territory Department of Employment, Education and Training

Meeting with Deputy Secretary Jim Davidson and the chief political advisor to Julia Gillard (Deputy Prime Minister and Minister for Education and Employment)

Annex B

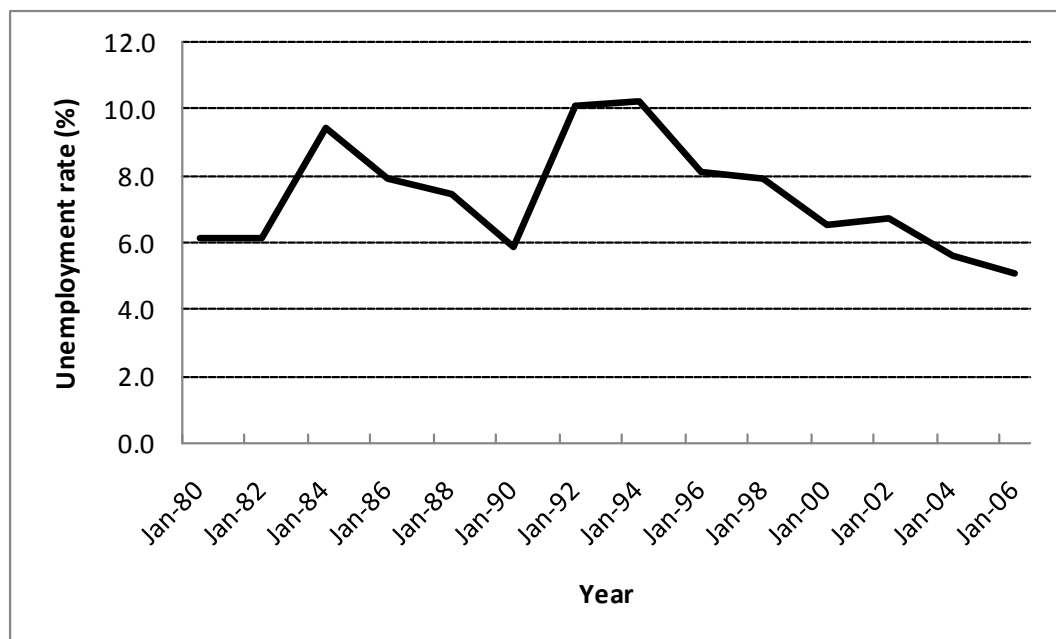
International and National Statistics

Figure B.1. Highest qualification level of the population aged 15-64 (% of the population)

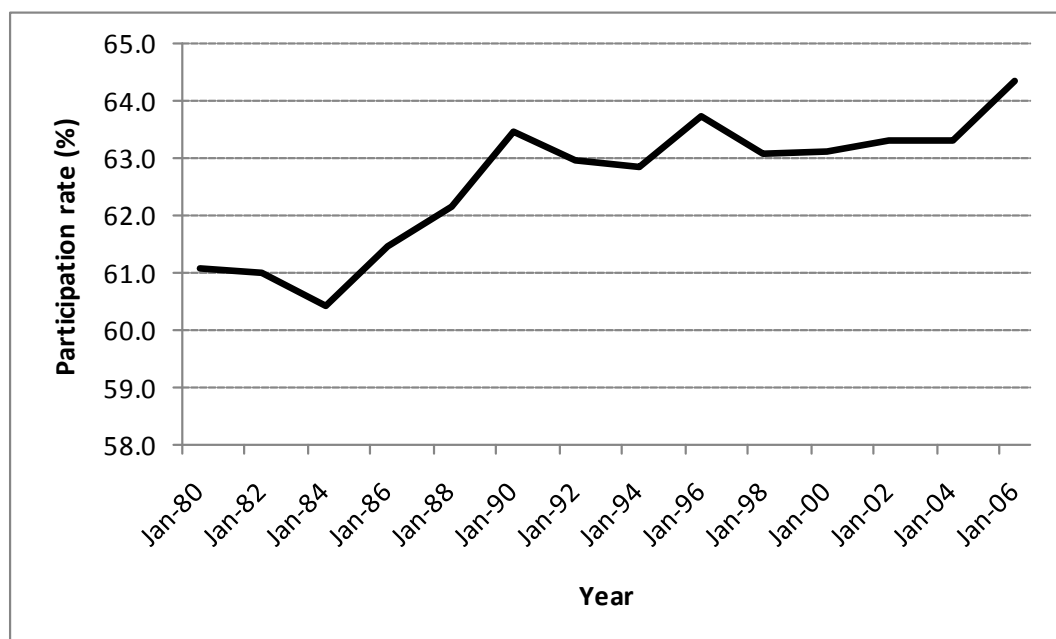


Source: ABS Education and Work (Cat No 6227.0)

Figure B.2. Unemployment rate, Australia, 1980–2007



Source: ABS, Labour Force, January 2008, Detailed, cat. no. 6202.0.55.001.

Figure B.3. Labour force participation rate, Australia, 1980–2007

Source: ABS, Labour Force, January 2008, Detailed, cat. no. 6202.0.55.001.

Table B.1. Performance of 15-year-olds in science, reading and mathematics

	Science		Reading		Mathematics	
	Mean score		Mean score		Mean score	
	Mean	S.E.	Mean	S.E.	Mean	S.E.
Australia	527	(2.3)	513	(2.1)	520	(2.2)
Austria	511	(3.9)	490	(4.1)	505	(3.7)
Belgium	510	(2.5)	501	(3.0)	520	(3.0)
Canada	534	(2.0)	527	(2.4)	527	(2.0)
Czech Republic	513	(3.5)	483	(4.2)	510	(3.6)
Denmark	496	(3.1)	494	(3.2)	513	(2.6)
Finland	563	(2.0)	547	(2.1)	548	(2.3)
France	495	(3.4)	488	(4.1)	496	(3.2)
Germany	516	(3.8)	495	(4.4)	504	(3.9)
Greece	473	(3.2)	460	(4.0)	459	(3.0)
Hungary	504	(2.7)	482	(3.3)	491	(2.9)
Iceland	491	(1.6)	484	(1.9)	506	(1.8)
Ireland	508	(3.2)	517	(3.5)	501	(2.8)
Italy	475	(2.0)	469	(2.4)	462	(2.3)
Japan	531	(3.4)	498	(3.6)	523	(3.3)
Korea	522	(3.4)	556	(3.8)	547	(3.8)
Luxembourg	486	(1.1)	479	(1.3)	490	(1.1)
Mexico	410	(2.7)	410	(3.1)	406	(2.9)
Netherlands	525	(2.7)	507	(2.9)	531	(2.6)
New Zealand	530	(2.7)	521	(3.0)	522	(2.4)
Norway	487	(3.1)	484	(3.2)	490	(2.6)
Poland	498	(2.3)	508	(2.8)	495	(2.4)
Portugal	474	(3.0)	472	(3.6)	466	(3.1)
Slovak Republic	488	(2.6)	466	(3.1)	492	(2.8)
Spain	488	(2.6)	461	(2.2)	480	(2.3)
Sweden	503	(2.4)	507	(3.4)	502	(2.4)
Switzerland	512	(3.2)	499	(3.1)	530	(3.2)
Turkey	424	(3.8)	447	(4.2)	424	(4.9)
United Kingdom	515	(2.3)	495	(2.3)	495	(2.1)
United States	489	(4.2)	m	m	474	(4.0)
OECD total	491	(1.2)	484	(1.0)	484	(1.2)
OECD average	500	(0.5)	492	(0.6)	498	(0.5)

Note: S.E. – standard error

Source: PISA, 2006, see: www.pisa.oecd.org.

Table B.2. Attractiveness of Australian universities to international students

	Student mobility	Foreign enrolments	Index of change in the number of foreign students, total tertiary, 2005 (2000=100)
	International students as a percentage of all tertiary enrolment	Foreign students as a percentage of all tertiary enrolment	
Australia ¹	17.3	20.6	167
Austria ^{1,3}	11.0	14.1	114
Belgium ¹	6.5	11.7	117
Canada	m	m	m
Czech Republic	m	5.5	339
Denmark ¹	4.4	7.5	135
Finland ^{2,3}	3.6	2.8	152
France ¹	10.8	m	173
Germany ²	m	11.5	139
Greece ^{1,3}	0.4	2.4	182
Hungary ¹	2.7	3.1	137
Iceland	m	3.2	120
Ireland ²	6.9	m	174
Italy	m	2.2	180
Japan ¹	2.8	3.1	189
Korea	m	0.5	459
Luxembourg	m	m	m
Mexico	m	m	m
Netherlands ³	4.7	5.6	225
New Zealand ¹	17.0	28.9	845
Norway ¹	1.9	4.8	154
Poland	m	0.5	166
Portugal	m	4.5	152
Slovak Republic ¹	0.9	0.9	107
Spain ^{1,3}	1.0	2.5	112
Sweden ¹	4.4	9.2	154
Switzerland ^{2,3}	13.2	18.4	142
Turkey	m	0.9	103
United Kingdom ¹	13.9	17.3	143
United States ¹	3.4	m	124
OECD average	6.7	7.6	192.8
EU19 average	5.5	6.3	161.1

1. For the purpose of measuring student mobility, international students are defined on the basis of their country of residence

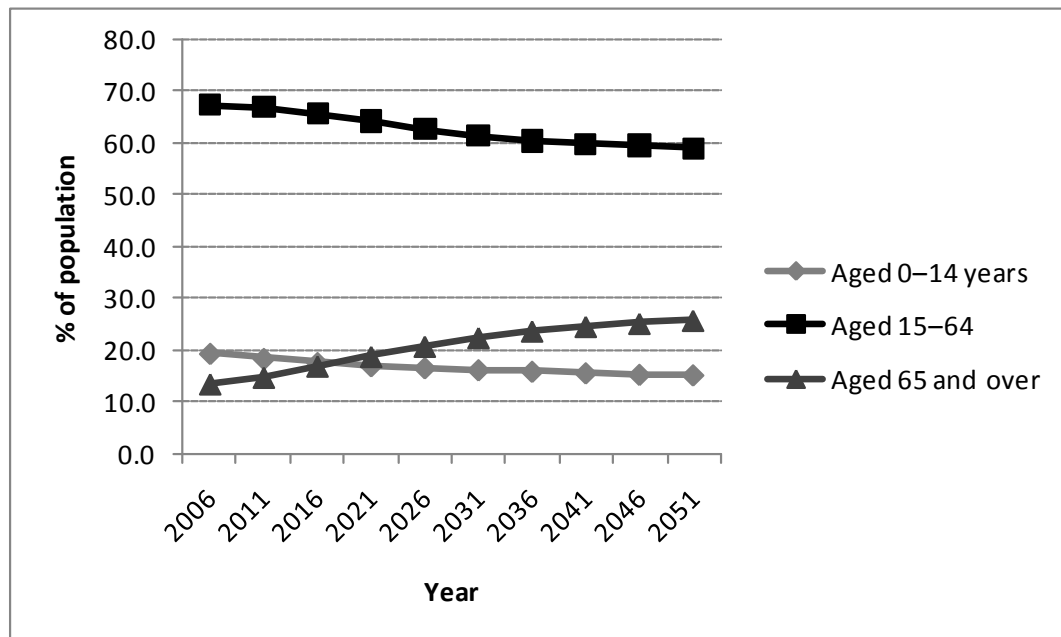
2. For the purpose of measuring student mobility, international students are defined on the basis of their country of prior education.

3. Percentage in total tertiary underestimated because of the exclusion of certain programmes.

4. Excludes private institutions.

m – missing information.

Source: OECD, *Education at a Glance 2007*; see: www.oecd.org/edu/eag2007.

Figure B.4. Projection of population ageing, Australia, 2006–2051

Source: Australia Bureau of Statistics, Social Trends, 2006, cat. no. 4102.0.

Learning for Jobs

OECD Reviews of Vocational Education and Training

AUSTRALIA

For OECD member countries, high-level workplace skills are considered a key means of supporting economic growth. Systems of vocational education and training (VET) are now under intensive scrutiny to determine if they can deliver the skills required.

Learning for Jobs is an OECD study of vocational education and training designed to help countries make their VET systems more responsive to labour market needs. It will expand the evidence base, identify a set of policy options and develop tools to appraise VET policy initiatives.

The Australian VET system has many strengths including strong engagement of employers, a well established national qualification system, extensive VET data and research. The system is flexible and allows for a fair degree of local autonomy and experimentation. But at the same time there are a number of challenges, including a lack of clarity and potentially duplication in the respective roles of Commonwealth, states and territories in planning and delivering VET, a lack of clear and simple rules for entitlement to funding, difficulties in providing a reliable foundation in skills forecasts, some gaps in the data base, somewhat complicated and cumbersome training packages and an ageing teacher and trainer workforce. Among the review's recommendations:

- Agree on common principles for VET funding and provision and achieve as much administrative consistency as possible. Quantify costs and benefits arising from duplication of responsibilities and from local variation.
- Encourage student choice of providers.
- Ensure that a range of provision is available to all and that information about providers to users is of good quality.
- Encourage part-time work of trainers in VET providers.
- Develop innovative strategies to sustain the number and skills of the VET teacher and trainer labour force.
- Replace training packages by simple and much briefer statements of skills standards.

OECD is conducting country VET policy reviews in Australia, Austria, Belgium (Flanders), the Czech Republic, Germany, Hungary, Ireland, Korea, Mexico, the Netherlands, Norway, Sweden, Switzerland, the United Kingdom (England and Wales), and the United States (South Carolina and Texas). The initial report of *Learning for Jobs* will be available on the OECD website in 2009. The final report on the study's findings will be published in 2010.

Background information and documents are available at www.oecd.org/edu/learningforjobs.