

# Longitudinal Surveys of Australian Youth

## Research Report 48

### **Variations in VET Provision across Australian Schools and Their Effects on Student Outcomes**

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March 2006

This report forms part of the Longitudinal Surveys of Australian Youth:  
a research program jointly managed by ACER and the  
Australian Government Department of Education, Science and Training (DEST).

The project has been funded by the DEST LSAY Analysis Grants Scheme.  
The Scheme aims to widen the use of LSAY data amongst researchers and encourage  
new approaches to using the data to address policy issues.

The views expressed in this report are those of the authors and not necessarily of the Department  
of Education, Science and Training or the Australian Council for Educational Research.

Published 2006 by  
The Australian Council for Educational Research Ltd  
19 Prospect Hill Road, Camberwell, Victoria, 3124, Australia.

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ISSN 1440-3455

ISBN 0 86431 509 0

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## Glossary of Terms

**Apprenticeship:** a system of training regulated by law or custom, which combines on-the-job training and work experience while in paid employment with formal off-the-job training. The apprentice enters into a contract of training or training agreement with an employer, which imposes mutual obligations on both parties.

**Australian Qualifications Framework (AQF):** a nationally consistent set of qualifications for all post-compulsory education and training in Australia. Registered Training Organizations that have met quality assurance requirements may deliver training, assess competency outcomes and issue Australian Qualifications Framework qualifications and / or Statements of Attainment.

**School-based new apprenticeships (SNAP):** New national apprenticeship and traineeship arrangements came into effect on 1 January 1998. The main characteristics of New Apprenticeships include a contract of training between employer and apprentice or trainee, public funding and support for employers, choice of training provider, a wider range of occupations and industries than previously, and competency-based training using national training packages. Under the school-based version (SNAP), schools can make arrangements for students to complete a ‘new apprenticeship’ while they are enrolled in their senior secondary years.

**Structured workplace learning:** The learning component of a VET in Schools program that is undertaken in the workplace. The skills or ‘learning outcomes’ commonly reflect nationally recognised, industry-defined competency standards. The student is not paid by the employer.

**Tertiary Entrance Rank (TER):** In New South Wales and the Australian Capital Territory this rank is known as the **UAI** (University Admissions Index); in Victoria the **ENTER** (Equivalent National Tertiary Entrance Rank); and in Western Australia, South Australia, the Northern Territory and Tasmania as the **TER** (Tertiary Entrance Rank). Queensland uses an **OP** (Overall Position) instead of a TER. The UAI, ENTER and TER are nationally equivalent measures.

**VET in Schools (VETiS):** allows school students to combine vocational studies with the general senior secondary curriculum. Students participating in VETiS continue to work towards their Year 12 certificate; all VETiS subjects count towards this certificate. The VET component of their studies gives them credit towards a nationally recognized vocational qualification that is aligned with AQF requirements.

**Vocational Education and Training (VET):** Post-compulsory education and training, excluding degree and higher level programs delivered by higher education institutions, which provides people with occupational or work-related knowledge and skills. In the report, VETiS is used to refer to VET subjects in school that count towards the Year 12 Certificate in each state and give credit towards AQF qualifications, whereas the term VET is used to describe subjects that are not recorded or do not count towards the various Senior School Certificates, though may count towards AQF certificates or statements of attainment.

**Year 12 Certificates:** Senior secondary school qualifications endorsed and issued by the State and Territory boards of studies and assessment authorities. The titles of the Year 12 certificates vary by jurisdiction:

- **NSW:** Higher School Certificate (HSC)
- **Victoria:** Victorian Certificate of Education (VCE)
- **Victoria:** Victorian Certificate of Applied Learning
- **Queensland:** Senior Certificate
- **South Australia:** South Australian Certificate of Education (SACE)
- **Western Australia:** Western Australian Certificate of Education, (WACE)
- **Tasmania:** Tasmanian Certificate of Education
- **ACT:** ACT Year 12 Certificate



## Executive Summary

Vocational education and training (VET) represents one of the most significant reforms to the senior secondary curriculum in Australian schools over recent decades. Introduced to expand curricular options and provide work-based training and qualifications, the numbers of students participating in VET have more than trebled since the mid-1990s. Over 90 per cent of schools now deliver some VET subjects. While VET is an important component of senior secondary programs across Australia, each state or territory system locates VET in a different curricular context. Some systems stipulate that all VET subjects must be accredited, meeting the requirements of the industry-specific Training Packages that are central to the Australian Qualifications Framework (AQF). Subjects that meet AQF requirements are known as VET-in-Schools subjects (and are referred to in this report with the acronym VETiS, with the term VET used to describe the other VET programs offered in school). However, full AQF accreditation is not deemed essential by all systems. There are some systems in which schools may offer VET subjects that are school-delivered and school-assessed only. Differences such as these between the different states and territories tend to impose broad constraints on how schools implement VET, leading to differences *between* systems. There is also considerable variation in the delivery of VET *within* systems. In each system, some schools go to the very limit of what is possible, offering school-based apprenticeships and vigorous multi-strand VET-in-Schools (VETiS) programs that allow students to achieve recognised qualifications and advanced credit in TAFE. Other schools may respond weakly, providing ‘taster’ VET only, while other schools deliver no VET at all.

The aim of this report is to develop a school-based typology that captures some of the variation in VET provision across Australian schools. Models of VET provision are constructed using information on system-level policies, obtained from state and territory curriculum authorities, and information on school-level delivery derived from a national survey of schools and students. Data derived from the schools and students involved in the *Longitudinal Surveys of Australian Youth 1998 Cohort* contribute to the construction of the typology. The report not only focuses on the types or models of VET provision, but also their impact on school completion rates and on initial post-school outcomes for different groups of students.

It is important to note that the period covered by the data in this report relates to the time between 1999 and 2002. The schools data were collected in 1999. From that time there have been further changes in the provision and accreditation of VET in Schools. The impact of more recent changes will not be reflected in the results of this report.

### Main Findings

#### *Models of VET provision*

One of the important outcomes of the analyses presented here is the construction of a classification of the main models or types of VET provision. The introduction of VET in Schools posed a difficult challenge for the senior secondary curriculum. Accredited VET requires the use of competency based-assessments, but it is difficult to integrate these into academic frameworks that were designed to deliver finely-graded assessments suited to the needs of tertiary entrance. This problem may be resolved in one of two ways. One is to create new subjects that count towards the Year 12 certificate. This response could be described as the *school model* for the provision of VETiS, because it attempts to incorporate VET into the existing Year 12 structure. It represents a form of dual accreditation, since these VET subjects count towards senior secondary qualifications and tertiary admission, while at the same time leading to accredited VET certificates. The other main approach has been to provide stand-alone VET subjects which in some jurisdictions do not count towards the Year 12 certificate. Rather, they are organized around the industry training packages, and aligned with AQF qualifications. This response could be described as the *TAFE model* of VET, because the subjects offered under this model are the same as, or are based on, those delivered by TAFE or by other Registered Training Organizations (RTOs) in the VET sector.

Within both the *school model* and the *TAFE model* there are variations related to the degree of emphasis on structured workplace learning. In some schools *all* VET students participate in structured workplace learning; in others a high proportion of students participate in structured workplace learning; and in others very few students are able to participate in the workplace. In addition, there are schools in which VET is offered without any workplace learning, and other schools in which no VET is offered at all. Consideration of all of these elements provides a basis for grouping schools into seven types, organized into three broad models:

**School model with workplace learning:** VET studies are integrated with the senior curriculum and accredited towards the school certificate:

1. All programs incorporate workplace learning (12 per cent of all schools)
2. Strong emphasis on workplace learning (26 per cent of all schools)
3. Weak emphasis on workplace learning (19 per cent of all schools)

**TAFE model with workplace learning:** Most VET studies are stand-alone and not accredited towards the senior school certificate:

4. Strong emphasis on workplace learning (13 per cent of all schools)
5. Weak emphasis on workplace learning (13 per cent of all schools)

**VET without workplace learning or no VET:**

6. VET does not include any workplace learning (10 per cent of all schools)
7. No VET is offered (8 per cent of all schools)

If schools are classified in this way by type or model of VET provision it becomes evident that there are substantial variations in the numbers of schools of each type across the states and territories, by school sector (Catholic, government independent), by region (metropolitan, provincial, rural and remote), and social intake (SES backgrounds of students).

#### *Impact of VET provision on Year 12 completion and initial post school outcomes*

Schools that have a higher concentration of VET students tend also to have higher non-completion rates, irrespective of type of VET provision. Non-completion rates range from 28 per cent in schools where VET counts towards the Year 12 certificate and there is a strong emphasis on workplace learning to 9 per cent in schools without any VET. However, in schools which offer VET there is some indication that those who chose VET in the senior secondary years of schooling were more likely to have changed their intention about completing school by Year 11 from the intention which they held at Year 9. This change of mind might have been because of the availability of VET at school.

The data from the LSAY cohort was used to address two important aspects of VET in schools:

- Whether different forms of VET provision impact differently on completion of Year 12 and initial post school outcomes; and
- Whether VET students had different outcomes to non-VET students of similar academic ability and background.

#### Impact of different forms of VET provision on Year 12 completion

The analysis in this study suggests that the *school model* had greater impact on Year 12 completion than the other models of VET provision:

- In schools where VET subjects count towards the Year 12 certificate, school completion rates were higher among those students who participated in VET.
- In these schools, the non-completion rate for students doing VET in Year 11 was 14 per cent; a rate that was almost as low as for non-VET students (12 per cent).
- The non-completion rates for students in equivalent schools that offered the TAFE-model of VET were significantly higher (20 per cent).



Thus, there may be advantages for students who study VET in terms of Year 12 completion in schools where VET counts towards the Year 12 certificate. These advantages remained after controlling statistically for school differences in intake, location, state and sector. This may suggest that VET study helps engage or re-engage students in school.

#### Impact of VET provision on initial post-school activities

While non-VET students are far more likely to go to university than VET students, for those not going to university there are advantages in having participated in VET while at school. For students who did not go to university, there was a greater likelihood of getting an apprenticeship, studying at TAFE or gaining full time jobs for those who enrolled in VET compared to those who did not enrol in VET.

The mode of VET provision impacts differently on students. While provision of *school-model VET* is associated with a greater likelihood of completing school compared to other models of VET provision, the *TAFE-model VET* provision seems to have some better labour market outcomes. An analysis of results for students not entering university shows that students in schools that offer *TAFE-model VET* with a strong emphasis on workplace learning had significantly greater odds of entering TAFE than of being unemployed, when compared with VET students in schools where VET counts towards Year 12.

The benefits of certain forms of VET provision appear not only for Year 12 completers, but also for non-completers. In terms of VET study, attending a school that offers TAFE-type VET with a strong emphasis on workplace learning appears to increase the odds of engaging in TAFE or being in at least part-time study or work, rather than being unemployed after leaving school.

#### **Conclusions**

At a general level, the results suggest that whereas schools adopting the integrated models of VET tended to promote higher retention in school for VET participants, the schools providing stand-alone VET programs tended to promote better initial post-school outcomes — better in terms of avoiding unemployment and successfully entering pathways involving tertiary study, apprenticeships and entry to full-time work. In this sense the TAFE Model of VET provision in schools seemed to promote positive post-school outcomes while the School Model seemed to promote better completion rates for participants.



# Variations in VET Provision across Australian Schools and Their Effects on Student Outcomes

## 1. INTRODUCTION

### Background

In Australian secondary schools, VET has played an increasingly important role in recent years. Since the mid-1990s the numbers of senior school students enrolled in VET in Schools has more than trebled to the point where almost one in two students now undertake VET subjects (MCEETYA, 2004). But it is not only student numbers that have changed. The numbers of schools offering VET have increased markedly, from 70 per cent in 1997 to over 90 per cent in 2004 (MCEETYA, 2004). Changes have also occurred in the types of programs offered at a school level: how schools deliver VET has been transformed. The Australian Qualifications Framework (AQF) was introduced on 1 January 1995 and the system of national training packages established and endorsed through this framework was phased in over five years, with full implementation by the year 2000 ([www.aqf.edu.au/aboutaqf.htm](http://www.aqf.edu.au/aboutaqf.htm)). Before the introduction of the AQF, vocational education in senior schooling was based on initiatives such as work experience programs, school-industry link programs, cooperative programs with TAFE, and formal career education. Mostly, technology and technical subjects did not provide workplace learning, some were recognised as subjects within Year 12 certificates, and some were not. The development of the AQF and changes to the senior secondary curriculum have allowed schools across the country to offer units of study that can contribute both to Year 12 certificates and to accredited VET, that is, to vocational qualifications at Certificate levels I - IV. Thus, under this new set of arrangements, what is known as 'VET in Schools' subjects or 'VETiS' are subjects that are undertaken by students as part of their Year 12 certificate but which also provide credits towards nationally recognised vocational qualifications within the AQF.

The development of national training packages through the AQF has provided a broad framework for the delivery of VETiS. Training packages provide a clear specification of the student outcomes required for qualifications in each industry by specifying the units of competence applicable to each qualification (ANTA, 1998a; ANTA, 1998b). For a school subject or a unit of study within a subject to gain accreditation in the VET system, the unit *must* deliver the competencies specified by a particular training package, and must conform to the prescribed assessment guidelines, which means that accredited assessors must evaluate student performance usually under workplace conditions. This framework has made it possible for the Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA) to establish agreed national principles and guidelines on the organization, provision and delivery of VETiS programs (see MCEETYA, 2000a; MCEETYA 2000b). According to these principles, at a school level, VET programs should be based on the national competency standards incorporated in training packages, leading to certificates within the AQF system as well as Year 12 certificates endorsed by state and territory Boards of Studies (MCEETYA, 2004).

The changes in the nature of the vocational subjects and programs offered in schools have been driven by the need to strengthen the links between senior schooling and employment, as well as by employer concerns that schools meet industry-standards of VET (rather than offering non-accredited courses). In the context of improving retention and strengthening post-school options, student demand for vocational skills and training prior to leaving school as well as demand for flexible options and choice in school programs have also been important influences for change (Malley & Keating, 2000).

From 2000, the MCEETYA reforms have led to a more uniform commitment to adopting the VETiS guidelines. VETiS provides opportunities for students to participate in structured workplace learning or on-the-job training. These opportunities are often provided by local businesses. Students learn practical workplace skills that industry and employers have identified as important for a specific job or career. The skills students learn are subject to formal assessment by accredited

assessors who implement the standards outlined in the Australian Quality Training Framework (AQTF) and are linked to a Registered Training Organisation (RTO). At the same time, VETiS subjects count towards Year 12 certificates.

Despite the existence of the national VETiS guidelines, different policy emphases persist across the jurisdictions, and different practices are also evident at the school level. Each system locates VETiS in a different curricular context and schools themselves vary in the way they organise and deliver VET. For example, the intensity of delivery of VETiS (e.g., the number of VET subjects that a student might study concurrently) tends to vary by jurisdiction, since the regulations governing the computation of Tertiary Entrance Ranks (TERs) vary by system<sup>1</sup>. In addition, some systems stipulate that all vocational subjects taught in the senior years must be AQF accredited and that the competencies must be workplace assessed. In other systems, alignment with AQF competencies is not always prescribed, so in some schools, some subjects take the form of school-delivered and school assessed vocational studies rather than fully accredited VET studies.

The diversity, though, lies not only across state and territory boundaries. It is also the case that within individual systems there can be major differences in what different schools provide. Thus, there can be differences in delivery between schools in different sectors, differences between those in different regions and differences between schools with different student intakes.

The aim of this report is to develop a school-based typology that captures some of the variation in VET provision across Australian schools. The models of VET provision will be constructed using information on system-level policies, which have been obtained from state and territory curriculum authorities, and information on school-level delivery derived from a national survey of schools and students. Data derived from the schools and students involved in the *Longitudinal Surveys of Australian Youth* 1998 Cohort will contribute to the construction of the typology. The report will not only focus on the types or models of VET provision, but also their impact on participation in VET in the senior years and on initial post-school outcomes. Does participation in VET in the senior years depend on the nature and type of school provision? Does this vary by state and territory? Are the post-school outcomes for young people linked to the type of VET delivery provided by school? This study will address these questions.

It should be noted that this report describes the situation that pertained at the end of the 1990s and in the early 2000s. It used data from the 1998 cohort of the Longitudinal Surveys of Australian Youth series (*LSAY-98*). These data refer to the experiences of young Australians who were in Year 9 in 1998, most of whom completed Year 12 in 2001. The analyses identify their main activities after leaving school; that is, for those who completed school, their main activity in 2002, and for the non-completers, their main activity in the two or three years since they left school. Four years have elapsed since these students were at school and during this time, there have been changes in the Year 12 Certificates in most states and territories, and there has been continuing adoption of the VETiS approach in which senior secondary VET subjects are AQF accredited and also count towards the Year 12 certificate. In addition, there has been rapid growth in School-based New Apprenticeships (SNAP). Despite these developments, the findings presented in this report in relation to the effects of participation in VETiS are likely to be robust. Since the numbers participating in SNAP in 2000 and 2001 were very small this report cannot comment on the outcomes of this innovation.

### **Sample and method**

The analyses in this report are based on data collected in the *Y98* cohort of the Longitudinal Surveys of Australian Youth (*LSAY-98*). *LSAY* is a program of longitudinal surveys of young people managed by the Department of Education Science and Training (DEST) and the Australian

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<sup>1</sup> Scores computed to rank students for tertiary admission have different names in different systems. See Glossary. The title Tertiary Entrance Rank is used in four of the eight jurisdictions.

Council for Educational Research (ACER). The program is designed to provide policy-relevant information on young people's education, training, and transition to work. *LSAY-98* base-year data were collected in 1998 and follow-up data have been collected annually since then. As part of this survey of young people, information was collected on subject participation in Years 11 and 12. In addition to the student survey, a school survey was undertaken in 1999 when most young people were in Year 10. The school survey collected information on programs that are offered as well as resources and policies. Both sets of data were used for this report.

This study focuses on the five mainland states and the Northern Territory. It excludes Tasmania and the ACT. The main reason for this is that the school data were collected while students were in Year 10. In the ACT and Tasmania, many students change schools at the end of year 10, moving from junior secondary schools to senior secondary colleges. What this report aims to do is examine the effects of different school VET programs on student retention, engagement and post-school activities. The school program data were collected in 1999, when students in the *LSAY-98* sample were in Year 10. Therefore, for any students who changed schools at the end of Year 10, we have no measure that records what type of VET program they experienced. These students may have been contacted in 2000 and 2001 by telephone interviews, so they would remain in the *LSAY* sample, but we have no matching data on the nature of the VET programs on the schools they attended in Year 11 and 12. For this reason, schools in the ACT and Tasmania have been excluded. For the same reason, junior secondary schools in the mainland states were excluded. In addition, students who changed schools at the end of Year 10 or Year 11 were excluded from the analysis. This is because there was no, or little, information available on the schools to which students transferred. Without this information, the effects of 'school type' on student outcomes, attitudes and main activities could not be assessed.

Information on sample sizes is presented in Table A. In the first survey undertaken in 1998 there were 14,117 young people from 296 schools. The final sample for this study involved 5,113 students who had remained in the survey to 2002 when initial post-school outcomes were measured, and had attended a secondary school in New South Wales, Victoria, Queensland, South Australia, Western Australia or the Northern Territory. These 5,113 students had either remained at the same school from Year 9 to Year 11 or were early school leavers who did not continue on at school. The final school sample comprised 172 schools that had provided information on their programs in the 1999 school survey. This sample comprised schools that, at minimum, enrolled students from Year 9 to Year 12; however, almost all of them enrolled students from Year 7 to Year 12 or from Year 8 to Year 12.

**Table A: The sample sizes**

	Schools	Students
	<i>n</i>	<i>n</i>
Base sample (1998 Year 9)	296	14,117
<b>Study sample</b>	<b>172</b>	<b>5,113</b>
NSW	41	1265
VIC	36	959
QLD	47	1462
SA	23	626
WA	20	657
NT	5	144

Note: The School sample is based on a survey of schools undertaken in 1999. The student sample is based on the initial post-school sample of students from 2002.

The school typology or models of VET provision were constructed using three sources of data:

1. The LSAY-98 schools survey, which was conducted in 1999 and provided information on the nature of the curriculum and various other school features and characteristics;
2. The LSAY-98 individual-level data on the Year 11 and 12 subjects that students actually enrolled in; and
3. Information from various state and territory curriculum authorities on the structure and accreditation of VET in schools.

Once the *School-VET-Type* variable was constructed, each school in the LSAY-98 sample was assigned to a specific category.

The effects on students of attending schools that differ in terms of VET provision were examined in terms of three outcomes:

1. Participation in Year 11 and Year 12 VET, which was obtained from subject enrolment data collected as part of the annual student surveys.
2. Completion of Year 12 or not, which was estimated from student responses on questions relating to their annual school activities and the dates and year-levels at which they left school. The goal here was to ascertain, after taking account of individual background factors, the extent to which school differences in VET provision influenced the chances of Year 12 completion.
3. Students' initial destinations or main activities after leaving school. The goal here was to examine the degree to which variations in school VET provision were linked with differences in post-school outcomes for students. That is, does school VET provision make a difference to the main activities students engage in when they leave school?

An important distinction is made between the effects of participation in VET subjects by individual students, and the effects of attending a school that has a particular model or type of VET provision. The report focuses on the latter, particularly in the early sections, but ultimately includes both sorts of analyses. The outcomes that relate to participation in schools that offer different models of VET include analyses at a student-level as well as at a school-level. The unit of analysis is clearly identified in the discussion of the results. Examination of school level factors provides an important picture of the differences between schools in VET provision and VET participation but there are also likely to be factors that operate at an individual level that influence participation in VET subjects in school.

Descriptive analyses have been used to develop different models of VET provision and describe the characteristics of schools. Descriptive analyses have also been used initially to examine the effects of VET provision on participation and outcomes. Inferential techniques are also used to examine the effects of type or model of VET provision on VET participation and initial post-school outcomes. They include linear regression to estimate the effects of type of VET provision at a school level on completion rates of Year 12 and logistic regression for analyses of the impacts on students' decisions to leave before Year 12 or not. A similar regression technique is used to examine the influence of VET model of provision on the activities of school students in their initial post-school years. Information on the regression procedures is provided in Chapter 4.

In the report, the term VET in Schools (VETiS) is used to refer to VET undertaken as part of a senior secondary certificate and its completion by the student provides credit towards a recognised VET qualification within the Australian Qualifications Framework. This is the definition adopted according to nationally agreed principles and guidelines on VET in Schools (Australian National Training Authority, 2001). VET that is delivered in schools but doesn't count towards the senior school certificate is referred to more simply as VET.

It is important to note that the period covered by the data in this report relates to the time between 1999 and 2002. The schools data were collected in 1999. From that time there have been further changes in the provision and accreditation of VET in Schools. The impact of more recent changes will not be reflected in the results of this report.

Descriptions of the variables used in the report for schools and students are provided in Table 1A in the Appendix.

### **Organisation of the report**

Chapter 2 presents the models of VET provision, derived from the LSAY survey of school programs and school features, undertaken in 1999. The models are also based on information on system-level policies, obtained from the different state and territory curriculum and assessment authorities: the New South Wales Board of Studies, the Senior Secondary Assessment Board of South Australia, the Victorian Curriculum and Assessment Authority, the Queensland Studies Authority, the Curriculum Council of Western Australia, the Northern Territory Board of Studies and the Australian Qualifications Authority. It then examines the variations in provision across states and territories, and across school sectors, geographical regions, and based on differences in school populations. The chapter concludes with an examination, based on a multinomial logistic regression, of the likelihood that schools with different demographic characteristics will offer particular models of VET programs.

Chapter 3 turns to the patterns of participation in Year 11 and 12 VET programs across schools. It looks at the links between participation in VET in Years 11 and 12 and the different models of provision identified in the previous chapter. It goes on to examine the likelihood of participation after controlling for a variety of school characteristics.

In Chapter 4 the focus shifts to the impact of VET provision on student outcomes. The rates of Year 12 completion for schools are reported as well as the rates for different groups of young people. Descriptive information is provided on completion rates as well as predicted completion rates based on regression analysis. This information includes data on differences by state and territory, school sector, region, and model of VET provision. This chapter also provides an analysis of the impact of school VET provision on initial post-school outcomes including entry to university, entry to TAFE, take-up of apprenticeships and traineeships, transition to full-time work and unemployment. Data from a multinomial logistic regression are used to examine the effects of a range of variables including school VET provision on the likelihood of initial destination.

Finally, Chapter 5 summarises the major findings and gives some consideration to the nature of the impact of VET provision at a school level on the lives and progress of students.

## 2. MODELS OF VET PROVISION

VET in schools is now recognised as an important component of senior secondary programs across all States and Territories and in most schools. Nevertheless, each system locates VET in a different curricular context and schools vary in the way they organise and deliver VET. Some schools offer accredited VET in Schools (VETiS) subjects in Year 10, and some even offer VETiS below Year 10. Others deliver VETiS only in Years 11 and 12, while the vocationally-oriented subjects they offer below Year 11 are *not* AQF accredited. Contextual differences across the state systems tend to impose broad constraints on how individual secondary schools within each system might implement VET. There is also considerable variation in the delivery of VET across schools within jurisdictions. In each jurisdiction, there will be some schools that go to the very limit of what is possible, constructing vigorous VET programs that offer students several strands of study leading to advanced credit in TAFE. Some schools also offer School-based New Apprenticeships. Other schools respond weakly, providing ‘taster’ courses only, while other schools may not deliver any VET at all.

This chapter presents an outline of some of the different models of VET provision at a school level. It uses the 1999 survey of LSAY schools and the LSAY surveys of students in 2000 and 2001 to create an empirically-based description or classification of the main forms of VET delivery across schools. The dimensions critical to this classification include the status of the VET subjects offered (are they AQF accredited? Do they count towards the Year 12 certificate?) and the degree to which these subjects involve structured workplace learning. Subsequent chapters examine the relationships between the different forms of VET provision, student participation, and student outcomes.

### School-level models of provision

The inclusion and integration of VET into the senior secondary years has been a major challenge to school systems and curriculum and assessment authorities. During the 1990s, the VET sector developed a competency-based training system. National agreements were reached on industry-specific training packages. These packages comprise groups of nationally-endorsed units of competency aligned to AQF qualifications, and nationally-endorsed assessment guidelines to support consistency in qualifications standards (ANTA, 1998a; ANTA, 1998b). To be accredited, a unit of study must deliver the competencies specified by a particular training package, and the student outcomes must be examined by a qualified assessor. The creation of competency-based assessment standards has led to a dilemma for VET, since this approach does not sit comfortably with the priorities and needs of the academic curriculum. In each state, the senior secondary curricula have historically been organized around assessment systems that are designed to serve the purposes of tertiary entrance selection.

Two main responses to the VET dilemma have emerged. One has been to attempt to integrate or embed VET in the general senior secondary curriculum. There are currently two methods for achieving this. The first is to embed relevant units of competency into subjects that count towards the Year 12 certificate. For example, there are six *Authority subjects* in Queensland that currently include embedded VET components; these subjects count towards the Year 12 certificate as well as towards the Tertiary Entrance Rank. From 2006, Queensland will move away from this ‘embedded’ approach and will deliver Year 12 VET subjects that will follow methods hitherto used more widely in NSW and other states. These methods involve packaging AQF-aligned units of competency together and treating them as subjects in their own right. For example, in NSW there are 10 VET subjects of 120 hours duration that are aligned with industry frameworks and count towards the NSW Higher Schools Certificate (HSC). These subjects are in areas such as Hospitality, Information Technology, Metals and Engineering, and so on. In NSW, most students only complete one VET subject as part of their Year 12 program. This is because VET subjects are designated ‘Category B’, meaning that while they count towards the Year 12 certificate, only one



2-unit VET subject can be counted towards the computation of a student's Tertiary Entrance Rank (TER).

These first two methods could be described as the 'school-based' solution to the VET problem because they attempt to incorporate VET into the existing structure of school subjects that are approved by the State boards of study, conforming to board-approved approaches to academic assessment. In effect, it is an approach that delivers dual recognition, since each VET study counts towards an AQF qualification, as well as towards the completion of a Year 12 certificate. A difficulty with this solution is that there remains a tension between VET content and assessment goals and traditional cultural assumptions about the nature of academic study. The subjects that include embedded VET tend to be labeled by schools as lower status ('easier') study options. At the same time these subjects are sometimes viewed by industry as 'poorer quality VET training' even though the standard of student work meets the AQF certificate requirements and is accepted by university admission authorities as a component of the overall TER.

The second main response to the VET dilemma has been to provide stand-alone vocational studies where there is no attempt at integration into the academic senior school curriculum. Students who complete these subjects also gain a statement of attainment or certificate that records the VET competencies they have achieved. At the point when Year 11-12 data were collected for the LSAY-98 sample (i.e., in 2000-01), there were some students in every state who were studying VET subjects that were not recorded on the Year 12 certificates issued by the state curriculum authorities or boards of studies. These VET subjects were not accepted as a component of the TER. For example, there were some TAFE subjects that had Board Endorsed status in NSW but were not recorded on the NSW Year 12 certificate. In Queensland, there are some VET subjects that have Authority-registered status but there are also some VET subjects that are *not* recorded on the current Queensland Year 12 certificate. From 2006, all VET subjects in the Queensland senior secondary curriculum should count towards the Year 12 certificate.

The provision of subjects organized around the requirements of industry training packages, based on AQF competency standards, but which do not count towards a Year 12 certificate, could be described as a 'TAFE-based' solution to the VET problem. A difficulty with this solution is that students may receive a VET qualification but it will not be recognized for the Year 12 certificate. In addition, results achieved on these VET subjects are not included in the calculation of the TER scores necessary for university selection.

Both the school-based and the TAFE-based approaches to the inclusion of vocational studies in senior school programs involve structured workplace learning as a key component of VET. Structured workplace learning is learning that occurs in the workplace through a formal vocational placement. It is integrated into AQF-accredited VET programs and designed to contribute to the required outcomes. Work-based learning is structured so as to enable the development of competencies to industry standards and it is assessed against those competency standards. Since the nationally-endorsed Training Packages have an industry focus, in most states and territories structured workplace learning is recommended for students enrolled in VETiS. Most training packages specify some form of workplace learning as a requirement and often the competencies specified in the packages must be assessed under workplace conditions. In some jurisdictions structured workplace learning is a requirement for the subject if it is to be counted towards the Year 12 certificate.

Thus, there are two key elements that are involved in constructing a typology of VET provision in secondary schools. The first relates to the formal accreditation arrangements for VET in the senior school curriculum: Does each subject count towards the Year 12 certificate? Or are there some Year 12 subjects that count towards a TAFE-based (AQF) qualification, but not a Year 12 certificate? Also some VET subjects may count toward the Year 12 certificate but not towards a TER. The second element is the level of emphasis on structured workplace learning. This is an important element. Structured workplace learning is a central feature of National Training

Packages and competency based assessment standards. The Commonwealth and state governments place a high priority on structured workplace learning, recognised in the Commonwealth funding for Local Community Partnerships to organise placements. Yet, according to MCEETYA figures, only about 50 per cent of VETiS students get a work placement (MCEETYA, 2000b).

Ideally, if other forms of data had been available, a more accurate typology could have been constructed. Unfortunately, the *LSAY-98* series does not provide information on whether students were awarded particular TAFE certificates and whether all the VETiS they did was AQF accredited. However, schools were asked whether the VET subjects they offered were recorded on Year 12 certificates, and students were also asked whether their studies included structured workplace learning. If a school specified that all the VET subjects offered were recorded on Year 12 certificates then that school was classified as offering a *school model*: if not, it was classified as offering a *TAFE model*. Seven main types of VET provision were constructed based on (a) information about the inclusion or non-inclusion of VET on the Year 12 certificates, and (b) the degree to which schools provided structured workplace learning as part of the VET in schools programs they offered. The seven types and models are:

**School model:** VET subjects are integrated with the senior curriculum and count towards the Year 12 certificate:

1. All subjects incorporate workplace learning (12 per cent of all schools)
2. Strong emphasis on workplace learning (26 per cent of all schools)
3. Weak emphasis on workplace learning (19 per cent of all schools)

**TAFE model:** VET subjects more often are stand-alone and do not count towards the Year 12 certificate:

4. Strong emphasis on workplace learning (13 per cent of all schools)
5. Weak emphasis on workplace learning (13 per cent of all schools)

**VET without workplace learning or no VET:**

6. The VET subjects offered do not include any workplace learning (10 per cent of all schools)
7. No VET is offered (8 per cent of all schools)

Table 1 summarises these models.

**Table 1 Models of school VET provision**

	Number of schools	Percentage of schools
	<i>n</i>	%
<b>School model:</b> <i>All VET subjects are recorded on Year 12 certificate</i>	(96)	(57)
All subjects incorporate workplace learning	20	12
Strong emphasis on workplace learning	44	26
Weak emphasis on workplace learning	32	19
<b>TAFE model:</b> <i>VET subjects are not recorded on Year 12 certificate</i>	(46)	(26)
Strong emphasis on workplace learning	23	13
Weak emphasis on workplace learning	23	13
<b>VET is offered without workplace learning</b>	17	10
<b>No VET</b>	13	8
<b>Total</b>	172	100

Note: Excludes schools in Tasmania and the ACT. Excludes junior secondary schools (7-10).

*'School Models' – VETiS subjects are recorded on Year 12 certificates*

Many schools offer VET in the form of accredited VET subjects (VETiS) that are recorded on Year 12 certificates. According to the national LSAY sample of schools this involved 57 per cent of all secondary schools in 1999 (see Table 1). Many of the VET subjects these schools offer are dual accredited, i.e. students gain credit towards the Year 12 certificate while also gaining AQF-accredited VET certificates at the same time. For example, a student can obtain a Certificate II in hospitality that is AQF-accredited while also counting the same work towards meeting the relevant state or territory Year 12 requirements. Much of this dual accredited study is undertaken in 'embedded VET' subjects. As described above, this is where the VET unit is embedded within a Year 12 subject; i.e. accredited units of vocational competency are delivered within school subjects that also count for the Year 12 certificate. It is also possible for dual accreditation to occur where a related collection of VET units are brought together and delivered as a recognised Year 12 subject in its own right.

Common to both these approaches is the provision of VET that is recorded on the Year 12 certificate and in most cases is AQF accredited at the same time (in accordance with the competencies defined in national training packages). Within this group of schools, however, there is some variation in the nature of delivery. Not all of the schools have the same level of emphasis on structured workplace learning as a critical feature of their VET in Schools programs.

About 12 percent of schools offered VET subjects where *all* students participated in structured workplace learning as a component of VETiS. In these schools, an extended period of learning in the workplace is built into the structure of every VET in schools subject so that every student must do work-based learning in order to complete each subject. This applies to every VET subject that these schools provide. The inclusion of work placements in vocational education programs is designed to strengthen the link between school and work and enhance student career opportunities. This model of VET provision suggests strong links between the school programs and AQF-accredited National Training Packages, which mostly require that work placements be undertaken as part of an approved VETiS program for both delivery and assessment purposes.

In about 26 per cent of all schools and in 45 per cent of the schools that only offer VET subjects that count towards the Year 12 certificate, structured workplace learning is a major component of school effort. Most students who undertake VET also engage in structured workplace learning and this can lead to quite high proportions of all students participating in some form of workplace learning (up to 70 per cent in some schools). Learning for most VET students in these schools occurs in the workplace as well as in the school classroom.

In the third group of schools, there is a much weaker emphasis on workplace learning. Fewer students participate in workplace learning (less than 15 per cent of all students and sizeable gaps between the numbers of VET students and the numbers of VET students engaged in workplace learning). This involves 19 per cent of all schools. While these schools indicated that the VET subjects they offered all count towards the Year 12 certificate, some of the subjects did not involve workplace learning and many of the VET students did not undertake any workplace learning.

*'TAFE models' – VET subjects are not recorded on Year 12 certificates*

Some schools offer National Training Package qualifications or AQF-accredited VET subjects that do not count towards the Year 12 certificate. In this case the level of achievement that students gain in relation to the VET is not recorded on the Year 12 certificate. In effect, there is no computation of levels of attainment since the AQF system records competencies without any use of a finely graded system of judgments. Instead, a VET certificate or Statement of Attainment is awarded for the competencies achieved. This VET certificate is provided by a Registered Training Organization. An example of such subjects is provided by the Queensland Studies Authority (QSA) VET in Schools option of 'stand-alone' VET. This is where schools offer National Training Package qualifications or accredited VET courses outside the embedded QSA VETiS subjects.

These subjects are not recorded on the Year 12 Certificate. The students receive a separate VET Certificate or Statement of Attainment for the VET competencies they have achieved.

This type of VET delivery involved 26 per cent of all schools (see Table 1). Many of these schools also offered VET subjects that counted towards the Year 12 certificate. However, they differed from the other schools delivering VET in that they also delivered stand-alone VET subjects that were not recorded on the Year 12 certificate.

The provision of workplace learning as a critical component of the teaching and learning of VET also divided this group of schools. There was a difference in the level of importance placed on workplace learning. Half of the schools (13 per cent of all schools) offering VET subjects that did not count for the senior secondary certificate placed a heavy emphasis on workplace learning with not only most VET students participating in work-based learning and assessment, but also a sizeable percentage of students participating in workplace learning: 15 per cent or more of all students within these schools.

The remaining schools (13 per cent of all schools) had less of an emphasis on workplace learning with only some subjects incorporating this feature and only relatively small percentages of students undertaking work-placements (less than 15 per cent). While these schools indicated that they offered a mixture of VET courses, some of which were embedded in subjects that counted towards the Year 12 certificate and some of which were stand-alone, there was not a high level of participation in workplace learning.

#### *Schools not offering any workplace learning*

Not all schools offering VET subjects or courses provide workplace learning as a feature of VET study. While structured workplace learning is designed to provide industry-based learning opportunities on which competencies can be developed and tested it is important to recognize that not all VET in Schools subjects require students to undertake work placement and not all schools offer subjects that involve workplace learning. For example, schools may offer *Accounting* as an accredited VET subject without arranging for students to do work-based learning in Accounting firms, since the relevant experiences may be simulated inside schools and AQF accreditation may still be available. One in ten schools offered VET subjects that did not include any workplace learning. While most of the schools claimed that the subjects they offered were AQF accredited and also counted towards the Year 12 certificate, the subjects offered in these schools did not involve learning time in a workplace. In some cases this may indicate that these schools are offering embedded VET subjects but are not providing fully-accredited assessments of the required competencies. Most of the National Training Frameworks prescribe certain forms and specific amounts of structured workplace learning, but in some areas (eg, Accounting, or Catering) it is possible for schools to install commercial-quality equipment and, provided that the teacher in charge has achieved AQF Level IV accreditation, these subjects can be offered within schools as accredited VET. The LSAY sources used did not indicate whether the VET subjects offered in these schools were AQF accredited or not, but we do know that all of the VET study in the schools allocated to this model is both classroom-based and classroom delivered.

#### *Schools not offering VET*

The numbers of schools across Australia not offering any form of VET in the senior years are few. In 1999, this involved only about 8 per cent of all schools (see Table 1). Only a few years earlier the percentage was as high as 25 per cent (MCEETYA, 2002), showing how rapidly VET has been adopted by Australian schools as a valid extension of senior school programs.

### **School characteristics and variations in VET provision**

VET provision in secondary schools increasingly has been driven by the requirements of national agreements on curriculum and qualification frameworks. This has meant a greater consistency in

the nature and type of VET provision in Australian schools. Yet, states and territories have different policy emphases and approaches which can affect provision. As Table 2 shows, among the national sample of schools, the models of VET provision vary by jurisdiction. When making comparisons it should be noted that due to the sampling within LSAY, the number of schools sampled within each jurisdiction is fairly small.

**Table 2 Models of VET provision, by state (%)**

	NSW	VIC	QLD	SA	WA
<b>School model:</b> <i>All VET subjects recorded on Year 12 certificate</i>	(59)	(59)	(53)	(47)	(60)
All subjects incorporate workplace learning	15	17	4	4	10
Strong emphasis on workplace learning	29	25	23	26	30
Weak emphasis on workplace learning	15	17	26	17	20
<b>TAFE model:</b> <i>VET subjects not recorded on Year 12 certificate</i>	(19)	(14)	(38)	(35)	(30)
Strong emphasis on workplace learning	12	8	17	22	10
Weak emphasis on workplace learning	7	6	21	13	20
<b>VET offered without workplace learning</b>	7	17	6	9	10
<b>No VET</b>	15	11	2	9	0
Total	100	100	100	100	100
<i>N=</i>	41	36	47	23	20

Note: Excludes schools in Tasmania and the ACT. Northern Territory schools are also excluded because of the small number.

Despite the high overall number of secondary schools offering some form of VET study in the senior years (92 per cent), the percentages not offering any VET varies substantially: from 15 per cent in New South Wales to 0 per cent in Western Australia. Quite a few schools in Victoria and South Australia also do not offer or deliver any VET in the senior years: 11 and 9 per cent of schools, respectively.

Victoria had the second highest proportion of schools that offered no VET and also a high proportion only offering VET subjects that did not involve any workplace learning. In Victoria, 17 per cent of schools offered VET without any workplace learning compared to 10 per cent of schools in Western Australia, 9 per cent in South Australia, 7 per cent of schools in New South Wales, and 6 per cent in Queensland.

There were substantial differences between the states in terms of the delivery of stand-alone VET. Queensland (38 per cent), South Australian (35 per cent) and Western Australian (30 per cent) schools were more likely to offer VET that was not recorded on Year 12 certificates than were Victoria (14 per cent) and New South Wales (19 per cent of schools).

As well as state, school sector also influenced the mode of VET provision. Government schools are more likely to offer VET subjects that count towards the Year 12 certificate than are Catholic or Independent schools. Inclusion of all VET subjects on the Year 12 certificate applied to 64 per cent of government schools, 50 per cent of Catholic schools and 32 per cent of Independent schools. Independent schools, in line historically with their more academic preparatory role, far less frequently offered any form of VET study in Years 11 and 12. This applied to 21 per cent of Independent schools compared to 9 per cent of Catholic schools and only 4 per cent of government schools (see Table 3).

**Table 3 Models of VET provision, by school sector (%)**

	Government schools	Catholic schools	Independent schools
	%	%	%
<b>School model: All VET subjects recorded on Year 12 certificate</b>	(64)	(50)	(32)
All subjects incorporate workplace learning	12	19	4
Strong emphasis on workplace learning	31	22	7
Weak emphasis on workplace learning	21	9	21
<b>TAFE model: VET subjects not recorded on Year 12 certificate</b>	(25)	(28)	(32)
Strong emphasis on workplace learning	14	9	14
Weak emphasis on workplace learning	11	19	18
<b>VET subjects offered without workplace learning</b>	8	13	14
<b>No VET</b>	4	9	21
Total	100	100	100
Total number of schools (n)=	112	32	28

Note: Excludes schools in Tasmania and the ACT. Excludes junior secondary schools (7-10).

Not only are Independent schools far less likely to offer VET in the senior years, they are also far less likely to offer workplace learning. Over half (53 per cent) of Independent schools either provide VET subjects without any workplace learning or provide programs of study in which there is only a weak emphasis on work-placement study. This is compared against 40 per cent of government schools and 41 per cent of Catholic schools. The inclusion of workplace learning — a central feature of the National Training Packages and competency based assessment standards — is much more evident in the practices of government and Catholic schools.

Catholic schools frequently provided programs in which all VET students participated in workplace learning (19 per cent). Many government schools also delivered programs in which there was a heavy emphasis on learning in the workplace (most VET students undertake workplace learning) and the study is recorded on the Year 12 certificate. This was true of 31 per cent of government schools as against 22 per cent of Catholic schools and only 7 per cent of Independent schools.

VET provision also varies by region. All non-Metropolitan schools offer VET (see Table 4). This may be due to the need to offer more diverse programs in provincial, rural and remote areas.

The type of VET delivered, however, can vary. Schools in provincial and rural and remote areas were more likely to provide VET courses where student levels of achievement were not recorded on the Year 12 certificate, and did not count towards that certificate. Instead, students were given separate certificates of VET attainment. This applied to 40 per cent of schools in provincial Australia and 43 per cent of schools in rural and remote areas. It applied to only 21 per cent of schools in metropolitan areas. Rural schools, more often than metropolitan schools, delivered stand-alone VET.

Workplace learning is a feature of VET programs in all schools serving rural and remote communities. While this may involve only a relatively small percentage of the total number of students who undertook VET studies, all rural and remote schools offered study incorporating work-placements. Approximately 7 per cent of schools in provincial centres offered VET study without workplace learning and 12 per cent of schools in metropolitan areas did so.

**Table 4 Models of VET provision, by region (%)**

	Metropolitan	Provincial	Rural & remote
	%	%	%
<b>Schools model:</b> <i>All VET subjects recorded on Year 12 certificate</i>	(56)	(53)	(58)
All subjects incorporate workplace learning	10	19	10
Strong emphasis on workplace learning	27	19	29
Weak emphasis on workplace learning	19	15	19
<b>TAFE model:</b> <i>VET subjects not recorded on Year 12 certificate</i>	(21)	(40)	(43)
Strong emphasis on workplace learning	8	33	19
Weak emphasis on workplace learning	13	7	24
<b>VET programs without workplace learning</b>	12	7	0
<b>No VET</b>	10	0	0
Total	100	100	100
<i>N=</i>	<i>124</i>	<i>27</i>	<i>21</i>

Notes: (1) Excludes schools in Tasmania and the ACT.

(2) Regions: metropolitan, provincial and rural or remote are derived from the postcode of the school and the ARIA index used in the 2001 Census. Metropolitan covers schools in areas identified as 'major cities'. Provincial covers schools in areas defined as 'inner regional'. Rural and remote covers schools in areas defined as outer regional and remote.

VET provision in schools also varies as a function of the social composition of the students enrolled (see Table 5). Schools with a high SES intake — i.e. those which are in the top quartile of schools grouped on the basis of the mean SES scores of their students — far more often either do not provide any VET (23 per cent of high SES schools) or only provide VET study which does not contain any workplace learning (20 per cent). It would appear that schools serving high SES populations do not treat VET as seriously as they do other senior school programs. This, no doubt, is due to the much heavier emphasis in such schools on the academic curriculum, scholastic success and university entry. Even where VET is offered it tends to be of a more formal, classroom-based kind that does not involve the workplace as a site of learning. Approximately half of the high-SES schools in the LSAY sample are Independent schools; as noted earlier, a relatively large proportion of these schools do not offer any VET, or offer VET subjects without providing workplace learning.

Based on provision, it would appear that low SES schools placed a strong emphasis on work-based learning as a key component of VET. Almost three quarters (74 per cent) either have a heavy emphasis on workplace learning where most VET students undertake work-placements or all subjects incorporate structured workplace learning. This is compared to 59 per cent of lower middle SES schools, 53 per cent of upper middle SES schools and only 18 per cent of high SES schools.

**Table 5 Models of VET provision, by school SES quartile (%)**

	School SES quartile			
	Low	Lower middle	Upper middle	High
	%	%	%	%
<b>Schools model: All VET subjects recorded on Year 12 certificate</b>	(62)	(61)	(68)	(33)
All subjects incorporate workplace learning	10	14	21	2
Strong emphasis on workplace learning	45	26	21	11
Weak emphasis on workplace learning	7	21	26	20
<b>TAFE model: VET subjects not recorded on Year 12 certificate</b>	(29)	(33)	(24)	(23)
Strong emphasis on workplace learning	19	19	12	5
Weak emphasis on workplace learning	10	14	12	18
<b>Subjects without workplace learning</b>	7	5	7	20
<b>No VET</b>	2	2	2	23
<b>Total</b>	100	100	100	100
<i>N</i> =	42	43	43	44

Note: Excludes schools in Tasmania and the ACT. SES quartile is based on a ranking of mean school SES.

It is possible to examine the factors most often associated with the model of VET provision and the type of school in which it is most likely to occur. Table 6 presents the odds of schools providing a certain model of VET program in the senior years. The rates have been derived using a multinomial logistic regression to identify the factors that predict model of provision. The control group comprises government metropolitan schools in New South Wales in the lowest quartile of SES offering VET subjects that counted towards the Year 12 certificate and that placed a heavy emphasis on workplace learning. The rates are the odds of schools with particular attributes providing VET programs associated with each model. The odds are relative to one. Therefore, for example, the odds of 2.3 for catholic schools offering VETiS in which all subjects incorporate structured workplace learning rather than VETiS with a strong emphasis on structured workplace learning, is 2.3 times higher than for Government schools. Odds that are significant are identified with asterisks.

The results show, after controlling for other factors, that schools which offered VET study without workplace learning were significantly more likely to be in Victoria and to be serving high SES populations. It suggests that high-SES schools, whether government or private, are far less likely to offer VET subjects that contain workplace learning. High SES schools offer VET programs less frequently than do low-SES schools. The odds of not offering VET were much greater for high SES schools than for low SES schools (23.6 to 1), suggesting a large and significant effect of SES on the provision of VETiS. Schools not offering VET were also more likely to be Independent private schools, regardless of their SES status. This means that Independent private schools, regardless of SES intake, more frequently do not offer VET as an area of study in the senior years.



**Table 6 Predicting the model of VET offered by schools: odds of provision based on multivariate analyses**

	Model of VET offered by schools					
	Recorded on Year 12 certificate		Not all VET recorded on Year 12 certificate			No VET
	All with workplace learning	Weak emphasis on workplace learning	Strong emphasis on workplace learning	Weak emphasis on workplace learning	No workplace learning	
<b>Sector</b> (relative to Government)						
Catholic	2.3	0.2*	1.1	1.4	0.7	1.5
Independent	2.0	1.3	NA	3.4	1.1	3.7*
<b>State</b> (relative to NSW)						
Victoria	0.8	2.6	1.2	1.3	5.1*	2.0
Queensland	0.2*	2.7	2.0	3.5*	1.6	0.2*
South Australia	0.2*	2.0	1.4	2.2	2.0	1.0
Western Australia	0.5	1.6	1.4	2.7	1.5	0.0*
<b>Location</b> (relative to Metropolitan)						
Provincial	0.5	1.1	12.9*	0.9	0.7	NA
Rural and remote	0.4	1.4	3.5*	1.9	NA	NA
<b>School SES Quartile</b> (relative to Low SES)						
Lower Middle	2.3	5.4*	1.4	1.9	1.3	2.2
Upper middle	3.9	9.6*	0.3	1.8	2.7	2.7
High SES	0.5	17.8*	0.1	3.9*	16.4*	23.6*

Note: Control group comprises New South Wales government metropolitan schools from the lowest SES quartile of student intake offering VET that counts on the Year 12 certificate and includes a strong emphasis on workplace learning.

NA=estimate not attainable.

Schools in provincial and rural and remote areas were more likely to offer VET subjects that do not count towards the Year 12 certificate. Their programs also placed a strong emphasis on workplace learning. Schools that offered VET subjects not included on the Year 12 certificate and where there was a low emphasis on workplace learning were significantly more likely to be located in Queensland. They were also far more often schools with high SES intakes, irrespective of jurisdiction.

### School VET models and program features

The models of VET provision presented in this report have been constructed on the basis of two program features: (a) whether the VET subjects offered count towards the Year 12 certificate, and (b) whether work-based learning is provided as a component of all, most, some, or none of the VET subjects offered. In addition to these features there are four other ways that VET delivery may vary at the school level. In some schools, VET provision and organisation involve industry partnerships, in others, there are TAFE-linked programs, or school-based apprenticeships. Accredited VET may also be offered in the junior years and the extent of this may vary by state, sector, and region. Table 7 presents differences in the patterns of some of these features associated with schools.

Some schools in Australia offer VET before the senior years. This could occur for several reasons. In interviewing Year 8 students as part of their review of secondary education in Queensland, Pitman and Herschell (2002) found that some students even at this early stage were disengaging from study and losing heart, fearing that school offered nothing more than an endless agenda of academic studies. Some schools offer Year 10 VET in order to provide such younger students with access to study that is more applied, involving industry and workplace relevant teaching and assessment — study that students may find more relevant (to their personal goals) and more

rewarding. In this sense, it is an attempt to not only help improve pupil motivation, but also facilitate better teaching and learning leading to better outcomes. Another possible reason is that schools introduce VET earlier as a form of management of pupil diversity, for promoting earlier orientation towards non-academic outcomes for weaker students.

Table 7 shows that South Australian schools more often offer VET to their Year 10 students than do schools in other states. The rate — 61 per cent — is more than three times that for Western Australia (20 per cent) and more than double that of Queensland (26 per cent). It was also much higher than in New South Wales (32 per cent) and Victoria (42 per cent). Offering VET in Year 10 also occurs more frequently in low SES rather than high SES schools (55 per cent as against 27 per cent).

**Table 7 Models of VET provision, by VET program features: percentages of schools providing each program**

	Year 10 VET	School- based apprentice.	Industry partnership	TAFE- linked program
<b>VET model</b>	%	%	%	%
<b>School model:</b> <i>All subjects recorded on Year 12 certificate</i>				
All subjects incorporate workplace learning	45	20	45	30
Strong emphasis on workplace learning	34	50	64	59
Weak emphasis on workplace learning	19	22	56	56
<b>TAFE model:</b> <i>Some subjects not recorded on Year 12 certificate</i>				
Strong emphasis on workplace learning	65	26	74	78
Weak emphasis on workplace learning	39	30	52	52
<b>Programs without workplace learning</b>	24	18	41	35
<b>State</b>				
NSW	32	15	39	61
VIC	42	28	47	36
QLD	26	62	60	55
SA	61	4	65	70
WA	20	15	60	45
NT	40	20	60	0
<b>Sector</b>				
Government	38	38	57	55
Catholic	25	16	56	56
Independent	32	11	32	32
<b>School SES quartile</b>				
Low	55	38	62	55
Lower middle	40	44	63	53
Upper middle	19	26	53	63
High	27	9	34	36
<b>Region</b>				
Metropolitan	33	31	52	51
Provincial	52	19	67	63
Rural and remote	24	33	43	43
All schools	35	29	53	52

Table 7 also shows that schools offering VET in Year 10 were often schools that provided stand alone VET which was not recorded on the Year 12 certificate, and where most VET students participated in workplace learning. This applied to two-thirds of the schools with this type of VET, compared to only one third of the schools which also had a heavy emphasis on workplace learning but where the VET study *did* count towards the Year 12 certificate. It suggests that more students are given the opportunity to participate in VET in their junior years in schools where students tend to receive separate VET certificates, that is, where senior VET study is mostly not tied to the school certificate.

These same schools often formed industry partnerships in the delivery of VET (74 per cent) and developed TAFE-linked programs (78 per cent). It is not surprising that such schools — schools that deliver stand-alone VET combined with a strong emphasis on work-based learning — also report the highest levels of activity in forming industry partnerships for the delivery of VET and in offering TAFE-linked programs. All these activities are consistent with a mission that focuses on AQF accreditation and workforce preparation, rather than competitive academic assessment aimed at university admission.

Among schools that offered stand-alone VET but placed less emphasis on workplace learning, the frequency of engagement in TAFE-linked programs and industry partnerships was lower than for schools with a high emphasis on work-based learning. Nevertheless, the rate for these schools — 52 per cent — was higher than for schools that did not offer any workplace learning at all.

School-based apprenticeships are also a source of variation in VET delivery. Among schools that offer VET that is recorded on the Year 12 certificate, the provision of school-based apprenticeships is greatest among schools that place a strong emphasis on work-based learning. Half of the schools that offered VET that counts toward the school certificate with a strong emphasis on workplace learning also had students participating in school-based apprenticeships. This was more than double the rate for the other schools that offered only VET that counts towards the Year 12 certificate (20 and 22 per cent respectively). As Table 7 shows, the provision of School Based New Apprenticeships (SNAP) varies substantially by jurisdiction. In part, this may be because of differences in barriers to the introduction of SNAP. Specifically, the provision of trainee wages depends on industrial awards. In some industries, students may gain a trainee wage through a Federal award, but some of the State award systems have no provision for trainee wages for school-based apprentices (<http://www.newapprenticeships.gov.au/school.student.wages.asp>).

Apprenticeship rates also vary by jurisdiction, sector and social intake. Across states, the rates varied from 4 per cent of schools in South Australia offering apprenticeships to 62 per cent in Queensland. Government schools more often provide them: 38 per cent of government schools compared with 16 per cent of Catholic schools and 11 per cent of Independent schools. Low and lower middle SES schools (38 and 44 per cent) were much more likely to offer school-based apprenticeships than upper middle or high SES schools (26 and 9 per cent, respectively).

### 3. MODELS OF PROVISION AND PARTICIPATION IN VET ACROSS SCHOOLS

#### Introduction

This chapter examines an important issue regarding the relationship between school VET programs and student participation in VET. Specifically, it addresses the question: to what extent are different models of VET provision associated with differences in student participation in VET at the senior secondary level? The chapter reports the rates of participation in VET of the students attending the sample schools. Information on subject enrolments was collected from students in 2000 and 2001 when they were in Years 11 and 12 respectively. Students were asked whether or not they had participated in VET programs that were offered in conjunction with TAFE or whether they had participated in any other VET programs organised and offered by the school. Data on participation in workplace learning and in school-based apprenticeships was also sought. In addition, students were asked to provide the full list of subjects they were taking and the certificate status or level of each study. From this information it was possible to construct measures of students' rates of participation in VET.

The results presented in this chapter are based on both student and school data, but the unit of analysis is the school. Rates of participation are based on the percentages of students in each school participating in VET.

#### Patterns of VET participation

Before examining the extent to which the rates of participation in VET studies vary by school VET model, it is worth looking at mean student participation rates in VET by year level and according to a range of school characteristics. Table 8 presents this information. The first row of Table 8 reveals that on average, across all of the schools included in the study sample, 27 per cent of Year 11 students participated in at least one VET subject. The VET participation rate in Year 12 was lower, at 21 per cent. If the number of students participating in a VET course at any time in *either* Year 11 *or* Year 12 were to be used to calculate the participation rate, then the mean rate across the schools in the sample was 32 per cent. This implies that on average, one in three of all students in the LSAY-98 sample studied a VET subject in 2000 or 2001.

Student participation rates vary substantially by type of school. Government schools are the main supplier of VET enrolments, though Catholic schools are also very active. In 2000, the average Year 11 student participation rate in VET was 31 per cent in government schools in this sample, 24 per cent in Catholic schools and 17 per cent in Independent schools. VET participation rates fall in Year 12 for all sectors, but the gap between government and Independent schools remains the same (14 percentage points). Analysis of the data for participation in any VET study in either Year 11 or Year 12 indicates that 36 per cent of all government schools students, 28 per cent of all Catholic school students, and 22 per cent of all Independent school students study a VET subject in either Year 11 or Year 12.

There are relatively small variations by state and territory in Year 11 rates of participation. Western Australia recorded the lowest rate (24 per cent) while South Australia recorded the highest rate (31 per cent). However, the fall in participation rates from Year 11 to Year 12 is uneven. The mean rate of participation in Year 11 across South Australian schools is 31 per cent, but the rate falls to 13 per cent in Year 12. This could reflect a high attrition rate for VET students or, alternatively, a lower emphasis on VET in Year 12. Currie and McCollow (2002) report that the majority of students in South Australia enrol in only one or two modules of embedded VET. This may occur mostly in Year 11 rather than Year 12. By comparison, the fall in rates of participation from Year 11 to Year 12 are small in New South Wales (2 per cent), Queensland (2 per cent), Western Australia (2 per cent), and the Northern Territory (3 per cent). It means that at Year 12 level there are substantial gaps in rates of VET participation between schools located in different jurisdictions.

Examination of the rates of VET participation in Years 11 and 12 suggest that Western Australia and Queensland have the largest numbers of new entrants to VET as students progress from Year 11 to Year 12 (see Table 8). This is evident from the gap between the combined rate (column 3) and the rate for Year 11 (column 1). The gap for both states is 8 percentage points compared with 1 point for Victoria, 3 points for South Australia and the Northern Territory, and 6 points for New South Wales.

**Table 8 Mean participation rates in VET, by year-level and selected school characteristics (%)**

	Year 11	Year 12	Year 11/12
	%	%	%
<b>Across all schools</b>	27	21	32
<b>School sector</b>			
Government	31	24	36
Catholic	24	19	28
Independent	17	10	22
<b>Region</b>			
Urban	24	20	30
Provincial	31	20	35
Rural & remote	38	31	44
<b>School SES quartile</b>			
Low	38	29	42
Lower middle	30	25	38
Upper middle	27	19	31
High	14	11	19
<b>State</b>			
NSW	30	28	36
VIC	25	17	26
QLD	26	24	34
SA	31	13	34
WA	24	22	32
NT	25	22	28

Location and social intake are also important influences on participation. While 38 per cent of students across schools in rural and remote locations participate in Year 11 VET, the rate for schools in metropolitan Australia is 24 per cent. For Year 12, the participation rate falls to 31 per cent of students across rural schools and 20 per cent in metropolitan schools.

Students attending low SES schools are far more likely to enrol in VET courses than students attending high SES schools. VET attracts an average of 38 per cent of Year 11 students across low SES schools. For high SES schools the rate is only 14 per cent. As a result of differential attrition and differences in program structure, the participation gap between high-VET and low-VET schools narrows in Year 12, since all of the VET enrolment rates fall. Even so, students in low SES schools are almost three times as likely as students in high SES school to study VET at the Year 12 level. It is also important to remember that this is still a broad comparison and takes no account of the type of VET that students enrol in. This is also likely to show sharp differences by social intake.

*VET delivery and participation*

In looking at the rates of participation in VET across models of VET provision, it must be kept in mind that one of the factors that define the models is the intensity of participation in workplace learning. This means that some schools will have higher VET participation by virtue of the way provision is defined. While it is possible for a school to have a high rate of participation in VET and a low number of students engaged in workplace learning, this is unlikely. As a result of both AQF regulations and MCEETYA rulings, if students are to gain accredited VET certificates then their schools must organise the specified work-based learning experiences. Arrangements for work-based learning are complex, expensive, and time-consuming. Schools that undertake this investment usually have a strong commitment to delivering VET credentials. Therefore, in schools where the numbers of students in workplace learning is high, the numbers participating in VET will by virtue of this fact also be high. It makes little sense to provide work-based learning unless it is part of an accredited VET program.

Given this, what are the patterns of participation in VET in the senior secondary years and how do they vary according to the organisational features of VET provision at the school level? Table 9 reports the mean rates of participation according to the models of VET provision that were defined in the previous chapter.

Apart from schools that do not offer any VET, participation rates are lowest in the schools that are least engaged with the industry or workplace centred VET. These are schools that offer VET *without* workplace learning. It is possible that VET serves a different purpose in these schools. In these schools VET subjects are more often classroom-centred and are taught more traditionally. Neither the LSAY-98 student survey nor the survey of LSAY schools conducted in 1999 indicated which students studied non-accredited VET or which schools offered VET without meeting the requirements of AQF accreditation. It seems likely, however, that schools that offer VET without providing work-based learning are seeking to deal with managing pupil diversity rather than engaging with competency standards and the delivery of accredited AQF certificates. These schools have a mean participation rate of only 9 per cent in VET subjects in Year 11, which is 12 points below the next group of schools.

**Table 9 Mean participation rates of students in senior school VET, by model of VET provision and year-level (%)**

	Year 11	Year 12	Year 12 not in Year 11	Years 11 and 12
	%	%	%	%
<b>School model: All subjects recorded on Year 12 certificate</b>				
All subjects incorporate workplace learning	25	20	7	13
Strong emphasis on workplace learning	42	33	13	20
Weak emphasis on workplace learning	21	19	9	10
<b>TAFE model: VET subjects not recorded on Year 12 certificate</b>				
Strong emphasis on workplace learning	42	28	12	16
Weak emphasis on workplace learning	23	20	11	9
<b>Subjects without workplace learning</b>	9	7	4	3
<b>No VET</b>	0	0	0	0
All schools	27	21	8	12

At the same time, delivering VET in which all students participate in workplace learning does not produce the highest rates of enrolment in VET. Schools adopting this MCEETYA preferred or endorsed model of VET in which the study is dual-accredited (i.e., it counts for both Year 12 certificates and AQF certificates) had a participation rate of 25 per cent. This is considerably more than

for schools not offering any workplace learning. It is quite a lot less, though, than in schools providing stand-alone VET in which there is a strong emphasis on workplace learning, and schools with the same commitment to workplace learning where the achievements are recorded on the Year 12 certificate (integrated VET models). In such schools the average rate of participation was 42 per cent.

On the basis of these data, it is clear that VET forms a large part of senior secondary program delivery in schools with a strong emphasis on work-based learning. The participation rates remain strong in Year 12, despite larger falls in VET enrolments in the transition from Year 11. For schools providing stand-alone VET with a strong emphasis on workplace learning enrolment rates fall in the transition to Year 12 by 14 percentage points to 28 per cent. They fall by 9 points for those schools with a strong emphasis on workplace learning where VET is integrated in the senior school curriculum. Even so, both groups of schools continue to have the largest participation rates in Year 12 and the largest numbers of students who study VET over two years (both Years 11 and 12). In schools adopting the integrated VET model, 20 per cent of students undertake VET courses for two years while it is 16 per cent in schools that deliver stand-alone VET.

Students who are new to VET study in Year 12 are also more often from these schools. Rates of VET participation in Year 12 of students who did not enrol in VET in Year 11 were 13 per cent in schools providing VET that counted towards the Year 12 certificate with a strong emphasis on workplace learning, and 12 per cent in schools with stand-alone VET.

Despite the importance of VET in the programs of these schools, they also have the largest falls in participation from Year 11 to Year 12. This could be due in part to higher attrition rates since it is possible that VET students in these schools may leave school at the end of Year 11 at a greater rate than VET students in other schools. This hypothesis will be tested in the next chapter. It could also be due to enrolment preferences with Year 11 treated as the most appropriate year-level for participating in VET. This would suggest that students enrol in units or modules of VET study in Year 11 without planning to complete a full certificate course and go on to enrol in non-VET subjects in Year 12 — similar to the pattern reported by Currie and McCollow (2002) for South Australia.

#### *Estimated rates of participation*

The rates of participation in VET in the senior years are likely to be influenced by the characteristics of the schools in which the VET programs are delivered, as well as the models of VET that are delivered. To estimate the effects of school characteristics on VET participation while at the same time examining the relationship between type of VET provision and student participation, a linear regression analysis was conducted with controls for social intake, sector, region and state. The control group for the analysis comprised urban government schools in New South Wales where the student intake placed the school in the lowest SES quartile and where the VET provided in Years 11 and 12 counted towards the Year 12 certificate, and where there was a strong emphasis on workplace learning. The results are presented in Table 10.

The estimates in Table 10 can be treated as percentages. Positive figures represent increases in the VET participation rate. Negative figures represent reductions in levels of participation associated with the particular school attribute. The third column indicates whether the change in rate associated with a school characteristic is significant or not. The rate of enrolment in the control group of schools was 49.3 per cent. All figures are increases or reductions relative to that figure.

Consistent with what has been documented previously, after taking account of other factors, the social intake of schools has a significant effect on the levels of participation. High SES schools have significantly lower levels of VET enrolments, all else equal. The gap between low and high SES schools is 9 percentage points on average. The social intake of schools has such a powerful effect that it eclipses the effect of attending a private school. Therefore, while private Independent schools have low VET enrolments (as reported earlier), this is largely related to their social intake. Once social background factors have been taken into account, private school attendance does not add anything further to explaining differences in rates of VET participation.

**Table 10 Ordinary Least Squares (OLS) derived rates of Year 11 VET participation, by selected school characteristics**

	Unstandardised OLS estimates	Standardised estimates	Significance
Mean participation rate for control group	49.3		
<b>School sector</b> (relative to government schools)			
Catholic	-0.6	0.01	0.83
Independent	-1.6	0.03	0.65
<b>Region</b> (relative to urban areas)			
Provincial	1.4	-0.03	0.64
Rural and remote	5.6	0.10	0.08
<b>SES intake</b> (relative to low SES students)			
Lower middle	-2.6	-0.06	0.36
Upper middle	-5.0	-0.12	0.11
High	-9.0	-0.21	0.02
<b>State</b> (relative to NSW)			
Victoria	-5.1	-0.11	0.10
Queensland	-4.6	-0.20	0.08
South Australia	-3.3	-0.06	0.33
Western Australia	-9.9	-0.17	0.01
<b>VET Model</b> (relative to strong emphasis on workplace learning in VETiS)			
<b>School model:</b> <i>All subjects recorded on Year 12 certificate</i>			
All subjects incorporate workplace learning	-17.6	-0.30	0.00
Weak emphasis on workplace learning	-18.1	-0.38	0.00
<b>TAFE model:</b> <i>VET subjects not on Year 12 certificate</i>			
Strong emphasis on workplace learning	0.0	0.00	0.99
Weak emphasis on workplace learning	-16.3	-0.30	0.00
<b>VET programs without workplace learning</b>	-29.9	-0.48	0.00
<b>No VET</b>	-39.9	-0.57	0.00

Note: The control group for the analysis comprised urban government schools in New South Wales where the student intake placed the school in the lowest SES quartile and where the VET provided in Years 11 and 12 counted towards the Year 12 certificate, and where there was a strong emphasis on workplace learning. Unstandardised estimates represent values in the original metric or scale of each variable. Standardised estimates (Beta coefficients) are based on standard deviations of the metric or scale of each variable. Standardized estimates are presented because they can be used to judge the relative predictive power of the independent variables. Beta is the average amount the dependent variable increases when the independent variable increases one standard deviation and other independent variables are held constant.

Region and state also have some influence on student participation in VET. There is a tendency (at the 10 per cent significance level) for schools in rural and remote areas to have higher Year 11 VET participation than schools in metropolitan centres. The effect is modest. Modest effects are also recorded for two states: Victoria and Queensland. In both states VET participation rates are lower, all else equal, than in New South Wales. The rates of VET participation are significantly lower in Western Australia than in other states. In terms of the *type of VET provision*, the results in Table 10 suggest that schools where there is a weak emphasis on workplace learning as a component of VET study record significantly lower VET participation rates than 'control group' schools where there was a strong emphasis on workplace learning. It is also interesting to note that, among schools where all VET subjects are recorded in the Year 12 certificate, significantly fewer students participate in VET where *all* the VET students undertake work-placements.



## 4. MODELS OF VET PROVISION AND STUDENT OUTCOMES

### Introduction

The implementation in schools of nationally accredited programs of VET has been heralded as a major initiative for facilitating growth in rates of retention and helping improve student outcomes. Whether by extending choice in programs in upper secondary school or by offering subjects that are more accessible and satisfying to students in learning terms, VET encourages young people to remain in study, or so the argument goes. There is some evidence to support this view. In 1995 there were an estimated 26,000 secondary students in what were then known as school-industry programs across Australia. By 1999 this had risen to nearly 130,000 young people (Malley, Keating, Robinson & Hawke, 2000). In 2002, it is estimated that there were over 185,000 VET in Schools students (Teese et. al, 2003). A further 7,300 were undertaking school-based apprenticeships. Some of this growth could have been because more and more young people have made subject choices that involve replacing pre-existing mainstream studies with dual-accredited VET studies. Or it could be the case that at least some of the growth in VET enrolments is related to ‘new’ students — those who would previously have left school before Year 12. What is not known is the extent to which VET, as a curriculum innovation, has contributed to growth in retention. But retention in recent years has grown, or at least stabilised, and this has occurred in the context of a massive increase in VET enrolments, and the social and academic background of VET students suggests that some of this growth in retention may not have occurred without the availability of VET options (for the background of VET students, see Teese & Polesel, 2003, and Teese, Polesel & Mason, 2004).

Others argue that it is not important whether VET does contribute, or has contributed to, growth in school retention. They point to broader goals and to the fact that within the nationally-endorsed *VET in Schools Framework* agreed to by MCEETYA in 2001, VET programs were not supported as a means of boosting retention in schools but as a means of improving the transition from school to work and further study (Spring & Syrmas, 2002). Arguably, stronger pathways from school and productive and rewarding post-school destinations, rather than retention per se, are the main benchmarks of the effectiveness of VET study. This is consistent with the national objectives endorsed for VET in Schools. It is a view that emphasises the importance of VET in Schools in terms of facilitating stronger pathways to work and further study irrespective of whether participants complete Year 12 or not. It is the role that school-provided VET has in strengthening pathways and improving transition that is all important and the main measure of course or program worth.

This chapter does not attempt to address directly these alternative views, but what it does aim to do is examine whether or not there is a variation in Year 12 completion that is linked to the type of VET provision in schools and whether or not the VET that students have available to them in school leads to differences in post-school outcomes. The analysis begins with an examination of retention, initially focusing on school rates of Year 12 non-completion. The early parts of this section use school as the unit of analysis. The later parts turn to student data and an assessment of school VET provision on individual behaviour to remain at school or not. In the following section, attention turns to the post-school destinations of students. It compares the initial main activities of VET students with non-VET students and whether or not the patterns vary by the model of VET provision adopted by schools. In that section the student is the unit of analysis. Table 2A in the appendix provides a breakdown of the student sample by model of VET provision and year-level.

### Year 12 non-completion

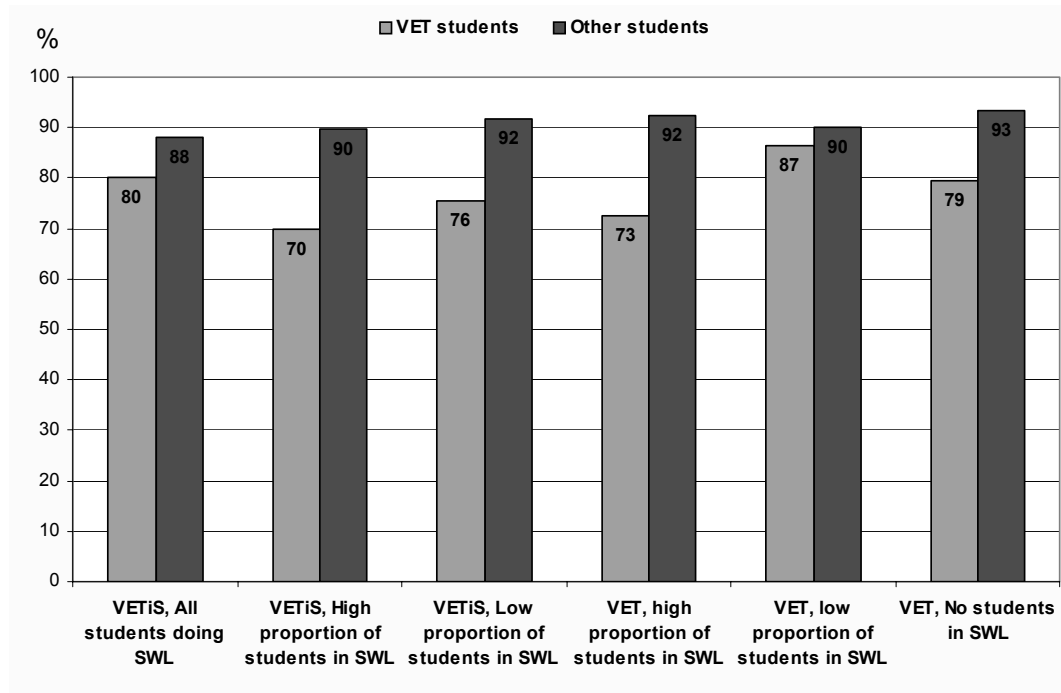
It is not a straightforward task to measure whether or not school VET provision influences retention. To do so accurately would require historical data on the retention patterns of individual schools and information on when VET programs were introduced or changes made. This would be

needed in order to measure trends in retention and whether or not school holding power changed after the introduction of VET or with changes in relation to VET programs. Of course, for accuracy, other information would also be needed, such as data on student intake and changes in student cohorts as well as information on other school programs. Information on patterns in other schools across jurisdictions or regions would also be needed. Unfortunately, such information is not available for this study. However, it is possible to examine the relationship between Year 12 completion and the models or types of VET programs provided by schools. By controlling for other factors, such as social background of the student intake, school sector, region, and state, it is possible to measure whether particular forms of VET provision adopted by schools are associated with higher completion rates or not. The analysis does not imply causality, simply that there is a relationship between a model of VET provision and the rates at which students complete Year 12.

It is also important to consider the separate but related issue of the impact of VET participation on students' plans and their commitment to education. Schools that offer particular models of VET provision may not influence broad rates of Year 12 completion (which is measured here in terms of Year 9 to Year 12 transition). However, they may have an impact on the staying-on decisions of those who actually participate in VET. There is some evidence to support this view. Figure 1 displays the school leaving plans *in Year 9* of students who *subsequently* completed Year 12. They are provided separately for VET and non-VET students according to the model of VET provision in the school the student attended. In schools where the VET subjects offered count towards the Year 12 certificate and there is a strong emphasis on workplace learning, only 70 per cent of students who studied VET in Year 11 or 12 reported, in Year 9, that they planned to complete Year 12. For non-VET students in the same schools the rate was 90 per cent. All the students in both groups did in fact complete Year 12, but among those who chose VET studies, 30 percent of them stated in Year 9 that they would not stay to Year 12. Among non-VET students, only 10 per cent of them had earlier plans to leave school. In effect, it appears that a much larger percentage of the Year 12 completers who did study VET made positive changes in their school leaving plans during their senior years, deciding to stay to Year 12 rather than leave early. Their VET study may have contributed to this.

Such a view is also supported by information on student attitudes towards school. Table 11 reports the percentages of students who expressed positive views towards school as a learning place. The table provides a comparison of the views of Year 11 students with the views of the same students when they were in Year 9. The views of VET students and non-VET students are tabulated according to the model of school VET provision in the school they attended.

Some caution should be taken with the figures. The views of the students are from two different measures: in Year 9 it is based on the item "school is a place where I like learning", whereas in Year 11 it is based on student happiness with the work they do at school. The point is not to look at changes in absolute terms, but to look at the relative changes. In Year 11, there is little that separates VET students from non-VET students across different school settings. In most settings, over 90 per cent of all students hold a positive view of the work they do at school. The one exception is for VET students in schools where VET does not incorporate workplace learning (84 per cent). In Year 9, however, there are consistent gaps between VET students and non-VET students with non-VET students more frequently holding positive views of school as a learning place. While keeping in mind the caveats described above, the results suggest that VET study seems to be associated with positive changes between Year 9 and Year 11 in students' feelings about learning and school. This takes place across most categories of VET provision apart from schools where VET does not involve any workplace learning. In these schools there is a gap between the views of VET students and non-VET students suggesting that VET students who do not experience work-based learning continue to have rather negative views of school.



Note: SWL=Structured workplace learning

**Figure 1 Proportion of students who planned (in Year 9) to complete Year 12: Year 12 VET students and non-VET students compared (%)**

These results suggest that students who study VET in school may be more likely to remain at school, because their VET study and their experiences in the workplace help them to form more positive views about learning and school as a place where they can learn. This is consistent with findings based on studies of the effects of work-based learning programs in the United States, where similar evidence emerges concerning the positive effects on student engagement that result from participation in work-based learning (Hughes, Bailey, & Mechur, 2001; Steinberg, 1998).

**Table 11 Proportion of students with positive attitudes towards school in Year 9 and Year 11, by model of school VET provision: VET students compared with non-VET students (%)**

	Year 9		Year 11	
	VET students	Other students	VET students	Other students
	%	%	%	%
<b>Year 11 VET students</b>				
<b>VET Model</b>				
<i>School model: All subjects recorded on Year 12 certificate</i>				
All subjects incorporate workplace learning	72	80	92	90
Strong emphasis on workplace learning	70	78	91	93
Weak emphasis on workplace learning	66	77	93	94
<i>VET model: VET subjects not recorded on Year 12 certificate</i>				
Strong emphasis on workplace learning	73	78	93	93
Weak emphasis on workplace learning	72	75	92	92
<b>VET programs without workplace learning</b>	69	80	84	94
<b>No VET</b>		81		93

NOTE: Excludes students in Tasmania and the ACT. Includes only those students who were attending the same school in Year 11 as in Year 9. Attitudes in Year 9 are measured using the Likert-scaled item “school is a place where I like learning”. Attitudes in Year 11 are measured using an item relating to happiness with “the work you do at school”.

*Does the school VET model affect Year 12 completion?*

An analysis of the effects of VET study on completion and non-completion of school requires a slightly different measure of Year 12 completion than just the broad rates of retention from Year 9 to Year 12. One approach is to compare the rates at which students progress from Year 11 to the end of Year 12, based on subject or program choices in Year 11. Ideally this form of analysis would also benefit from information on individual student histories. The results presented here do not claim to be strictly causal, however, they do allow for a range of comparisons of the possible effects of VET across different kinds of schools and across different models of VET program provision.

Before engaging in a more detailed analysis of the range of variables that may influence Year 12 completion, it is worth looking at a simple cross-tabulation, shown in Table 12. The final row reveals that the mean rate of non-completion was 21 per cent for the school sample overall. However, the rate varies substantially by model of VET provision.

**Table 12 Year 12 non-completion rates for schools, by model of VET provision and other selected characteristics (%)**

	Average non-completion rate
<b>VET Model</b>	%
<b>School model:</b> <i>All subjects recorded on Year 12 certificate</i>	
1. All subjects incorporate workplace learning	25
2. Strong emphasis on workplace learning	28
3. Weak emphasis on workplace learning	17
<b>TAFE model:</b> <i>Some subjects not recorded on Year 12 certificate</i>	
4. Strong emphasis on workplace learning	26
5. Weak emphasis on workplace learning	21
6. <b>VET programs without workplace learning</b>	14
7. <b>No VET</b>	9
<b>School sector</b>	
Government	26
Catholic	15
Independent	12
<b>Region</b>	
Urban	19
Provincial	27
Rural & remote	32
<b>School SES quartile</b>	
Low	31
Lower middle	28
Upper middle	19
High	10
<b>State</b>	
NSW	23
VIC	20
QLD	18
SA	24
WA	27
<b>Average for all schools</b>	21

Schools that did not offer any VET in the senior years had the lowest rates of non-completion — 9 per cent. Schools that offered VET without workplace learning had a mean non-completion rate of 14 per cent. On average, students in these schools have a higher Year 12 completion rate than students in schools offering other types of VET. The figures suggest at a surface level that, on average, schools that either ignore VET as a program of study or offer VET subjects that do not incorporate any workplace learning have the lowest numbers of students leaving school before completing Year 12.

On average, the highest non-completion rates are in the schools that offer embedded or integrated programs of VET that count towards the Year 12 certificate and include a strong emphasis on workplace learning. The rate of non-completion in these schools was 28 per cent. In schools that offer integrated VET but where few students do work-based learning the rate was 13 points less (17 per cent).

Further analyses are needed to ascertain whether these differences in rates of non-completion are linked to the model of VET program provided, or whether they reflect other features of the schools. We know that Year 12 non-completion is affected by a range of factors including school location, SES intake, region and sector (see Lamb et al., 2004). This also applies to the current sample of schools. Table 13 shows that non-completion rates are highest in low SES schools, in government rather than private schools, and in schools located in rural and remote rather than metropolitan areas. The types of schools that have high non-completion rates are also those that more frequently offer particular sorts of VET programs. To look at whether there is any independent effect associated with the type of VET program taking account of the other features of school, a linear regression analysis was conducted. The results are presented in Table 13. The comparison or control group comprises low SES metropolitan government schools in New South Wales which offered VET that counts towards the Year 12 certificate with a strong emphasis on workplace learning.

The results in Table 13 suggest that, all else equal, non-completion rates are significantly lower in upper middle and high SES schools than in low SES schools. They are significantly higher in schools located in provincial and rural areas than in metropolitan centres and this is the case after controlling for social intake, sector and state. The rate in Catholic schools remains significantly lower after controlling for other factors suggesting that rates of non-completion are lower in Catholic than in government schools and this is not related to social intake. This does not apply to Independent schools, suggesting that there is no separate effect for these schools beyond what might be attributed to their social intake.

What we are interested to know in this report is whether or not, after taking all these familiar relationships into account, different models of VET provision have any additional effects on rates of completion of Year 12. The results in Table 13 suggest that they do. Significantly higher levels of Year 12 completion occur in schools that offer *no VET* or that offer VET *without* workplace learning, as Table 12 indicates. This also applies to schools that have a weak emphasis on workplace learning while offering VET that counts towards the Year 12 certificate. More often than not, schools that adopt these models of VET provision are likely to be ones that place a strong emphasis on Year 12 completion and on gaining high TER scores. There are no significant differences in completion rates among schools offering other models of VET provision. Schools offering stand-alone VET and schools in which all students participate in workplace learning have completion rates that are not significantly different (in statistical terms) from those achieved in schools offering VET that counts towards the Year 12 certificate with a strong emphasis on workplace learning.

It would appear that offering extensive VET programs or having high participation rates in VET does not necessarily promote high rates of retention to Year 12. This would appear to be a justifiable conclusion, based on regression models such as these that examine results at the school-level. The problem with this conclusion is that we lack the historical comparisons which may show that the outcomes are actually better than they might have been if the same VET programs had not been provided. It is this relative change over time that needs to be captured for measuring the influence of VET provision on school holding power.

**Table 13 Regression based estimates of Year 12 non-completion, by selected school characteristics**

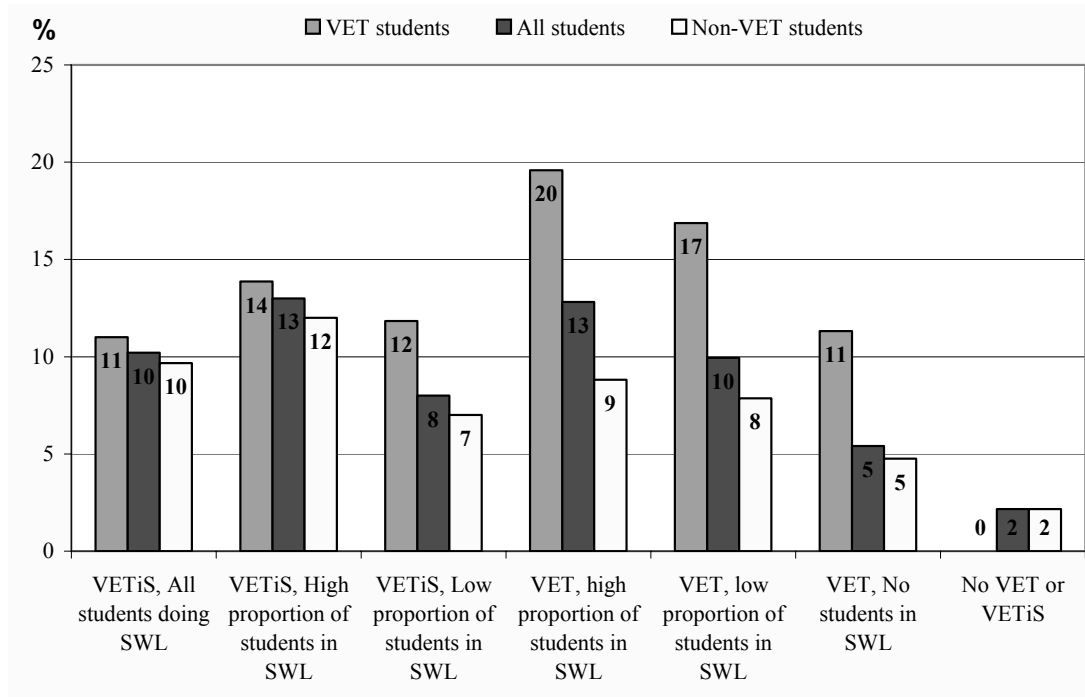
	Unstandardised OLS estimates	Standardised estimates	Significance
Mean non-completion rate for the control schools	31.6		
<b>School sector</b> (relative to government schools)			
Catholic	-8.5	-0.24	0.00
Independent	-1.8	-0.05	0.54
<b>Region</b> (relative to metropolitan schools)			
Provincial	8.8	0.23	0.00
Rural & remote	6.9	0.16	0.01
<b>School SES quartile</b> (relative to lowest quartile)			
Lower middle SES	-2.8	-0.09	0.23
Upper middle SES	-11.3	-0.36	0.00
High SES	-13.3	-0.42	0.00
<b>State</b> (relative to NSW)			
Victoria	-3.4	-0.10	0.17
Queensland	-6.9	-0.22	0.00
South Australia	1.1	0.03	0.70
Western Australia	-0.7	-0.02	0.82
<b>VET Model</b>			
<b>School model:</b> <i>All subjects recorded on Year 12 certificate</i>			
All subjects incorporate workplace learning	-0.5	-0.01	0.86
Weak emphasis on workplace learning	-6.7	-0.19	0.01
<b>TAFE model:</b> <i>Some subjects not recorded on Year 12 certificate</i>			
Strong emphasis on workplace learning	-4.1	-0.10	0.15
Weak emphasis on workplace learning	-2.7	-0.07	0.32
<b>VET programs without workplace learning</b>	-7.0	-0.15	0.03
<b>No VET</b>	-8.7	-0.17	0.02

Standard deviation=13.9

In another important respect, results for school-level rates of completion are not necessarily the best way of measuring the impact of VET on staying on at school. Many non-completers never participate in VET. Nevertheless, if individual students *do* participate in VET it may affect their propensity to stay on at school. In other words, VET participation and VET provision may influence individual decisions about completion and non-completion even though the schools students attend may have low school-level rates of completion, based on retention measured from Year 9 to Year 12. One way to look at this is to compare the non-completion rates of individual students doing VET and those not doing VET. This can be done by measuring non-completion for those participating in Year 11. Figure 2 shows the results of such an analysis.

The results presented in Figure 2 tell a different story about retention and VET provision to that suggested by the broader analysis based on school-level rates of retention. Here the unit of analysis is the student rather than the school. The figures show the percentages of Year 11 students who do not complete Year 12 by VET participation in Year 11 and model of VET provision. Non-completion rates for VET students are compared with those for non-VET students and for all students.

The largest gaps in non-completion rates proportionately are between VET and non-VET students in schools that offer stand-alone VET and in schools that offer VET without workplace learning. In schools with stand-alone VET with a strong emphasis on workplace learning 20 percent of VET students did not complete Year 12. This rate was more than double that of non-VET students (9 per cent). In schools with a weaker emphasis on workplace learning VET students fared little better with 17 per cent not remaining to the end of Year 12 compared with 8 per cent of other students. The non-completion rate of VET students was lower in schools without workplace learning (11 per cent of VET students didn't complete), but the rate was more than double that of other students (5 per cent). It suggests that in these more academic schools, relative to students doing other courses, VET students have much higher non-completion rates.



Note: Rates measure the effects of school VET models based on student-level data. Rates for VET students are for students participating in Year 11 VET. Sample: Year 11 VET students=1174; all Year 11 students=5112. Students are only included if they were attending the same school in Year 11 as they were attending in Year 9.

**Figure 2 Year 12 non-completion, by school VET model: Year 11 VET students compared with all students (%)**

VET students do much better, in relative Year 12 completion terms, in schools that offer VET that counts towards the Year 12 certificate. In schools with a strong emphasis on workplace learning the non-completion rate was 14 per cent compared to 12 per cent for non-VET students. Non-completion rates are also much the same between VET and non-VET students in the schools where all VET students do workplace learning (11 per cent as against 10 per cent). Compared to schools offering stand-alone VET, the non-completion rates of VET students in schools where the VET counts towards the senior-certificate are much lower.

Is this difference due to the backgrounds of students in the different schools rather than having any relationship with the type of VET provided? To examine this question a binary logistic regression technique was used to predict non-completion for different categories of students after controlling for a range of background factors. Students enrolled in VET in each type of school are presented as a separate category as are non-VET students. This allows us to compare the probability of non-completion rates of VET students against non-VET in each category of school as well VET students in particular schools against VET students in other types of schools.

The results are presented in Table 14 as variations in predicted probabilities or the likelihood of non-completion. The control group comprises low achieving, low SES, Year 11 male VET students in New South Wales attending metropolitan government schools in which the VET provided counts towards the Year 12 certificate and places a strong emphasis on workplace learning. The predicted rate for this category of students was 26.1 per cent, meaning a non-completion rate of 26.1 per cent. The figures in Table 14 represent percentage point deviations, either upwards or downwards, in the likelihood of non-completion. Statistically significant variations or deviations are marked with an asterisk.

The results show that Year 12 non-completion for students enrolled in Year 11 is significantly lower, all else equal, for students attending Catholic schools (8 percentage points), for females (8 percentage points), for those from high SES family backgrounds (12 points), and for middle and high achievers (13 and 16 points respectively) than for the control group. They are significantly higher for students in South Australia and Western Australia and for students in provincial centres.

In terms of VET participation, the results show that the differences between different models of VET provision in Year 11 are not all removed after controlling for student background and other school differences. VET students in schools that offer stand-alone VET (i.e. not recorded on the Year 12 certificate) with a strong emphasis on workplace learning have a significantly higher probability of not completing Year 12 (8 percentage points) than students in schools where the VET study counts for the Year 12 certificate. At the same time, the likelihood of early leaving among VET students who are in schools where all the VET subjects count towards the Year 12 certificate is *not* significantly different to that of non-VET students in these schools. This is an important result, since on average, there is a clear tendency for more VET students than non-VET students to leave school without completing Year 12.

What these results suggest is that the school solution to the provision and delivery of VET — attempting to integrate VET into the Year 12 curriculum and make VET count towards the Year 12 certificate — does deliver some benefits in terms of school completion, at least for those who participate in VET in the senior years. In certain kinds of schools — especially in those that struggle to achieve high completion rates — VET study does seem to improve the chances of Year 12 for students who participate in it.



**Table 14 Variations in predicted probabilities of Year 12 non-completion, by selected characteristics: Year 11 students**

	Variation (%)	
Control group predicted non-completion rate	26.1	
<b>School sector</b> (compared to Government)		
Catholic	-8*	
Independent	0	
<b>State</b> (compared to NSW)		
VIC	4	
QLD	-6	
SA	13*	
WA	10*	
<b>Females</b> (compared to males)	-8*	
<b>Region</b> (compared to metropolitan)		
Provincial	13*	
Rural & remote	0	
<b>School SES quartile</b> (compared to lowest)		
Lower middle	-4	
Upper middle	-6	
High	-12*	
<b>Achievement quartile (Year 9)</b> (compared to lowest)		
Lower middle	-9*	
Upper middle	-13*	
High	-16*	
<b>VET Model</b> (compared to VET recorded on Yr 12 with strong emphasis on WL)		
<b>School model:</b> <i>All VET recorded on Year 12 certificate</i>		
All subjects incorporate workplace learning	VET students	-1
Weak emphasis on workplace learning	VET students	-1
<b>TAFE model:</b> <i>Some subjects not recorded on Year 12 certificate</i>		
Strong emphasis on workplace learning	VET students	8*
Weak emphasis on workplace learning	VET students	5
<b>VET subjects without workplace learning</b>	VET students	-2
<b>School model:</b> <i>All subjects recorded on Year 12 certificate</i>		
All subjects incorporate workplace learning	Non-VET students	-2
Strong emphasis on workplace learning	Non-VET students	0
Weak emphasis on workplace learning	Non-VET students	-8*
<b>TAFE model:</b> <i>Some subjects not recorded on Year 12 certificate</i>		
Strong emphasis on workplace learning	Non-VET students	-10*
Weak emphasis on workplace learning	Non-VET students	-5
<b>VET subjects without workplace learning</b>	Non-VET students	-11*
<b>No VET</b>	Non-VET students	-19*

Note: Excludes students in Tasmania and the ACT. Includes only those students who were attending the same school in Year 11 as in Year 9.

\* P<0.05

### **VET provision and post-school education and labour market outcomes**

This section presents analyses based on students' main activities during the first year beyond high school. Through these analyses it will be possible to develop a richer picture of the role of VET participation, and other factors, in shaping life after secondary school.

While several Australian studies have examined the effects of VET participation on post-school outcomes, few if any have examined the relationship between the type of VET provision in schools and the pathways young people follow once they leave school. In this section we ask: does the model of VET provision in schools have any effect on post-school outcomes? Do students enrolled in schools offering particular forms of VET follow different pathways than students in other schools? In particular, does participation linked to school provision affect the likelihood of further study? Is there a difference between students participating in VET and those not participating in relation to each of the categories of VET provision? Are there differences related to success in the workplace? In comparing groups of VET and non-VET students, are some more likely to work full time rather than part time, and more likely to be employed and less likely to be unemployed related to school model of VET provision?

Post-school outcomes were measured as the main work and study activities students engaged in during their first post-school year. That is, it was the activity they participated in for the most part of the first 12 months after they left school. The main post-school activities identified were those involving tertiary study, apprenticeships and labour force status. The main activities were:

1. Studying full-time or part-time at a university; or
2. Studying full-time or part-time in TAFE or another form of vocational training; or
3. In an apprenticeship or a traineeship; or
4. Working full time and not in study; or
5. Working part-time and not in study; or
6. Unemployed; or
7. Not in the labour force.

The proportions not in the labour force (NILF) were very small, so the latter two categories were combined (unemployed or NILF).

Table 15 provides a frequency distribution of the main activities by model of VET provision and Year 12 completion. It compares VET and non-VET students. One feature to note from the table is that among Year 12 completers who had participated in VET in the senior years there are differences in initial post-school activities which occur across models of VET provision. Students studying VET in schools which offer stand-alone programs not recorded on Year 12 certificates were less frequently unemployed or not in the labour force during their first post-school year. This was true for both schools which had a strong emphasis on workplace learning and those that placed less emphasis on workplace learning. The rate was lowest, though, in those schools that had a weak emphasis on workplace learning. From those schools only 2 per cent of VET students were unemployed. This rate was lower than for VET students from any other category of schools. It was also lower than for all non-VET students, irrespective of the category of school. VET students tended to be unemployed more often than non-VET students except in schools offering separately accredited statements of attainment. VET students in schools offering stand-alone VET tended to do well in terms of avoiding being unemployed in their first post-school year.

What were these students more likely to do? For those in schools with a strong emphasis on workplace learning, VET students tended to enter TAFE (25 per cent) and full-time work (26 per cent), whereas those in schools with a weaker emphasis on workplace learning tended to be more successful in gaining full-time work in large numbers (34 per cent) but also tended to enter TAFE (20 per cent).

**Table 15 Initial post-school activities, by model of school VET provision and Year 12 completion status: VET students and non-VET students compared (%)**

	Type of school VET model						No VET learning
	Recorded on Year 12 certificate			Not on certificate			
	All studies include workplace learning	Strong emphasis workplace learning	Weak emphasis workplace learning	Strong emphasis workplace learning	Weak emphasis workplace learning	No workplace learning	
<b>Year 12 completers</b>							
<i>VET students</i>							
University	24	24	30	24	25	36	
TAFE	15	22	20	25	20	17	
Apprenticeship	23	16	17	17	19	15	
Full-time work	27	26	24	26	34	20	
Part-time work	2	3	2	4	1	2	
Unemployed/NILF	10	8	8	4	2	10	
Total	100	100	100	100	100	100	
<i>Non-VET students</i>							
University	49	54	56	53	52	69	71
TAFE	15	16	12	13	14	10	8
Apprenticeship	7	6	8	10	8	6	2
Full-time work	20	17	17	17	20	10	13
Part-time work	2	2	3	2	2	1	2
Unemployed/NILF	6	6	4	4	6	4	3
Total	100	100	100	100	100	100	100
<b>Non-completers of Year 12</b>							
<i>VET students</i>							
TAFE	14	19	14	29	12		
Apprenticeship	36	37	48	39	65		
Full-time work	29	29	29	18	12		
Part-time work	7	6	0	5	4		
Unemployed/NILF	14	10	10	8	8		
Total	100	100	100	100	100		
<i>Non-VET students</i>							
TAFE	20	35	22	29	30	39	
Apprenticeship	37	20	37	29	16	22	
Full-time work	17	31	29	25	38	28	
Part-time work	6	6	0	4	0	6	
Unemployed/NILF	20	8	12	14	16	6	
Total	100	100	100	100	100	100	

Despite the perception that VET students tend to be less academically competent (sometimes disparagingly viewed as the ‘refugees’ from academic programs), many students who have studied VET actually enter university. Approximately one in four VET students entered a university and this rate held across four of the six categories of schools. The rate was higher in two categories: in those schools which do not provide any workplace learning (36 per cent) and the schools offering VET that counts towards the Year 12 certificate with a weak emphasis on workplace learning (30 per cent). In these schools VET has been combined with the mix of other senior school studies leading to university entry. The VET undertaken by these students may well be dual accredited and/or embedded in Year 12 subjects that count towards university entry.

The rates of university entry for VET students are roughly half that of non-VET students in every school-VET model in these analyses. However, the take-up of apprenticeships is double or more for VET students in comparison with non-VET students, across most of the models.

Among non-completers of Year 12, for nearly every model of VET provision, students participating in VET were less likely than non-VET students to be unemployed or not in the labour force in their first post-school year. The only exception was for VET students in schools offering VET that counts towards the Year 12 certificate where the VET includes a strong emphasis on workplace learning. In some cases the gaps are large. In schools providing stand-alone VET, the rate of unemployment was 6 percentage points or more lower for VET students than non-VET students. It was half the rate for VET students compared with non-VET students in schools with a weaker emphasis on workplace learning. In these schools, 65 per cent of the VET students gained an apprenticeship. It appears that among non-completers of Year 12, VET seems to give an edge to students seeking to enter apprenticeships. The rates of apprenticeship uptake are higher — in some cases much higher — than for non-VET students in almost all the models of schools presented in the analyses.

At a general level, the results tend to suggest that whereas schools adopting the integrated models of VET tended to promote higher retention in school for VET participants, the schools providing stand-alone VET programs tend to promote better initial post-school outcomes — better in terms of avoiding unemployment and successfully entering pathways involving tertiary study, apprenticeships and entry to full-time work. In this sense the ‘VET sector’ or ‘TAFE’ solution to VET provision in schools seems to promote positive post-school outcomes.

Some of these outcomes may be more closely linked to the nature of the students involved rather than the programs they participated in. While it is difficult, even with appropriate statistical controls, to apportion causality, it is possible to look at whether the relationships remain after taking account of various factors that might also influence the outcomes. For example, attendance at a university rather than a TAFE college, or gaining full-time work rather than being unemployed, has been found to be influenced by gender and SES, and in this context VET study may play no role. To explore this matter, a multinomial logistic regression analysis was conducted. The primary concern was to ask whether access to particular models of VET provision at a school level predisposes students to pursue one or another of the defined ‘main activities’, or whether it provides some comparative advantage for those who do pursue a particular activity. First of all, we will look at the influence of the control factors on post-school outcomes.

#### *Factors influencing initial post-school activity*

Tables 16 and 17 present an analysis of the main activities of Year 12 completers after they left school. They are based on multinomial logistic regression models of the relationship between the outcome variable (main activity), and the explanatory variables, which include SES, achievement, region, state, gender, school sector, and model of VET provision. Students enrolled in VET in each type of school are presented as separate categories as are non-VET students. This allows a comparison of the post-school activities of VET students against non-VET students in each model of school as well as VET students in particular schools against VET students in schools that deliver other models of VET provision. The results in Table 16 are presented as the odds of participating in a particular activity against the odds of entering university. The results in Table 17 exclude students entering university. They are the odds of participating in a particular activity against the odds of being unemployed or not in the labour force. They add another dimension as they remove the effect of large differences between VET and non-VET students in undertaking university study.

The control group in Table 16 comprises male VET students in New South Wales who were low achievers in Year 9, who were from low SES families, whose main activity after leaving school was study at university, and who attended government schools in urban areas where the VET offered counts towards the Year 12 certificate and places a strong emphasis on workplace learning. The control group in Table 17 has the same attributes except rather than being at university the students were unemployed or not in the labour force. The odds in the tables are relative to 1 where

1 represents the level for the control group. Therefore, for example, odds of 2 for Western Australia for TAFE would mean that relative to entering university VET students in Western Australia have a 2 to 1 ratio of enrolment in TAFE, all else equal. Odds that are significant are identified with asterisks.

According to the results in Table 16, SES has a marked impact on post-school activities. The odds of young people either attending TAFE, gaining an apprenticeship, entering full-time or part-time work, or being unemployed were significantly lower than they were of entering university compared to low SES students. In effect, high SES students are more likely to enter university than any other activity compared to low SES students. For example, the odds of high SES students taking up an apprenticeship or being unemployed is 0.3 to 1, meaning that they are a third as likely to enter these pathways, all else equal, than to enter university, by comparison with low SES students. In terms of being unemployed there is a linear and negative relationship with SES (it decreases across SES quartiles). In effect, the odds of being unemployed compared to participating in university decrease with SES quartile, being least for those in the upper SES quartile. University dominates the outcomes of high SES students while TAFE, apprenticeships, work and unemployment dominate the outcomes of low SES students in relative terms.

The rates for school type show that being in a Catholic school results in significant decreases in the odds of young people participating in any of the main activities compared to attending university after controlling for other factors. In some instances, such as relative to apprenticeship entry and being unemployed, the rate is half of that for students in government schools (0.5 to 1). After controlling for SES and achievement, in conjunction with other factors, private Independent schools do not lead to significantly different rates of participation in university, TAFE, or work. However, in relation to apprenticeships, the odds are significantly lower than for government schools (0.7 to 1).

In relation to academic achievement in Year 9, the results again show some predictable patterns, with very substantial falls in the odds of young people participating in all activities rather than attending a university. The falls are significant and linear across quartiles. As we ascend levels of achievement the odds of participating in work, TAFE, apprenticeships or being unemployed rather than attending university fall, and are significantly lower than for low achievers.

Historically, apprenticeship opportunities have been more readily available to boys than girls. This situation has changed slowly as traineeships, in particular, have grown in number. However, in Table 16 we see that the odds of taking up an apprenticeship are still substantially lower for females than males, all else equal. The odds are 0.4 to 1, showing that girls enter an apprenticeship two-and-a-half times less frequently than boys. Girls enter a university far more often than boys. In relation to all other main post-school activities, girls' odds of participation are significantly lower than those for boys, including in relation to being unemployed.

The results in Table 17, which excludes those entering university, show less familiar patterns. For those who ignore university and take their chances with the labour market and vocational education and training, literacy and numeracy achievement (based on Year 9 tests) has little impact. Compared to being unemployed rather than in work or study, higher achievement provides no independent benefit. Gender too does not have any independent effect apart from the lower rate of entry into apprenticeships for females. School sector also has little impact. The same is not the case for SES. Compared to students from low SES backgrounds, those from higher SES backgrounds are significantly more likely to gain full-time work or enter TAFE rather than be unemployed or not in the labour force. For being in full-time work rather than unemployment, the odds range from 1.8 to 1 for students from lower middle SES origins against students from low SES origins to 1.6 to 1 for students from high SES origins against students from low SES origins. SES still seems to influence outcomes, even among those not going on to university.

**Table 16 Odds of main activity in initial post-school year, compared to entering university:  
Year 12 completers**

	TAFE	Apprentice.	Full-time work	Part-time work	Unemployed/ NILF
<b>School sector</b> (compared to government school)					
Catholic school	0.6*	0.5*	0.7*	0.7*	0.5*
Independent school	0.8	0.7*	0.8	0.9	0.8
<b>Female</b> (compared to males)	0.8*	0.4*	0.6*	0.9	0.7*
<b>Region</b> (compared to urban location)					
Provincial	0.9	2.0*	1.2	0.8	1.5*
Rural and remote	1.0	1.7*	1.4	1.8*	1.4
<b>SES quartile</b> (compared to lowest quartile)					
Lower middle	1.1	1.0	1.2	0.8	0.6*
Upper middle	0.7*	0.6*	0.7*	0.6*	0.4*
High	0.4*	0.3*	0.5*	0.4*	0.3*
<b>Achievement quartile</b> (compared to lowest quartile)					
Lower middle	0.4*	0.4*	0.5*	0.4*	0.4*
Upper middle	0.2*	0.3*	0.3*	0.2*	0.3*
High	0.1*	0.1*	0.2*	0.1*	0.1*
<b>State</b> (compared to NSW)					
VIC	1.5*	1.5*	0.9	0.9	1.1
QLD	0.9	1.4	1.1	0.7*	1.4
SA	1.2	1.6*	1.4	2.3*	1.1
WA	2.0*	1.1	1.3	2.4*	1.4
<b>Model of school VET</b> (compared to VETiS with a strong emphasis on workplace learning)					
<b>VET students</b>					
<b>School model:</b> <i>Subjects recorded on Year 12 certificate</i>					
All subjects with workplace learning	0.8	1.3	1.0	0.6*	1.6*
Weak emphasis on workplace learning	0.9	0.9	0.8	0.1*	1.0
<b>TAFE model:</b> <i>Subjects not recorded on Year 12 certificate</i>					
Strong emphasis on workplace learning	1.6*	1.1	0.9	1.5*	0.9
Weak emphasis on workplace learning	1.2	1.3	1.1	0.2*	0.5*
No workplace learning	0.5*	0.8	0.6*	NA	1.2
<b>Non-VET students</b>					
<b>School model:</b> <i>Subjects recorded on Year 12 certificate</i>					
All subjects with workplace learning	0.5*	0.4*	0.6*	0.7*	0.7*
Strong emphasis on workplace learning	0.5*	0.3*	0.4*	0.3*	0.4*
Weak emphasis on workplace learning	0.4*	0.4*	0.4*	0.5*	0.3*
<b>TAFE model:</b> <i>Subjects not recorded on Year 12 certificate</i>					
Strong emphasis on workplace learning	0.5*	0.3*	0.4*	0.3*	0.3*
Weak emphasis on workplace learning	0.5*	0.4*	0.5*	0.2*	0.6*
<b>No workplace learning</b>	0.4*	0.2*	0.2*	0.3*	0.4*
<b>No VET</b>	0.3*	0.1*	0.4*	0.6*	0.4*

Note: Excludes students in Tasmania and the ACT. Includes only those students who were attending the same school in Year 11 and Year 12 as in Year 9.

NA Numbers are too small to derive reliable estimates

\* P<0.05

**Table 17 Odds of main activity in initial post-school year, compared to being unemployed or not in the labour force (excluding university entry): Year 12 completers**

	TAFE	Apprentice- ship	Full-time work	Part-time work
<b>School sector</b> (compared to government school)				
Catholic school	1.4	1.1	1.6*	1.7
Independent school	1.1	0.8	1.1	1.3
<b>Female</b> (compared to males)	1.0	0.5*	0.8	1.3
<b>Region</b> (compared to urban location)				
Provincial	0.6*	1.4	0.8	0.5
Rural and remote	0.7	1.3	1.0	1.2
<b>SES quartile</b> (compared to lowest quartile)				
Lower middle	1.8*	1.6*	1.8*	1.2
Upper middle	1.5*	1.5	1.7*	1.4
High	1.3	1.1	1.6*	1.3
<b>Achievement quartile</b> (compared to lowest quartile)				
Lower middle	0.9	0.9	1.1	1.0
Upper middle	0.9	1.2	1.3	0.6
High	0.8	1.0	1.4	0.6
<b>State</b> (compared to NSW)				
VIC	1.4	1.4	0.8	0.8
QLD	0.6*	1.0	0.8	0.5
SA	1.1	1.4	1.2	1.9*
WA	1.4	0.7	0.9	1.7
<b>Model of school VET</b> (compared to VETiS with a strong emphasis on workplace learning)				
<b>VET students</b>				
<b>School model:</b> <i>Subjects recorded on Year 12 certificate</i>				
All subjects with workplace learning	0.5*	0.8	0.6	0.4*
Weak emphasis on workplace learning	0.9	0.8	0.7	0.1*
<b>TAFE model:</b> <i>Subjects not recorded on Year 12 certificate</i>				
Strong emphasis on workplace learning	1.8*	1.3	1.0	1.8*
Weak emphasis on workplace learning	2.4*	2.6*	2.3*	0.4*
No workplace learning	0.5*	0.7	0.6	NA
<b>Non-VET students</b>				
<b>School model:</b> <i>Subjects recorded on Year 12 certificate</i>				
All subjects with workplace learning	0.7	0.6	0.8	0.9
Strong emphasis on workplace learning	1.2	0.8	1.0	0.7
Weak emphasis on workplace learning	1.3	1.1	1.2	1.5
<b>TAFE model:</b> <i>Subjects not recorded on Year 12 certificate</i>				
Strong emphasis on workplace learning	1.4	0.8	1.1	0.8
Weak emphasis on workplace learning	0.8	0.7	0.9	0.3*
<b>No workplace learning</b>	1.1	0.6	0.6	0.9
<b>No VET</b>	0.8	0.3*	1.0	1.5

Note: Excludes students in Tasmania and the ACT. Includes only those students who were attending the same school in Year 11 and Year 12 as in Year 9.

NA Numbers are too small to derive reliable estimates

\* P<0.05

*Does model of VET provision influence main initial post-school activity?*

The effects displayed in Table 16 show that family background variables, gender, and student achievement have substantial influences on the activities Year 12 completers engage in when they leave school. Taking these relationships into account, does the model of VET provision have any additional effect on the main activities of young people in the year immediately after school? That is, does the VET study available to young people in different groups of schools influence the odds of participating in TAFE, or gaining an apprenticeship or a full time job, or being unemployed rather than entering university?

The results presented in Table 16 suggest that school VET provision does have an effect on certain outcomes. Remember the comparison group comprises students who are in schools where the VET counts towards the Year 12 certificate and places a strong emphasis on workplace learning. Compared to this group, students in schools which offer stand-alone VET tend less often to be unemployed and more often to enter TAFE than university. The effects vary by level of intensity of workplace learning. In those schools with a weaker emphasis, the odds of students being unemployed were half those of students in the control group (0.5 to 1). They were four times less for being in part-time work. For students in the schools offering stand-alone VET with a stronger emphasis on workplace learning the odds for TAFE entry were significantly higher than for the control group (1.6 to 1).

The results for non-VET students show a consistent and significant effect for all outcomes. The odds for all non-VET students of participating in any outcome other than university were significantly lower than for the control group. In other words, non-VET students enter university in significantly higher numbers than VET students in the control group and it doesn't matter which category of schools the non-VET students are in: they do not enter other pathways in anywhere near the same frequency as VET students.

What happens if we remove entry to university? This may be a fairer measure of the impact of VET because it is looking at the outcomes for students who are trying to negotiate their way into the workforce or tertiary VET study rather than university. Here we are comparing VET and non-VET students who did not pursue university study. The odds are of an activity relative to being unemployed or not in the labour force. Table 17 shows that there are effects linked to the model of VET offered in the school students attended. The results suggest that VET students in schools delivering stand-alone VET with a weaker intensity of workplace learning have significantly greater odds of entering TAFE (2.4 to 1), of gaining an apprenticeship (2.6 to 1), and of getting a full-time job (2.3 to 1) than of being unemployed. VET students in these schools do well in the transition to further study and work by comparison with VET students in schools that offer VET that counts towards the Year 12 certificate. They also do better than non-VET students from the same schools. In other words, VET in these schools delivers positive outcomes.

Students in schools with a strong emphasis on workplace learning which offer stand-alone VET have significantly greater odds of entering TAFE than being unemployed. Other outcomes compared to being unemployed are also greater than even, but the differences are not statistically significant.

The results reported here suggest that type of VET provision in schools can influence young peoples' chances of pursuing further study in TAFE, or of gaining an apprenticeship or a full-time job once they leave school. Whether it is linked to the role of qualifications, or the areas of study covered, VET students have very positive outcomes from schools in which VET is offered as stand-alone subjects or modules. The outcomes are positive by comparison with other VET students as well as non-VET students. While non-VET students may enter university in larger numbers, for those not taking that path, in terms of getting apprenticeships, studying at TAFE or gaining full-time jobs there are advantages to having participated in VET.



*Impact of VET for non-completers of school*

What about early leavers? One of the arguments on the value of VET is that the certificate qualifications VET provides, even the most basic, are AQF accredited, and are, therefore, linked to an integrated framework whereby lower level study leads to higher level qualifications in a stepwise fashion. In addition, VET in school provides skills training related to workplaces that assist participants when they leave school and seek employment. This should help all school leavers, including early school leavers. Is there any evidence to support this view?

Table 18 presents an analysis of the main initial post-school activity of young people who did not complete Year 12. It is based on a multinomial logistic regression model of the relationship between the outcome variables and type of VET provision with the same controls as those used in the analyses for Year 12 completers. Data are in the same form as the previous tables, as odds. In the analysis the control group includes low SES, low achieving males who were in New South Wales government schools which offered VET that counted toward the Year 12 certificate and included a strong emphasis on workplace learning. The odds are based on those who were unemployed or not in the labour force as their main activity in the first post-school year.

In terms of background measures, the results in the table suggest that the early literacy and numeracy achievements of students have little influence on post-school education or employment outcomes for school non-completers. Relative to being unemployed, there is very little effect linked to achievement background. However, SES continues to exert a large effect. The odds of entering TAFE, gaining an apprenticeship or getting a full-time job are all greater and in many cases significantly greater for students from middle and higher SES backgrounds rather than low SES origins. In effect, being from a middle or high SES background reduces the odds of being unemployed, all else equal.

In terms of VET study, attending schools which offer stand-alone VET where there is a strong emphasis on workplace learning appears to increase significantly the odds of engaging in TAFE (2.2 to 1) or being in at least part-time work (1.9 to 1) rather than being unemployed or not in the labour force after leaving school. For non-VET students from the same schools, however, the odds are significantly lower for apprenticeship entry (0.2 to 1), full-time (0.3 to 1) and part-time work (0.4 to 1) than they are of being unemployed compared to VET students schools where the VET counted towards the Year 12 certificate. While there is some variation this was generally true across categories of non-VET students. Non-VET students tended to have lower odds of being in an apprenticeship or full-time work than of being unemployed compared with VET students.

The results suggest that student futures might well be improved or enhanced by attendance at schools with particular types of VET provision if the students participate in VET. While generally the odds of unemployment are lower for VET students than non-VET students, the odds of gaining an apprenticeship and finding a job tend to be greater, all else equal. The model or type of VET does have some effect: VET provision seems to matter. Outcomes tend to be better for VET students from schools in which VET is offered as stand-alone study, with separate statements of attainment or as AQF certificates. Those in schools where VET is offered as stand-alone study and where there is a strong emphasis on structured workplace learning were 2.7 times more likely to be in TAFE than to be unemployed, compared with VET students in schools offering VETiS with a strong emphasis on workplace learning. Their odds of being in TAFE or other forms of study or training, rather than being unemployed, were also greater than for non-VET students from the same schools.

**Table 18 Odds of main activity in initial post-school year, compared to being unemployed or not in the labour force: Year 12 non-completers**

	TAFE	Apprentice- ship	Full-time work	Part-time work
<b>School sector</b> (compared to government school)				
Catholic school	0.8	1.4	1.7	2.3*
Independent school	1.2	1.5	1.2	1.2
<b>Female</b> (compared to males)	1.5	0.4*	1.2	1.3
<b>Region</b> (compared to urban location)				
Provincial	0.5	1.4	0.4*	0.3*
Rural and remote	1.1	0.9	0.8	0.8
<b>SES quartile</b> (compared to lowest quartile)				
Lower middle	3.1*	3.8*	2.3*	1.9
Upper middle	3.9*	3.3*	2.8*	3.3*
High	1.8	1.9	1.7	4.1*
<b>Achievement quartile</b> (compared to lowest quartile)				
Lower middle	0.8	0.4*	1.1	0.5
Upper middle	0.7	0.7	1.1	0.2*
High	0.4*	0.6	1.0	1.3
<b>State</b> (compared to NSW)				
VIC	0.5	1.1	1.0	0.3
QLD	0.7	0.6	0.8	0.1*
SA	4.6	2.8	5.0	0.2*
WA	0.8	0.6	0.7	0.2*
<b>Model of school VET</b> (compared to VETiS with a strong emphasis on workplace learning)				
<b>VET students</b>				
<b>School model:</b> <i>Subjects recorded on Year 12 certificate</i>				
All subjects with workplace learning	0.4	0.2*	0.4	0.3*
Weak emphasis on workplace learning	0.6	1.1	0.9	NA
<b>TAFE model:</b> <i>Subjects not recorded on Year 12 certificate</i>				
Strong emphasis on workplace learning	2.7*	1.0	0.9	1.9*
Weak emphasis on workplace learning	0.7	1.4	0.4	NA
No workplace learning	NA	NA	NA	0.8
<b>Non-VET students</b>				
<b>School model:</b> <i>Subjects recorded on Year 12 certificate</i>				
All subjects with workplace learning	0.6	0.4	0.3*	0.2*
Strong emphasis on workplace learning	2.2*	0.6	1.2	0.8
Weak emphasis on workplace learning	1.2	0.7	0.7	NA
<b>TAFE model:</b> <i>Subjects not recorded on Year 12 certificate</i>				
Strong emphasis on workplace learning	0.5	0.2*	0.3*	0.4*
Weak emphasis on workplace learning	0.9	0.2*	0.5	NA
<b>No workplace learning</b>	2.7*	0.3*	0.6	0.3*
<b>No VET</b>	NA	NA	NA	NA

Note: Excludes students in Tasmania and the ACT. Includes only those students who were attending the same school in Year 11 and Year 12 as in Year 9.

NA Numbers are too small to derive reliable estimates .

\* P<0.05

## 5. CONCLUSION

The essential purpose of this report was to ascertain the extent to which the provision of VET programs might have positive effects on students who otherwise tend to disengage from school. It also explored the benefits of VET for young people who make a direct transition from school to work rather than continuing with further study. Overall, the results were positive. Participation in VET increased satisfaction with school among those students who are most likely to disengage and leave school early (those who do not express intentions of remaining to Year 12). It also improved their chances of gaining an apprenticeship, or of being employed, rather than being unemployed, once they left school. However, the extent to which these goals are met seems to depend in part on the type of VET that schools provide.

### **The multiple goals of VET provision in schools**

Arguments about the development and expansion of VET programs have tended to focus on several purposes. They include the need:

1. to increase levels of engagement in school, especially among students who would rather look for a job than continue at school, by providing teaching and learning with a more applied focus based on industry skills and competencies;
2. to extend the range of subjects available beyond the standard academic offerings of the senior secondary curriculum, so that students interested in vocational studies will find something relevant for them at school;
3. to provide work experience and training so that students might be able to clarify their vocational orientations; and
4. to develop skills that enhance job prospects and to establish initial qualifications that can be built on through the continuing AQF-based vocational pathways.

Two fundamentally different policy perspectives are evident in these broad goals. One is to provide alternative programs in the senior years of school that will help make school more attractive in order to promote growth in Year 12 completion. VET is part of the push for greater program breadth to encourage young people to remain at school and to help cater to an increasingly diverse senior school population. In this sense, VET is needed to overcome the failure of the academic curriculum to deliver a successful mass program, because academic preparatory programs were never designed for delivery to a broad population base. Alternative school programs are needed for non-academic students.

The second policy perspective focuses on the role of VET in improving pathways from school to work and further training or study. VET is a valuable area of learning in its own right. In Australia, it has a well articulated rationale, embodied in training packages, competency standards and AQF linked certificates. Whether or not VET is equivalent in a cognitive sense to the academic Year 12 certificate is arguably not the issue. It is important essentially because it produces valuable and perceptible benefits that provide a foundation for employment and/or further VET study. The importance of VET can be measured by what it leads to. Helping promote increased school completion rates may be a less important issue than providing skills and training that young people can be accredited with and can use in future employment. Early entry to the workforce or apprenticeships, supported by VET, may produce better long-term outcomes for some students than Year 12 completion. VET should be organised to facilitate pathways from school to work without necessarily being tied to a concern about the number of years a student should spend at school.

These perspectives on the role of VET are not mutually exclusive, though both are evident in the different arrangements for the provision of VET at a school level. One approach to VET provision incorporates study through integrating or embedding it in the senior school curriculum. This can be done by incorporating AQF competency standards subjects that count towards the Year 12 certificate or by providing separate VET subjects that are treated as senior secondary subjects in

their own right. This *school model* for the delivery and provision of VET incorporates VET into the existing academic senior secondary curriculum. It supports the ‘retention’ goal, in that it seeks to create a learning environment that caters for all students, extending opportunities for them to the end of Year 12. Diversity and accreditation within Year 12 curriculum structures, aimed at promoting completion of school, are associated with this approach.

The other main approach to VET provision – *the TAFE model* – provides stand-alone VET programs where there is no attempt at integration into the general senior school curriculum. Subjects and programs are organized around industry training packages and deliver statements of attainment or certificates aligned to AQF qualifications. This ‘VET sector’ or ‘TAFE’ solution to the delivery of VET involves programs that are similar to those delivered in the broader VET sector and can often involve TAFE colleges in collaborative arrangements with schools for VET delivery. Training is aimed at strengthening work and training futures.

### **Quality outcomes seem to depend on the type of VET that schools provide**

The extent to which the broad goals of promoting retention growth and strengthening post-school pathways are met seems to depend in part on the type of VET that schools provide. This study used student and school data from the 1998 cohort of the Longitudinal Surveys of Australian Youth to examine the effects of VET provision at a school-level on educational progress and outcomes. These students were in Year 11 in 2000, and in Year 12 in 2001. The study indicated that while there was considerable variation among schools in the way VET was delivered in schools in 2000-2001, the two perspectives outlined above could be identified in the two main forms of VET provision that emerged from the analyses. Firstly, there are groups of schools that conform to the *school model*: these only offered VET subjects that were integrated in the senior school curriculum and counted towards the Year 12 certificate. Secondly, there were groups of schools that offered some integrated subjects that ‘counted’, but that also offered stand-alone or *TAFE-model* VET subjects. There were differences within these groups of schools, and these were based on the intensity of workplace learning. Among those following the *school model*, some offered VET study in which all participants undertook workplace learning. Other schools had a large number of students participating in workplace learning, though not all VET students did, and some had low numbers of students participating in workplace learning. Among those following the *TAFE model*, some had many students participating in structured workplace learning, and some schools that had fewer students doing so. There are also some schools that did not offer any workplace learning and several that did not offer any VET at all.

There is some evidence to suggest that schools providing VET that was integrated into the senior school curriculum (either in an embedded form or as separate subjects) did tend to promote Year 12 completion among participants. This does not necessarily apply to broad rates of school retention measured across the junior and senior years of secondary schooling. In looking at the rates measured from Year 9 to Year 12, schools that had a higher concentration of VET students tended also to have lower retention rates, irrespective of type of provision. However, the completion rates of students who participated in VET, particularly if they were in schools where the VET subjects counted towards the Year 12 certificate, were higher than for other VET students, after controlling for a range of student-level and school-level background variables. In these schools the rates of completion of VET students matched those of non-VET students.

One of the reasons for this result may be that VET study helped re-engage students in school. In Year 12 the attitudes to school (happiness with school as a place to learn) of VET students were as positive as those of non-VET students. In Year 9, however, the same students had less positive views of school as a place of learning compared to other students who never engaged in VET. This change in outlook among VET students during their senior years may have been related to their VET study. It is possible that students who studied VET in school were more likely to remain at school as a result of their study because it helped them form a more positive view of learning and school as a place of learning. Furthermore, a much larger percentage of Year 12 completers who

had studied VET changed their school leaving plans across the senior years compared to non-VET students. In Year 9, compared to non-VET students they were less certain about when they would leave school, or actually planned to leave before Year 12. Their VET study, with a stronger focus on applied learning in workplaces and skills-based teaching and assessment, may have contributed to their remaining on to complete Year 12. Interestingly, these patterns were less evident in schools providing VET without any workplace learning.

While those who study VET that counts towards the Year 12 certificate showed an increased likelihood of completing school, substantial labour market benefits occurred for young people studying VET in those schools that provided stand-alone programs. An analysis of results for students who did not enter a university shows that students in schools that offered stand-alone VET with a weaker emphasis on workplace learning had significantly greater odds of entering TAFE, of gaining an apprenticeship, and of getting a full-time job rather than being unemployed, compared to VET students in other schools. The odds were even greater than for non-VET students in the same schools. The results also showed that, after controlling for social and academic background, gender, state, region and school type, students in schools with a strong emphasis on workplace learning and that offer stand-alone VET had significantly greater odds of entering TAFE than of being unemployed. This was a greater effect than was the case for VET students in schools offering VET that counted towards the Year 12 certificate. The results for students in schools with a strong emphasis on workplace learning and that offer stand-alone VET were even better than for non-VET students in the same schools.

The benefits of certain forms of VET provision occurred not only for Year 12 completers, but also for non-completers. In terms of VET study, attending schools that offered stand-alone VET where there was a strong emphasis on workplace learning appeared to increase significantly the odds of engaging in TAFE or being in at least part-time work rather than being unemployed after leaving school. For non-VET students from the same schools, however, the odds were significantly lower for apprenticeship entry and full-time and part-time work than they were of being unemployed, compared to VET students in schools where VET counts toward the Year 12 certificate. While there was some variation this was generally true across all categories of non-VET students. Non-VET students tended to have lower odds of being in an apprenticeship or full-time work than of being unemployed compared with VET student

These results suggest that whereas schools adopting the integrated or school-based models of VET tended to promote higher retention in school for VET participants, schools providing stand-alone or TAFE-type VET programs tended to promote better initial post-school outcomes — better in terms of avoiding unemployment and successfully entering pathways involving tertiary study, apprenticeships and full-time work. In this sense the ‘TAFE’ solution to VET provision in schools seemed to promote positive post-school outcomes.

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**APPENDIX: SUPPLEMENTARY TABLES**
**Table 1A Descriptions of variables used in report**

Variable	Description of variable
<b>STUDENT</b>	
Gender	Dichotomous variable with female coded as 1 and male as 0.
SES	Composite measure based on parental occupation and parental education.
Year 9 attitude to school	Student response to the Likert-scaled item "My school is a place where I like learning".
Year 11 attitude to school	Student response to the item "How happy are you with the work you do at school: very happy, happy, unhappy, or very unhappy".
Aspirations	Student responses in Year 9 to the item on school-leaving plans, "I plan to leave school after Year ?"
Post-school activity	Identified as the main activity undertaken across the first 12 months after leaving school. Categories include: (1) Studying full-time or part-time at a university; (2) Studying full-time or part-time in TAFE or another form of vocational training; (3) In an apprenticeship or a traineeship; (4) Working full time and not in study; (5) Working part-time and not in study; or (6) Unemployed; or (7) Not in the labour force.
Year 9 achievement	Early school achievement is a composite score based on a combination of results from two ACER tests of literacy and numeracy administered in Year 9.
Completion	Remained at school to the end of Year 12 (beyond August of the Year 12 year) or not.
<b>SCHOOL</b>	
Sector	Schools are classified as (1) Government school, (2) Catholic school or (3) Independent (private non-Catholic)
State or territory	School located in (1) New South Wales, (2) Victoria, (3) Queensland, (4) South Australia, (5) Western Australia, or (6) Northern Territory
Region	Based on (1) Metropolitan, (2) Provincial and (3) Rural or remote. Derived from the postcode of the school and the ARIA index used in the 2001 Census. Metropolitan covers schools in areas identified as 'major cities'. Provincial covers schools in areas defined as 'inner regional'. Rural and remote covers schools in areas defined as outer regional and remote.
SES quartile	Quartiles based on the ranking of school-level mean of student SES.

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**Table 2A Student sample size, by school VET model and year-level**

School VET model	VET students	All students
	<b>Year 11</b>	
<b>All subjects recorded on Year 12 certificate</b>		
1. All programs incorporate workplace learning	133	434
2. Strong emphasis on workplace learning	488	743
3. Weak emphasis on workplace learning	200	771
<b>Some subjects not recorded on Year 12 certificate</b>		
4. Strong emphasis on workplace learning	217	353
5. Weak emphasis on workplace learning	173	589
<b>No workplace learning or no VET</b>		
6. Programs without workplace learning	57	513
7. No VET	0	442
<b>Total</b>	<b>1268</b>	<b>3845</b>
	<b>Year 12</b>	
<b>All subjects recorded on Year 12 certificate</b>		
1. All programs incorporate workplace learning	101	379
2. Strong emphasis on workplace learning	324	687
3. Weak emphasis on workplace learning	169	681
<b>Some subjects not recorded on Year 12 certificate</b>		
4. Strong emphasis on workplace learning	117	344
5. Weak emphasis on workplace learning	127	507
<b>No workplace learning or no VET</b>		
6. Programs without workplace learning	41	478
7. No VET	0	407
<b>Total</b>	<b>879</b>	<b>3483</b>

Note: Excludes students in Tasmania and the ACT. Includes only those students who were attending the same school in Year 11 and Year 12 as in Year 9.