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## **Non-apprenticeship VET courses : participation, persistence and subsequent pathways.**

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# Longitudinal Surveys of Australian Youth

## Research Report 47

### **Non-apprenticeship VET Courses: Participation, Persistence and Subsequent Pathways**

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Nicole Wernert

December 2005

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## EXECUTIVE SUMMARY

This report examines recent school leavers who commenced non-apprenticeship VET courses in Australia during the late 1990s. The focus is on the early post-school years, up to age 20. The report has two broad aims:

- to describe the educational, training and labour market pathways of non-apprenticeship VET course entrants; and
- to identify factors associated with persistence in non-apprenticeship VET courses.

The report uses data from the Longitudinal Surveys of Australian Youth (LSAY) to address each of these aims. The findings are based upon a sample of young people who had been in Year 9 in 1995 and who commenced a non-apprenticeship VET course during the period between leaving school and December 2000. Their education, training and labour market activities were tracked until late in 2001 when they were approximately 20 years of age.

### **Educational, training and labour market pathways**

#### *First non-apprenticeship VET course*

Among the 1995 Year 9 LSAY cohort, 23 per cent of females and 17 per cent of males had commenced a non-apprenticeship VET course by 2000 (at approximately age 19).

By late in 2001 (at approximately age 20), 60 per cent of the non-apprenticeship VET entrants had completed their first course, 14 per cent were still enrolled in their first course, and just under one-quarter had discontinued their first course. These completion rates differ from other published rates, such as those outlined in the introduction, because they followed cohort members through their non-apprenticeship VET courses, unlike completion rates based on administrative data, which do not track individuals across institutions.

Males were more likely than females to be still studying in their first course and less likely than females to have completed their first course by age 20. While males and females displayed similar rates of course discontinuation, females tended to stop earlier than males.

#### *Subsequent pathways (up to age 20)*

Among those who left their first non-apprenticeship VET course through completion or discontinuation, 24 per cent commenced a second non-apprenticeship VET course, 11 per cent commenced a university course, and 9 per cent commenced a New Apprenticeship by age 20.

Subsequent labour market activities were also examined. Seventy-nine per cent of those who had completed a diploma and 74 per cent of those who had completed a certificate or discontinued a non-apprenticeship VET course were engaged in full-time activities such as employment, education and training at age 20. In contrast, young people who had not participated in tertiary education and training by age 19 reported lower levels of participation in full-time activities at age 20 (68%).

Gender differences were evident between the pathways of persons with no experience of tertiary education and those of persons who had undertaken non-apprenticeship VET. Among females, those with no experience of tertiary education and training were most likely to be outside work and study (24%), followed by those who had discontinued VET (16%), completed a certificate (11%), or completed a diploma (4%). Among males, the relationship was weaker: those with no tertiary experience and those who had completed a certificate displayed similar levels of being outside work and study (18% and 16%, respectively), followed by those who had completed a diploma (10%) and those who had discontinued a course (7%).

## Factors associated with course persistence

For the purposes of this report, course persistence was defined as completing a course or still being enrolled by age 20. The findings show that:

- *Low socioeconomic status (SES) students* were *not* disadvantaged in terms of course progress. Rather, students with parents in manual occupations were more likely to persist in their courses than those with parents in para-professional, clerical or sales occupations, and had similar levels of course persistence as those with parents in professional and managerial occupations. Parental education and receipt of Youth Allowance were unrelated to course progress after controlling for a range of other background, educational and labour market characteristics.
- *Other background characteristics:* Gender, language background and region were unrelated to course persistence as defined in this report.

In contrast, the findings show that a number of educational and labour market characteristics were associated with course persistence and that students' interests and preferences were also important. In particular:

- *Numeracy:* Numeracy—measured at school in Year 9—was negatively associated with course persistence, other things being equal.
- *Course level:* Entrants to Certificate I/II courses and Certificate III/IV courses were more likely to persist than entrants to Diploma and higher-level courses.
- *Paid work:* Students who worked between 11 and 20 hours per week or more than 30 hours per week were less likely than students not in paid work to persist in their course. In contrast, students working relatively few hours per week were no less likely than students who were not in paid work to persist.
- *Attitudinal factors:* Higher self-perceptions of academic ability were associated with higher levels of course persistence, as were previous aspirations to undertake VET studies and gaining entry into the course of first preference.
- *Reasons for discontinuing:* The reasons given by discontinuers for leaving their first course also emphasise the importance of preferences and interests: wanting to get a job, apprenticeship or traineeship; the course turning out to be not what the students wanted; and losing interest were common reasons for withdrawal or deferral.

## Implications

The extent to which course persistence differs between various socio-demographic groups has important equity implications. The current report suggests that among non-apprenticeship VET course entrants, low SES students are not disadvantaged in relation to course progress and that gender, language background, and region are unrelated to course persistence. Any new policy initiatives targeting these equity groups should focus on entry to tertiary education or on branching points earlier in young people's educational pathways.

The high proportion of course discontinuers indicating that their first course turned out to be not what they wanted, or that they wanted to get a job, apprenticeship or traineeship suggests a need for students to have better access to course and career guidance prior to entry to tertiary study.

Finally, there is some evidence that VET participation—relative to not undertaking tertiary education and training—is beneficial in terms of being engaged on a full-time basis in education, training or labour market activities at age 20. It will be necessary, however, to examine the pathways of young people over a longer period of time in order to provide a more accurate assessment of the outcomes of participation in a non-apprenticeship VET course.

# **Non-apprenticeship VET Courses: Participation, Persistence and Subsequent Pathways**

## **1. INTRODUCTION**

Over the past two decades, both the number and the proportion of students undertaking formal study past the compulsory school years have increased dramatically. Between 1991 and 2000, for example, the number of people aged 19 and under participating in all forms of vocational education and training (VET) increased by more than 50 per cent (NCVER, 2002), similar to a growth of around 60 percent in higher education (DETYA, 2001). The overall increase in participation in tertiary education has led to a focus on the provision of quality programs, with increased interest in institutional accountability and efficiency, resource allocation and student support services, as well as the benefits of vocational education and training.

This report concentrates on students who participated in one form of VET study. It uses data from a sample of young people who were in Year 9 at school in 1995 and participated in study leading to certificates, diplomas, advanced diplomas and associate degrees that are not associated with an apprenticeship or a traineeship (unweighted n=1232). The report examines characteristics of these non-apprenticeship VET students, their persistence in study and the early outcomes of that study.

### **Participation in non-apprenticeship VET study**

Much of our understanding of participation in vocational education and training comes from the national statistics collections managed by the National Centre for Vocational Education Research (NCVER), which are also reported by the Australian Bureau of Statistics. In 2001 there were 1.7 million students in VET, comprising 345 000 15-to-19 year-olds and 265 000 20-to-24 year-olds (NCVER, 2005b). These data, however, include all VET participants and do not distinguish between apprentices/trainees and those in non-apprenticeship study.

For many young people, the VET system serves as an educational alternative to the secondary school system. Long, Carpenter and Hayden (1999) reported that the participation of 19 year-olds who had not completed Year 12 but had taken up study in non-apprenticeship VET programs increased from 11 per cent in 1980 to 22 per cent in 1994. During the same period, the percentage of Year 12 non-completers who undertook apprenticeships and traineeships also increased. Ball and Lamb (2001) reported that 37 per cent of young people who had been in Year 9 in 1995 and had left school before Year 12 participated in some form of VET study (including apprenticeships) up to 1998, when most of their peers were completing Year 12.

### **Course progression**

One major area of concern is students' completion of their courses, even though the term 'completion' is not straightforward in the VET context. According to Cleary and Nicholls (1998), different stakeholders in the VET system have different understandings of the word 'completion'. For some, the acquisition of a skill that leads to a job is an adequate measure of success, regardless of whether a unit, module or course was completed. For others, completion can be measured by attendance for a specified number of hours or by a successful assessment of an acquired skill. Foyster, Hon and Shah (2000) noted that 'partial course completion'—in which some modules are successfully completed but not a qualification—was about twice as common as 'full course completion'—which is associated with the award of a qualification. They suggested that 'partial completion is a very significant outcome of enrolment in a TAFE course', and that an emphasis on '*completed* qualifications underestimate[s] the stock of skills in the workforce' (Foyster et al, 2000, pp. 32-33; emphasis added).

Non-completion—of both modules and courses—is often seen as a negative outcome. At the individual level, non-completion of a course can be a serious problem for some students, as it could be interpreted as a personal failing. At the institutional level, course non-completion can

indicate that an institution's curriculum does not match student needs and expectations and could be interpreted as a sign of inefficiency and ineffectiveness. It should not be assumed, however, that non-completion is synonymous with individual or institutional failure. Many students enrol in courses in the VET sector with the intention of completing only some modules, not the entire course. Course non-completion may signify that specific skills have been attained, enabling employment in a desired field; it may be associated with movement to another course or another tertiary institution. Additionally, non-completion is not necessarily a permanent state, as a student may return to complete a qualification at a later time.

For the present report, *completion* will be identified as full course completion; that is, a young person will be considered as having completed VET study if a certificate or diploma is awarded. For the annual NCVET Student Outcomes Survey, course completers are also referred to as *graduates*. Young people who have not received an award will be divided into two groups: those who were continuing study in a course (*persisters*), and those who have *discontinued* their study. Some of those who have discontinued in one course may have *transferred* to another VET course; others may have *withdrawn* from study and had not recommenced study when the most recent contact was made. These young people would be considered *partial completers* if they successfully completed some of the modules leading to successful course completion. Other measures of success that are common in the VET system are the 'pass rate', 'load pass rate', 'module load completion rate' and 'failure rate', all of which are subject-based.<sup>1</sup> These latter terms are used in the present discussion because they describe successful completion of a VET subject; they do not refer to completion of a full course.

#### *The extent of completion or non-completion*

Shah and Burke (2003) tracked the progress of VET students from 1997, when they commenced a course, to 2000. By the end of these four years, 25 per cent had completed their course, 29 per cent had partially completed their course, 29 per cent had withdrawn, and 17 per cent were continuing into 2001.<sup>2</sup> The authors then estimated that, after considering the characteristics of the continuing students and their courses, the final outcomes would be 30 per cent completions, 35 per cent partial completions and 35 per cent withdrawals. NCVET (2005b) reported that in 2000 there were 11.3 million subject enrolments<sup>3</sup>, and that 71 per cent of these enrolments were completed or awarded passes<sup>4</sup>; nine per cent ended in withdrawal from the subject. Both sets of figures are much lower than students' *intentions* to complete, as expressed in other publications: At Certificate I level, 85 per cent of students said they intended to complete the entire course, compared to 94 per cent of Certificate III students and 95 per cent of advanced diploma students (ANTA, 2001).

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<sup>1</sup> The 'load pass rate' is the ratio of hours attributed to students who passed assessment in an assessable module or unit of competency to all students who were assessed and either passed, failed or withdrew; the calculation is based on the nominal hours supervised for each assessable module or unit of competency. The 'module load completion rate' is the ratio of the number of students who successfully complete a module to all students who participated in that module; students assessed as 'withdrawn (without failure)' are not included. 'Pass rate' is a generic term that may include other specific calculations of passes as a proportion of enrolments; 'failure rate' is also a generic term that calculates a rate of failing results as a proportion of enrolments. For the latter two rates, the treatment of students who withdrew may differ.

<sup>2</sup> Course completion was defined as successful completion of at least 95 per cent of nominal course hours; partial completion as successful completion of less than 95 per cent of course hours with no failed modules but not continuing; non-completion as successful completion of less than 95 per cent of course hours but with at least one failed module and not continuing. Continuing students were all others. (Shah & Burke, 2003, p. 2)

<sup>3</sup> A subject enrolment is based on a student's participation in a subject. If a student enrolls in three subjects during the year, that is counted as three enrolments.

<sup>4</sup> For some subjects, students are not assessed but receive credit for hours of attendance; in such cases they are not awarded passes but are determined to have 'completed' the subject.

*Factors related to completion and non-completion*

Characteristics of students who complete VET study vary according to the type of outcome considered. Research in this area does not always distinguish between non-apprenticeship VET entrants and apprentices/trainees, while some research concentrates on particular types of VET study. Some research has concentrated on full course completion, while some has concentrated on partial course completion.

*Gender.* Foyster et al (2000) used national data for the period 1994 to 1996 to provide estimates of the probabilities of completion, partial completion and non-completion of a VET course. They found that overall, males had a slightly higher chance of course completion, and females had a slightly higher chance of partially completing a course. Lamb, Long and Malley (1998) used data from the Australian Longitudinal Survey (ALS) and the Australian Youth Survey (AYS) to examine participation in only non-apprenticeship VET study, and reported that of those who started such study 68 per cent of males and 72 per cent of females had completed a qualification by age 24. Phan and Ball (2001) reported 'module load completion rates' of 70 per cent for females and 68 per cent for males enrolled in enabling courses at TAFE institutions. ANTA (2002) also reported that females have marginally higher 'load pass rates'. While there may be some minor differences, gender of itself does not appear to be an important factor in completions.

*Age.* Age has been noted as a factor, but the pattern is complex. Shah and Burke (2003) reported that 18 year-olds had higher completion rates than all other age groups, while those aged 40 or over had the highest partial completion rate. Dumbrell, de Montfort and Finnegan (2001) used the 1999 Student Outcomes Survey, administered to both course completers ('graduates') and module completers in associate diploma, diploma and advanced diploma courses. Graduates were most commonly in the 20-to-24 age group and module completers in all other age groups, including 15-to-19 year-olds.

*Region.* ANTA (2002) reported that rural students have marginally higher load pass rates than metropolitan students and students from other non-metropolitan areas. Shah and Burke (2003) noted that students from remote areas had the lowest course completion rate (18%) but the highest partial completion rate (42%) and lowest withdrawal rate (23%).

*Indigenous students.* Shah and Burke (2003) noted that Indigenous Australian students had a 22 per cent completion rate compared to 25 per cent for non-Indigenous students, but that they also had a 38 per cent withdrawal rate compared to a 29 per cent withdrawal rate for non-Indigenous students. ANTA (2002) reported that Indigenous Australians have low load pass rates.

*Other socio-demographic groups.* Low load pass rates have also been reported for students with disabilities, those who speak a language other than English at home and those born in non-English-speaking countries (ANTA, 2002). Other unpublished research by NCVET (cited in Grant, 2002) found that module completions were associated with highest school level completed, postcode region and employment status. Ball and Lamb (2001) found that the following categories of school non-completers had the lowest failure rates: those who had performed well at school and those from high socioeconomic backgrounds, and those in modules undertaken more often by high-SES school non-completers or school non-completers from English-speaking backgrounds.

*Course type.* Foyster et al (2000) found that patterns of success varied by length of course (highest for one- and three-year courses), stream of study (highest in courses subsequent to an initial vocational course, at a skilled level), and field of study (highest for TAFE multi-field education). Data from New South Wales, Victoria and Western Australia have also been used to identify aspects of course structure related to the completion of TAFE qualifications. In general, courses that are 'bigger' and courses with more choice were found to have lower completion rates (Grant, 2002).

Shah and Burke (2003) found that as the AQF level increased (thus indicating an increase in the total hours of course contact), the percentage of student completions decreased, from 32 per cent at AQF Certificate I, to 17 per cent at AQF Diploma and Advanced Diploma. Partial completions were fairly even across the four certificate levels, and withdrawals were highest among the Diploma and Advanced Diploma courses. Diploma and Advanced Diploma courses also had the highest levels of persistence because of the length of these courses. Ball and Lamb (2001) found that failure rates were highest in advanced courses (diploma level), while pass rates were highest in trade-related and similar level courses among school non-completers. Phan and Ball (2001) reported module load completion rates of 69 per cent (70% for females and 68% for males) for students in enabling courses, which are lower level courses designed to introduce or re-introduce participants to VET study.

*Past students' reasons for completion and non-completion.* A number of researchers have examined reasons why some students complete only modules rather than full courses. Most researchers have identified issues relating to career plans. Dumbrell et al (2001) reported that graduates (course completers) were more likely to have enrolled in study to find a job or to change jobs, while module completers enrolled to improve the skills applicable to their current jobs. They noted that module completers believed that course completion was preferable to module completion, even though they had enrolled only to acquire the skills upgrades available through individual modules. At Central TAFE in Perth, most non-completers had accepted training places with different providers or had accepted full-time employment (Uren, 2001). Cleary and Nicholls (1998) also noted that many students talked about changes in vocational interests as a reason for non-completion. These researchers have also noted issues relating to transport, time management, family–study balance and literacy and numeracy skills as factors that influence decisions affecting non-completion. Administrative arrangements have also been cited as influences (Grant, 2002).

While there has been research that identifies factors associated with successful completion of VET study—subjects, modules or courses—much less is known about the relationship between who enters VET study and who completes it. The research cited here does not examine the pathways that students take to arrive at completion; these pathways may include temporary withdrawal from study ('deferral'), course transfers during study, or direct completion in the minimal time. Longitudinal data, such as those available in LSAY, provide more information on students' pathways through VET study and after leaving study, as well as information on background factors that may be associated with those pathways.

### **Subsequent educational, training and labour market outcomes**

Some information on post-VET outcomes is available from the Student Outcomes Survey conducted by NCVER. Data for these annual surveys are collected from a sample of course completers in the year after they graduate and from module completers if they had left the VET system by the time the survey is undertaken, although the response rate is often below 50 per cent.<sup>5</sup> The *Annual National Report on the Australian Vocational Education and Training System* (ANTA, 2002) presents short-term labour market outcomes for graduates (those awarded a qualification) and module completers, but does not make comparisons with non-completers or with other groups who had not participated in VET. Data from the 2001 Student Outcomes Survey have, however, been compared with general population statistics (NCVER, 2002). TAFE graduates under 25 years of age, six months after graduation, were more likely to be in full-time employment, but also slightly more likely to be unemployed, than the Australian population.

Dumbrell et al (2001) reported that module completers of diploma and associate diploma courses were similar to graduates on most employment outcomes, although the number of module completers in the survey was small. There was some variation in employment outcomes according

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<sup>5</sup> NCVER (2005a) reported response rates to the 2004 survey of 46% for graduates and 38% for module completers.

to the field of study in which the students were employed, with some of these differences attributable to the gender composition of the course and the proportion of students who had already completed a university course. One statistically significant difference between module completers and graduates in the occupational group of the completers' post-course employment was reported: Graduates were more likely to be in intermediate clerical/sales/service positions compared to module completers, who were more likely to be in elementary clerical/sales/service positions (Dumbrell et al, 2001, p. 34).

Ryan (2000) found that the post-study employment rate for all VET graduates was similar to the employment rate for university graduates, although university graduates were more likely to be employed full-time and in professional occupations. He also found that VET graduates were less likely to be employed than participants in the *Survey of Employment and Unemployment Patterns* (SEUP), although they were employed in higher-skilled occupations.<sup>6</sup> Young people from the most disadvantaged groups were also more likely to have benefited from participation in a VET course compared to the SEUP group. Using other data sources, Ryan (2002) later found that VET completers benefited in terms of full-time employment compared to those who had not undertaken further study. Based on both studies, he found that some fields of study offered better outcomes than others, especially when some fields and occupations are also associated with large differences in the gender composition.

Lamb et al (1998) used earlier LSAY data to examine the outcomes of VET study at age 24. They found different results by gender. Men had lower unemployment rates than women did, and men who had done some non-apprenticeship VET study had lower unemployment rates than men who had done some university study. For women, however, university study was associated with lower unemployment rates compared to all VET study. As noted by other researchers, some of these differences can be attributed to the differences in courses studied by men and women. The authors also found that the level of VET study mattered, with diploma graduates achieving better outcomes than certificate graduates, mainly because of the levels of occupations entered.

Overall, these studies suggest that some young people who undertake VET study obtain some benefit over not studying, and that the value of study improves with the level of the certificate obtained. Many young people do undertake VET study for the purpose of gaining or improving a skill, and do not always complete a course that leads to a formal qualification. For these young people, the benefits appear to be minimal in the short-term, but there is little information on longer-term benefits of such study. Longitudinal data can be used to examine such benefits, following young people to see the longer-term outcomes of a decision not to continue VET study, and allowing comparisons with those who complete qualification study and those who undertake no post-school study.

### **The present report**

As noted earlier, within the VET sector there are a number of distinct strands, two of which are apprenticeships and traineeships (grouped together as 'New Apprenticeships' since 1998) and more general study at public institutions of technical and further education (TAFE) and private VET providers. This report examines pathways by young people through one form of VET study, 'non-apprenticeship VET', defined here as VET certificates, diplomas, advanced diplomas and associate degrees that are not associated with an apprenticeship or a traineeship. It excludes single modules, recreational and leisure courses, and units undertaken by secondary school students as part of a VET in Schools program. In 2004, non-apprenticeship VET students represented 85 per

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<sup>6</sup> SEUP was a longitudinal household survey conducted by the Australian Bureau of Statistics (ABS) between September 1994 and September 1997. The target population of SEUP consisted of those people considered to be most likely to be currently eligible for labour market assistance or likely to become eligible for assistance in the near future.

cent of those undertaking VET studies (NCVER, 2005b). The report uses longitudinal data to follow young people who entered non-apprenticeship VET study after leaving school.

The young people considered in this report are members of the 1995 Year 9 LSAY cohort of the Longitudinal Surveys of Australian Youth (LSAY). Three related research reports from LSAY examine participation in and progress through VET in Schools (Fullarton, 2001), New Apprenticeships (Ainley & Corrigan, 2005), and higher education (McMillan, 2005) by the same cohort. Ball and Lamb (2001) examined participation in VET study by members of this cohort who had left school before completing Year 12, only up to the end of 1998. Long and Lamb (2002) used an earlier LSAY cohort to examine a different strand of VET: education and training within organisations.

The present report complements the earlier research on the post-school study pathways of the 1995 Year 9 LSAY cohort, addressing two sets of research questions. The first set relates to students' pathways into, within and out of their first non-apprenticeship VET course. The second set of research questions is narrower in focus, concentrating on factors associated with the persistence in or non-completion of that course. Persistence includes those studying towards a qualification and those who have completed their first qualification. The research questions are:

1. What are the pathways of young people who commence non-apprenticeship VET courses?
  - a. *Inflows*: What are the education, training and labour market pathways into non-apprenticeship VET courses? When do entrants commence their study?
  - b. *Course progression*: What proportion of entrants complete their non-apprenticeship VET course by age 20? When do non-completers stop their study?
  - c. *Outflows*: What are the educational, training and labour market destinations of course completers and non-completers?
  - d. How do the pathways of non-apprenticeship VET entrants compare with the pathways of young people who do not undertake post-secondary education and training?
2. What are the factors associated with persistence in or non-completion of non-apprenticeship VET courses?
  - a. What are the socio-demographic and educational characteristics of course persisters and non-completers?
  - b. Are attitudes and aspirations associated with course persistence and non-completion?
  - c. What are the reasons that past students give for course non-completion?

The following chapter describes the LSAY data in more detail and outlines the analytical techniques used in the report. The research findings are then organised into three chapters. The first of these, Chapter 3, provides a brief description of the level and nature of participation in non-apprenticeship VET by members of the 1995 Year 9 LSAY cohort. Overall participation rates, the number of courses commenced, course level, field of education, and the state or territory of VET provider are described. Chapter 4, examines students' pathways into, through and out of non-apprenticeship VET. Chapter 5 takes a narrower focus, examining factors associated with course persistence. Finally, Chapter 6 provides a summary and discussion of the results. The longitudinal data used for this report allow analysis of young people's activities before entering VET study, their movement through VET study and their persistence in VET study, which has not been possible with the cross-sectional data available to the studies cited above.

## 2. DATA AND METHODS

### Data

#### *The 1995 Year 9 LSAY cohort*

Data for this report are based upon a cohort of students who were in Year 9 in 1995 and who form part of the Longitudinal Surveys of Australian Youth (LSAY) program. Their experiences up to 2001 are examined. By stopping at 2001, this report is consistent with the related report by McMillan (2005) on university students and Ainley and Corrigan (2005) on New Apprentices.

The initial sample included 13 613 students from approximately 300 government, Catholic and independent schools throughout Australia. The students were first surveyed in their schools in 1995, where they completed a questionnaire about themselves and their families, and undertook reading comprehension and numeracy tests. Further data on education, training and labour market activities have been collected from the sample members on an annual basis. Extensive retrospective data on post-secondary education and training pathways were also collected as part of the 2001 data collection.

At the time of the 2001 data collection, the modal age of cohort members was 20. For those who completed Year 12 (approximately 80% of the 1995 Year 9 LSAY cohort), data are available on their post-secondary pathways, which span a three-year period from 1999 to late in 2001. For those who did not remain at school until the end of Year 12 (approximately 20% of the 1995 Year 9 LSAY cohort), data are also available on post-school pathways up to late in 2001, but this covers a longer period of time, ranging from three to six years, depending upon when the student left school. At the time of the 2001 data collection, 6876 respondents remained in the active sample. All results presented in this report have been weighted to correct for the original sample design and subsequent survey attrition.

A further description of the sample design and data collection is provided in Appendix 1.

#### *Non-apprenticeship VET participants in the 1995 Year 9 LSAY cohort*

In this report, 'non-apprenticeship VET' is defined as non-apprenticeship VET certificates, diplomas, advanced diplomas and associate degrees commenced *after* leaving school. It excludes single modules, and TAFE recreational and leisure courses. It should be emphasised that VET is not synonymous with TAFE; just under 90 per cent of VET commencers in the 1995 Year 9 LSAY cohort attended a TAFE college while the remainder attended a business college or other educational institution.

The sub-sample that is the focus of this report is specified in Table 1. It comprises persons who had commenced a non-apprenticeship VET course by December 2000, and who remained in the active sample at the time of interview in late 2001 (unweighted n=1232). Persons first commencing a non-apprenticeship VET course after December 2000 were excluded from analysis (unweighted n=236) in order to allow a minimum of one year for students to potentially discontinue their VET studies.

It must be emphasised that young people who enter non-apprenticeship VET are not representative of all school leavers. State and Territory differences were evident in the participation rates of the 1995 Year 9 LSAY cohort. Additionally, young people from some groups that are commonly viewed as disadvantaged were over-represented among non-apprenticeship VET entrants in the 1995 Year 9 LSAY cohort. These groups included young people from lower socio-economic status

backgrounds<sup>7</sup> and those who displayed lower literacy and numeracy skills while at school. Young people from other groups were also over-represented among non-apprenticeship VET entrants: females, those from mainland state capitals, those with Australian-born parents, those who had completed Year 12, those who had undertaken VET subjects while in senior secondary school, and those who had attended government and Catholic schools (Appendix 5, Table 24). Whether factors such as these continue to be associated with student flows after entry to non-apprenticeship VET will be examined in Chapter 4.

**Table 1** Year commenced first post-secondary non-apprenticeship VET course (retrospective data collected from the 1995 Year 9 LSAY cohort in 2001)

Year Commenced	Sub-sample analysed	Unweighted		Weighted	
		N	%	N	%
1996	Included	7	<1	10	<1
1997	Included	42	1	53	1
1998	Included	59	1	62	1
1999	Included	874	13	980	14
2000	Included	250	4	268	4
2001	Excluded <sup>a</sup>	236	3	247	4
Don't know year	Excluded	6	<1	5	<1
No non-apprenticeship VET courses commenced since leaving school (1995-2001)	Excluded <sup>a</sup>	5402	79	5252	76
Total		6876	100	6876	100

Notes: a. Within this group, persons who had not commenced any form of tertiary education or training by the end of 2000 were used as a comparison group in some of the pathways analyses reported in Chapter 3.

Columns may not sum to totals due to rounding.

### Measures

LSAY data permit the tracking of non-apprenticeship VET student flows over a number of years, including both progress through courses and the destinations of students after leaving a course. LSAY also includes a wide range of potential explanatory variables, including socio-demographic characteristics, achievement and aspirations while in secondary school, activities prior to VET commencement, factors relating to the experience of VET, and paid work and finances while enrolled in the first VET course. Data are also available on the reasons given for course non-completion by students who did not persist in their original course of study. A full list of the variables analysed in this report is provided in Figure 1. Detailed variable descriptions are provided in Appendix 3.

There are some limitations when using LSAY data to measure student flows. LSAY tracks whether non-apprenticeship VET students complete their course, change course (without completing the original course), withdraw from their course, take time out from their course, or are still enrolled. LSAY does not, however, ask questions that would permit the measurement of partial completions. Due to the sample size, LSAY data cannot be used to provide detailed estimates of completions for particular courses or providers.

<sup>7</sup> Students whose parents had not attained a degree or diploma and those whose parents were not in professional occupations were more likely than other students to participate in non-apprenticeship VET courses.

PRIOR TO FIRST VET COURSE	DURING FIRST VET COURSE	AFTER FIRST VET COURSE
<b>Socio-demographic characteristics</b> Gender Language background Home location Parents' education Parents' occupation School sector	<b>The experience of VET</b> Was course first preference? Had a gap year? Qualification level Field of education Mode of attendance State/territory of VET provider	<b>First VET course outcome</b> Persisted (completed or still studying) Non-completion (changed course, withdrew or deferred)
<b>Achievement and aspirations while in secondary school</b> Self-assessed ability Academic achievement Years of schooling Participation in VET in Schools Educational aspirations		<b>Past students' reasons for course non-completion</b> Subjective explanations
<b>Activities prior to VET commencement</b> Post-secondary education and training Labour market participation	<b>Paid work and finances while enrolled in VET course</b> In paid work Hours of paid work Youth Allowance recipient	<b>Activities after leaving first VET course</b> Post-secondary education and training Labour market participation

**Figure 1 Variables analysed in this report**

There are also some limitations on the range of potential influences on student flows that can be examined. Two potential influences identified in previous literature – age and Indigenous status – cannot be examined for reasons of sample design and sample size. Furthermore, only a limited range of data on the experience of VET was collected; for example, data on course results, academic and social integration, and practices and interventions at various VET institutions were not collected.

### Analytic techniques

Percentages are used to describe the pathways of entrants to non-apprenticeship VET courses, including their educational and labour market origins and destinations, as well as student flows within the VET sector (Chapters 3 and 4). Cross-tabulations and logistic regression are used to assess whether a range of factors are associated with course persistence, and percentages are used to describe the reasons course non-completers give for leaving their most recent non-apprenticeship VET course (Chapter 5). Further details on the analytic techniques employed in this report are provided in Appendix 4.

### 3. THE LEVEL AND NATURE OF PARTICIPATION IN NON-APPRENTICESHIP VET

This chapter provides a brief description of the level and nature of participation in non-apprenticeship VET by members of the 1995 Year 9 LSAY cohort. Overall participation rates, the number of courses commenced, course level, field of education, and the state or territory of VET provider are described. All results are based upon courses commenced between leaving school (some time in the period 1996 to 1998) and December 2000. The modal age of cohort members in 2000 was 19 years. The results are presented separately for school non-completers and school completers, and for males and females. Some results are also presented separately for different course levels.

#### Level of participation

Between leaving school and December 2000, 20 per cent of the 1995 Year 9 LSAY cohort had participated in a non-apprenticeship VET course. School completers were more likely than school non-completers to have participated (21% and 16%, respectively). Similarly, females were more likely than males to have participated (23% and 17%, respectively).

The number of courses commenced by non-apprenticeship VET participants is reported in Table 2. Of those who commenced a non-apprenticeship VET course, 80 per cent had commenced only one course by December 2000, while 17 per cent had commenced two courses and 4 per cent had commenced more than two courses. School non-completers were more likely to have commenced more than one non-apprenticeship VET course than school completers, who had been out of school for a relatively shorter period of time. Gender differences were also evident, with females being more likely than males to have commenced more than one course. For all groups, analysis will focus on the *first* non-apprenticeship VET course commenced.

**Table 2 Non-apprenticeship VET participants: Number of non-apprenticeship VET courses commenced by December 2000, by school completion status and gender**

Number of courses commenced	School completion status		Gender		
	Non-completer	Completer	Female	Male	All
	%	%	%	%	%
1	74	81	76	86	80
2	17	16	20	11	17 <sup>8</sup>
3+	9	3	4	3	4
Total	100	100	100	100	100
<i>Total N (weighted)</i>	228	1144	792	580	1372

Note: Column percentages may not add exactly to 100 due to rounding.

#### Course level

Non-apprenticeship VET courses are available at levels ranging from Certificate I to Advanced Diplomas and Associate Degrees. Fifty-five per cent of the non-apprenticeship VET participants in the 1995 Year 9 LSAY cohort were enrolled in certificate-level courses, while 45 per cent were enrolled at the diploma level or above. A relatively large proportion of those enrolled in certificate courses were unable to specify their certificate level (Table 3).

The results reported in Table 3 show differences in the levels of non-apprenticeship VET courses undertaken by school non-completers and school completers. These differences partially reflect the range of available pathways into VET.

<sup>8</sup> Of those who commenced two courses, 70 per cent completed their first course before commencing their second course, while 30 per cent did not complete their first course.

**Table 3 Course level, by school completion status and gender**

Course level	School completion status		Gender		
	Non-completer	Completer	Female	Male	All
	%	%	%	%	%
Certificate I	17	5	6	9	7
Certificate II	24	7	9	11	10
Certificate III	21	17	21	13	18
Certificate IV	8	14	12	14	13
Certificate (level unknown)	17	6	7	8	8
Diploma	12	42	39	34	37
Advanced diploma/ associate degree	2	9	5	12	8
Total	100	100	100	100	100
<i>Total N (weighted)</i>	<i>228</i>	<i>1144</i>	<i>792</i>	<i>580</i>	<i>1372</i>

Note: Column percentages may not add exactly to 100 due to rounding.

Entry to Certificate I and Certificate II courses is by various pathways which may include the completion of *Year 10 or equivalent*, or completion of a recognized program and/or recognition of prior learning (ABS, 2001). Among non-apprenticeship VET entrants in the 1995 Year 9 LSAY cohort, school non-completers were much more likely than school completers to commence Certificate I courses (17% and 5%, respectively) and Certificate II courses (24% and 7%, respectively).

Entry to Certificate III courses is also by various pathways, but these may include the completion of *Year 10 or equivalent, or higher*, or completion of a recognized program and/or recognition of prior learning (ABS, 2001). School non-completers were slightly more likely than school completers to commence Certificate III courses (21% and 17%, respectively).

In contrast, pathways into Certificate IV, Diploma and Advanced Diploma courses include the *completion of Year 12 or equivalent*, or completion of a recognized program and/or recognition of prior learning (ABS, 2001). School completers were more likely than school non-completers to be enrolled in Certificate IV courses (14% and 8%, respectively), Diplomas (42% and 12%, respectively), and Advanced Diplomas (9% and 2%, respectively).

Roughly similar proportions of females and males entered certificate-level courses (56% and 54%, respectively) and higher-level courses (44% and 46%, respectively). There were, however, some gender differences within these broad categories. Females were more likely than males to enter a Certificate III course, but slightly less likely than males to enter other certificate-level courses. Females were also more likely than males to enter diploma-level courses, but less likely than males to enter more advanced courses.

### Field of education

Non-apprenticeship VET participants were enrolled across a range of broad fields of education, with enrolments being highest in management and commerce (27%), food, hospitality and personal services (17%), society and culture (14%), creative arts (8%), engineering and related technologies (7%) and information technology (7%), as shown in Table 4. Differences were evident by school completion status, course level, and gender. School non-completers were more likely than school completers to participate in fields such as engineering and related technologies, architecture and building, and agriculture, environmental and related studies, but less likely than school completers to participate in fields such as information technology, and management and commerce. These differences may reflect entry requirements for study in these fields, as well as the levels of courses available for school non-completers. Participants in certificate-level courses

were more likely than those in higher-level courses to be enrolled in the fields of agriculture, environmental and related studies, and food, hospitality and personal services, but less likely than those in higher level courses to be enrolled in the fields of management and commerce, and society and culture. Females were more likely than males to enter fields such as management and commerce, society and culture, and food, hospitality and personal services. Males, on the other hand, were more likely than females to enter fields such as information technology, engineering and related technologies, and architecture and building.

**Table 4 Broad field of education, by school completion status, course level and gender**

Field of education	School completion status		Course level <sup>a</sup>		Gender		
	Non-completer	Completer	Certificate	Diploma or higher	Female	Male	All
	%	%	%	%	%	%	%
Information technology	4	8	7	7	3	13	7
Engineering & related technologies	10	7	6	8	1	16	7
Architecture & building	8	4	5	4	2	8	5
Agriculture, environ. & related studies	7	3	5	1	3	5	4
Health	3	3	4	2	4	2	3
Management & commerce	22	28	23	31	30	22	27
Society & culture	13	14	11	18	20	5	14
Creative arts	10	8	9	8	8	9	8
Food, hospitality & personal services	13	17	22	10	21	10	17
Other	1	4	2	4	3	5	3
Don't know/missing	10	5	5	3	5	4	5
Total	100	100	100	100	100	100	100
<i>Total N (weighted)</i>	<i>228</i>	<i>1144</i>	<i>758</i>	<i>615</i>	<i>792</i>	<i>580</i>	<i>1372</i>

Notes: a. Results based upon a more detailed course level classification are reported in Appendix 5, Table 25.

Column percentages may not add exactly to 100 due to rounding.

### State or Territory

The majority of non-apprenticeship VET participants were enrolled in institutions in New South Wales (34%), Victoria (23%), Queensland (16%) and Western Australia (12%), which is consistent with the distribution of cohort members. Ten per cent of participants were enrolled in VET institutions in the smaller States and Territories. Some differences in State enrolments were evident by school completion status and course level. School non-completers were more likely than school completers to be enrolled in a New South Wales VET institution, but less likely than school completers to be enrolled in VET institutions in Victoria and Queensland. Similarly, participants were more likely to be enrolled in a certificate-level course rather than a higher-level course in New South Wales, but less likely to be enrolled in a certificate-level course in Victoria and Queensland. These differences in participation and course levels suggest that jurisdictions differ in the types of courses available in their VET institutions, with some States more likely to use VET programs as alternatives to senior secondary school programs. Very few gender differences between the States and Territories were evident (see Table 5).

**Table 5 State/Territory of VET institution, by school completion status, course level and gender**

State/Territory	School completion status		Course level <sup>a</sup>		Gender		
	Non-completer	Completer	Certificate	Diploma or higher	Female	Male	All
	%	%	%	%	%	%	%
New South Wales	39	34	40	28	36	33	34
Victoria	16	24	19	29	23	23	23
Queensland	12	17	13	20	17	17	16
Western Australia	14	11	13	10	10	14	12
South Australia	7	5	6	5	6	6	6
ACT, Northern Territory & Tasmania	6	4	4	4	4	4	4
Missing	7	5	5	6	5	5	5
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>
<i>Total N (weighted)</i>	<i>228</i>	<i>1144</i>	<i>758</i>	<i>615</i>	<i>792</i>	<i>580</i>	<i>1372</i>

Notes: a. Results based upon a more detailed course level classification are reported in Appendix 5, Table 26.

Column percentages may not add exactly to 100 due to rounding.

### Summary

This chapter has described the level and nature of participation in non-apprenticeship VET by members of the 1995 Year 9 LSAY cohort. One-fifth of the cohort commenced a non-apprenticeship VET course; just over one-half of the entrants entered certificate-level courses, while just under one-half entered diploma or higher-level courses. The majority of entrants commenced their VET studies in the year they left school or in the year immediately after they left school. Variations in the level of study by the field of education, State/Territory and school completion status most likely reflect the different entry requirements for various courses, as well as policies regarding the provision of VET study as alternatives to senior secondary school programs.

## 4. PATHWAYS INTO, THROUGH AND OUT OF VET STUDY

This chapter provides an analysis of the pathways followed by young people into, through and out of their first post-secondary non-apprenticeship VET course. All results are based on courses commenced between leaving school and December 2000.

School completion status, course level and gender may be related to pathways into, through and out of non-apprenticeship VET. Consequently, where the sample size permits, results will be presented separately for school non-completers and school completers, certificate-level and diploma or higher-level courses, and for females and males. Analyses based upon more detailed course-level distinctions (Certificate I/II, Certificate III/IV, certificate level unknown, and Diploma or higher) are provided in Appendix 5 (Table 27–Table 34). The low numbers of students participating in non-apprenticeship VET courses in some States/Territories and many broad fields of education preclude the reporting of pathways at these levels.

### Pathways into non-apprenticeship VET

Table 6 shows that approximately 80 per cent of young people commenced their first non-apprenticeship VET course within a year of leaving school. Some differences were evident by school completion status and course level (see also Appendix 5, Table 27). School non-completers and students in certificate-level courses (especially those in Certificate I/II courses) displayed greater variation than other students in the timing of their VET commencement: they were more likely to commence in the same year in which they left school, or two or more years after leaving school. School non-completers and students in certificate-level courses (especially those in Certificate I/II courses) were less likely than school completers and students in higher-level courses to commence VET in the year after leaving school. Similar differences between school non-completers and completers have been documented in the timing of the movement into New Apprenticeships (Ainley & Corrigan, 2005).

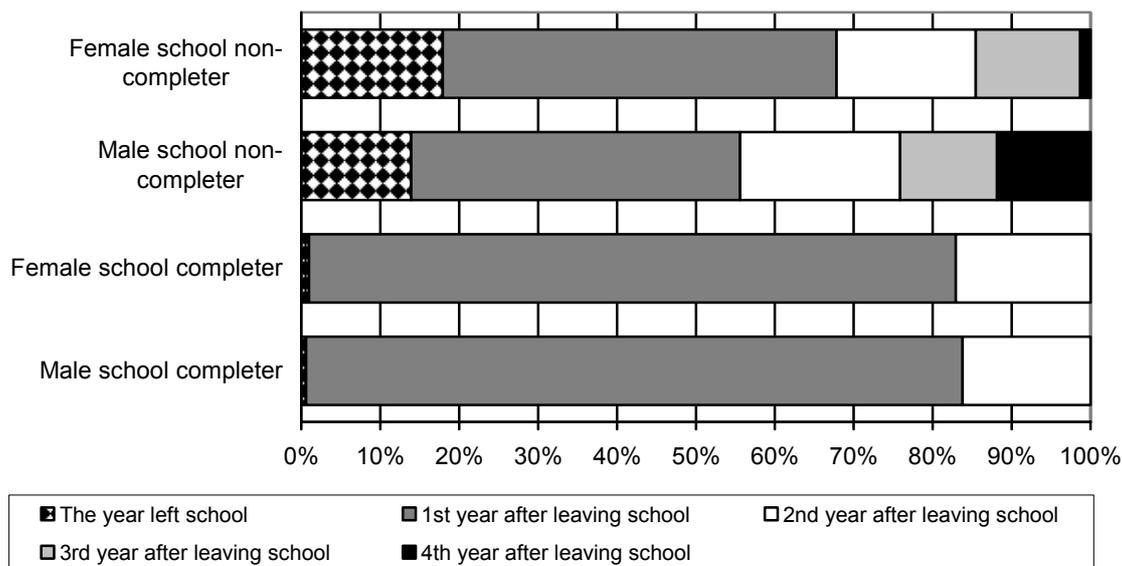
**Table 6** Number of years between leaving school and commencing first non-apprenticeship VET course, by school completion status, course level and gender

	School completion status		Course level <sup>a</sup>		Gender		
	Non-completer	Completer	Certificate	Diploma or higher	Female	Male	All
Commenced ...	%	%	%	%	%	%	%
In the year left school	16	1	5	1	4	3	3
1 <sup>st</sup> year after leaving school	46	82	70	85	77	76	76
2 <sup>nd</sup> year after leaving school	19	17	21	13	17	17	17
3 <sup>rd</sup> year after leaving school	13	-	3	1	2	2	2
4 <sup>th</sup> year after leaving school	6	-	2	<1	<1	2	1
Total	100	100	100	100	100	100	100
<i>Total N (weighted)</i>	<i>224</i>	<i>1143</i>	<i>754</i>	<i>613</i>	<i>791</i>	<i>577</i>	<i>1368</i>

Notes: a. Results based upon a more detailed course level classification are reported in Appendix 5, Table 27.

Column percentages may not add exactly to 100 due to rounding.

Overall, very few gender differences were apparent in the timing of entry into non-apprenticeship VET. There were, however, some differences between female and male school non-completers. Female school non-completers were more likely than male school non-completers to commence in the year they left school or the following year. Male school non-completers, on the other hand, were more likely than female school non-completers to commence after a considerable period of time, in the fourth year after leaving school (see Figure 2).



**Figure 2** Number of years between leaving school and commencing first non-apprenticeship VET course, by school completion status and gender

The highest level of education and training undertaken prior to first commencing non-apprenticeship VET is reported in Table 7. Given the timing of entry into first non-apprenticeship VET courses, it is unsurprising that the majority of entrants had not previously undertaken post-secondary education or training (93%). Three per cent of the entrants, however, had commenced a New Apprenticeship and four per cent had commenced a university course before entering their first non-apprenticeship VET course. Compared with school completers, school non-completers were more likely to have commenced a New Apprenticeship but less likely to have commenced a higher education course prior to commencing their first non-apprenticeship VET course. There were very few differences between students in certificate and higher-level courses in terms of their prior experience of tertiary education and training.

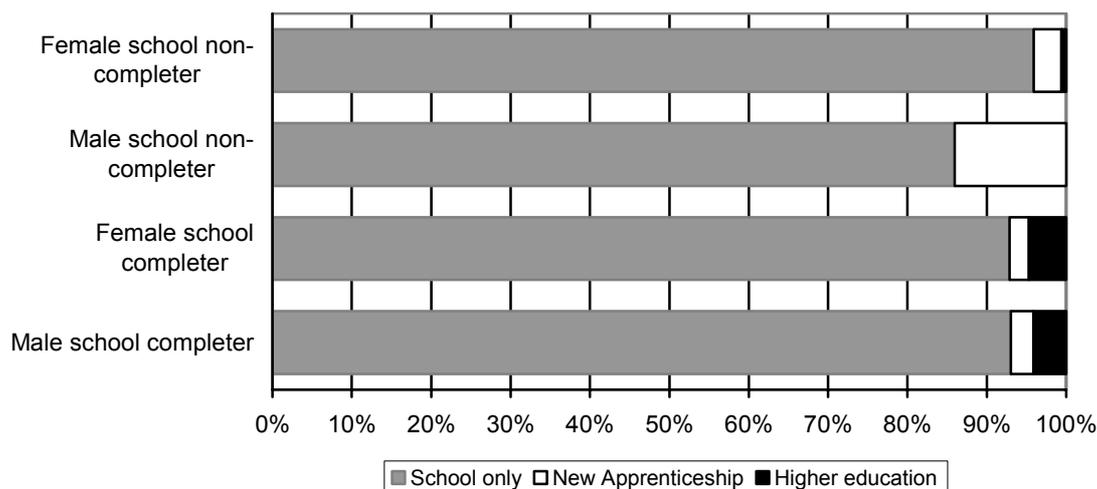
**Table 7** Highest level of education and training commenced prior to first non-apprenticeship VET course, by school completion status, course level and gender

Highest level of education	School completion status		Course level <sup>a</sup>		Gender		
	Non-completer	Completer	Certificate	Diploma or higher	Female	Male	All
	%	%	%	%	%	%	%
School only	91	94	93	94	93	93	93
New Apprenticeship	8	2	4	2	3	3	3
Higher education	<1	4	3	4	4	3	4
Total	100	100	100	100	100	100	100
<i>Total N (weighted)</i>	<i>228</i>	<i>1144</i>	<i>758</i>	<i>615</i>	<i>792</i>	<i>580</i>	<i>1372</i>

Notes: a. Results based upon a more detailed course level classification are reported in Appendix 5, Table 28.

Column percentages may not add exactly to 100 due to rounding.

There were very few overall gender differences in the highest level of education and training commenced prior to first non-apprenticeship VET course, as shown in Table 7, but there were some gender differences among school non-completers. Female school non-completers were more likely than male school non-completers to report no previous tertiary education and training, while male school non-completers were more likely than female school non-completers to have commenced a New Apprenticeship between leaving school and commencing a non-apprenticeship VET course (see Figure 3).



**Figure 3** Highest level of education and training commenced prior to first non-apprenticeship VET course, by school completion status and gender

An alternative way of examining flows into non-apprenticeship VET courses is to describe the main education, training and labour market activities undertaken by young people prior to course commencement. Main activities<sup>9</sup> in the year prior to entry to non-apprenticeship VET are reported in Table 8. Over three-quarters of the non-apprenticeship VET entrants were in secondary school in the year prior to entry to their course. The next most common main activity was full-time employment (7% of entrants), followed by not working and not studying (6%), part-time employment or part-time study (5%), New Apprenticeships (2%) and higher education (2%).

**Table 8** Main activity in the year prior to entry to non-apprenticeship VET<sup>a</sup>, by school completion status, course level and gender

Main activity	School completion status		Course level <sup>b</sup>		Gender		
	Non-completer	Completer	Certificate	Diploma or higher	Female	Male	All
	%	%	%	%	%	%	%
Secondary school	51	83	72	85	79	76	78
Higher education	<1	3	2	3	2	3	2
New Apprenticeship	8	1	4	1	2	3	2
Full-time employment	13	6	9	4	7	7	7
Part-time employment and/or part-time study	12	3	6	3	4	5	5
Not working and not studying	16	4	8	4	5	7	6
Total	100	100	100	100	100	100	100
Total N (weighted)	226	1144	756	615	792	578	1370

Notes: a. Main activity was measured at the time of the last annual interview prior to entry to VET.

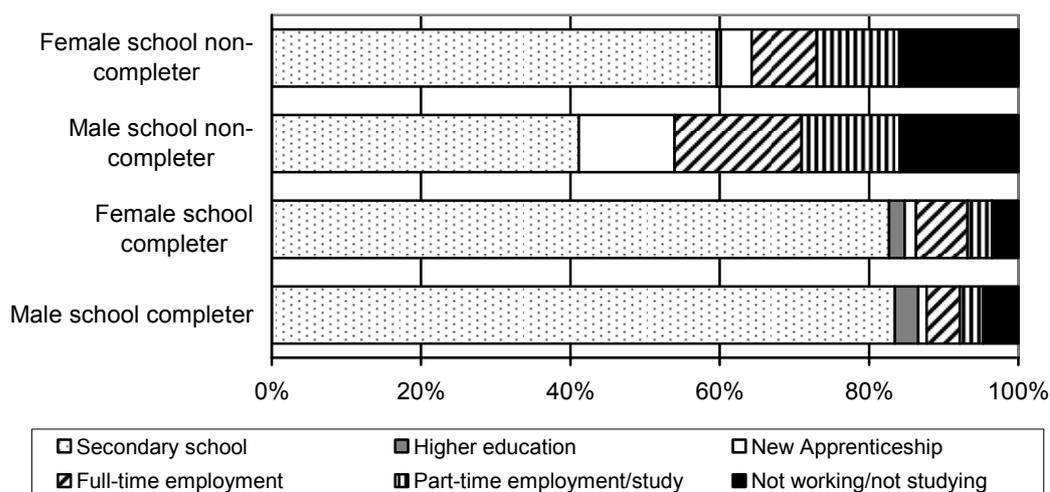
b. Results based upon a more detailed course level classification are reported in Appendix 5, Table 29.

Column percentages may not add exactly to 100 due to rounding.

<sup>9</sup> 'Main activities' refers to activities at the time of the most recent annual interview prior to commencement of first non-apprenticeship VET course. This time-point was chosen because the most detailed information on the labour market activities of the 1995 Year 9 LSAY cohort relates to the time of the annual interviews, which were usually conducted between September and December of each year.

Some differences were evident between school non-completers and school completers, and between those undertaking certificate-level and those undertaking higher-level courses (see also Appendix 5, Table 29). These differences partially reflect the timing of movement into non-apprenticeship VET for these groups, as shown earlier in Table 6. School non-completers and those undertaking certificate-level courses (especially Certificate I/II courses) were less likely than school completers and those undertaking higher-level courses to have been in secondary school in the year before commencing their non-apprenticeship VET studies. Conversely, school non-completers and those undertaking certificate-level courses were more likely than school completers and those undertaking higher-level courses to have been in a New Apprenticeship, in full-time employment, in part-time employment or part-time study, or not working and not studying in the year before commencing their non-apprenticeship VET studies. Among certificate-level students, those commencing Certificate I/II courses were more likely than those in other certificate or higher-level courses to have previously been in part-time employment or part-time study, or not working and not studying.

While there were very few overall gender differences in main activities in the year prior to entering non-apprenticeship VET, there were some differences between female and male school non-completers. Reflecting the gender differences in the timing of entry into non-apprenticeship VET described earlier in the chapter, female school non-completers were more likely than male school non-completers to have been in secondary school in the year prior to entering VET. Male school non-completers, on the other hand, were more likely than female school non-completers to enter VET after being in a New Apprenticeship or full-time employment (see Figure 4).



**Figure 4 Main activity in the year prior to entry to non-apprenticeship VET, by gender and school completion status**

**Student flows through non-apprenticeship VET**

Longitudinal survey methods, such as those used in LSAY, depend on successfully tracking the progress of each individual through a non-apprenticeship VET course. Each year a number of LSAY participants do not continue in the survey, and the proportion who do not continue is drawn disproportionately from those who are lower achievers at school and who do not participate in post-compulsory education and training, even though differential attrition in LSAY is partially compensated by weighting. If those who discontinue a non-apprenticeship VET course also have a greater preponderance to withdraw from the survey, the result will be an overestimate of completion rates, because more of those who complete their courses remain in the survey. The completion results reported here, therefore, are likely to be higher than rates based on data from other sources.

Students' progress through their first non-apprenticeship VET course, up until late in 2001, is reported in Table 9. As not all students had been enrolled long enough to complete their course, both completion and continuation in their first course are treated as successful course progress for the purposes of this report. Just over 60 per cent of students had completed their first course, while another 14 per cent were still continuing in their first course. In contrast, just under one-quarter of non-apprenticeship VET students had discontinued their first course. It must be emphasised that some of the latter group may return to VET to complete their course at a later date, while others had already commenced (and in some cases, completed) another non-apprenticeship VET course by 2001.

**Table 9 Student progress in first non-apprenticeship TAFE course, by school completion status, course level and gender**

	School completion status		Course level <sup>a</sup>		Gender		
	Non-completer	Completer	Certificate	Diploma or higher	Female	Male	All
Progress	%	%	%	%	%	%	%
Completed first course	70	60	72	49	64	59	62
Continuing in first course	10	15	8	21	12	18	14
Discontinued first course							
Commenced a second course	4	6	4	8	7	4	6
No further non-apprenticeship VET	16	19	16	22	18	19	18
Total	100	100	100	100	100	100	100
<i>Total N (weighted)</i>	<i>213</i>	<i>1110</i>	<i>731</i>	<i>592</i>	<i>763</i>	<i>560</i>	<i>1323</i>

Notes: a. Results based upon a more detailed course level classification are reported in Appendix 5, Table 30. Column percentages may not add exactly to 100 due to rounding.

These results can be compared to results of analyses of the level of persistence (that is, completions and continuations) displayed by members of the 1995 Year 9 LSAY cohort who entered other forms of education and training. The level of persistence in first non-apprenticeship VET courses (76%) compares favourably to that for initial university courses (74%) (McMillan, 2005), but is lower than that for apprenticeships (85%) and traineeships (87%) (Ainley & Corrigan, 2005).

Table 9 also shows differences in the progress of school non-completers and completers. Given that the non-school completers had been out of school for a longer period of time than the school completers, it is not surprising that school non-completers were more likely than school completers to have completed their first non-apprenticeship VET course and less likely than school completers to be still continuing in their first course. Overall, school non-completers were slightly less likely than school completers to have discontinued their first course (20% and 25%, respectively). This can be contrasted with progress through apprenticeships and traineeships, where school non-completers were slightly more likely than school completers to have discontinued their training (Ainley & Corrigan, 2005).

Differences in the progress of students enrolled in certificate-level and higher-level courses are also reported in Table 9. Supplementary analyses, based upon a more detailed course-level classification, are reported in Appendix 5, Table 30. Students in certificate-level courses (especially Certificate I/II courses) were more likely than those in higher-level courses to have completed their course but were less likely than those in higher-level courses to be continuing their course by 2001. These differences may partially reflect different course durations, as well as the higher propensity of those who left school relatively early to enrol in lower-level courses first (and thus to have had relatively longer to complete). Overall, students in certificate-level courses were less likely than students in higher-level courses to have discontinued their first course (20% and 30%, respectively).

The gender differences in progress through non-apprenticeship VET courses may partially reflect the timing of entry into VET. Males, who tended to commence VET later than females, were more likely than females to be continuing in their first course, while females were more likely than males to have completed their first course. Overall, females and males displayed similar levels of course persistence; that is, continuing in or having completed their first course (76% and 77% respectively).

The timing of course discontinuation is reported in Table 10. In total, over 75 per cent of persons discontinuing their first non-apprenticeship VET course did so within a year of enrolment. There was not a strong relationship between school completion status and the timing of discontinuation, although school non-completers were more likely than school completers to discontinue their first non-apprenticeship VET course in the semester in which they commenced that course, and less likely than school completers to discontinue in the fourth semester or later. These differences partially reflect the different course levels undertaken by school non-completers and school completers. Those who discontinued certificate-level courses were more likely than those who discontinued higher-level courses to stop within a year of commencement. Some gender differences were also evident. Females were more likely than males to discontinue their course in the same semester in which they commenced, while males were more likely than females to discontinue their course in the third semester or later.

**Table 10 Number of semesters between commencing and discontinuing first non-apprenticeship TAFE course, by school completion status, course level and gender<sup>a</sup>**

	School completion status		Course level <sup>b</sup>		Gender		
	Non-completer	Completer	Certificate	Diploma or higher	Female	Male	All
Discontinued ...	%	%	%	%	%	%	%
In the semester commenced	31	21	25	20	24	19	22
Second semester	53	56	61	52	56	55	56
Third semester	14	8	7	11	8	11	9
Fourth semester or later	1	15	8	17	12	15	13
Total	100	100	100	100	100	100	100
<i>Total N (weighted)</i>	<i>42</i>	<i>264</i>	<i>135</i>	<i>172</i>	<i>183</i>	<i>123</i>	<i>306</i>

Notes: a. Analysis restricted to students who discontinued their first non-apprenticeship VET course.

b. Results based upon a more detailed course level classification are reported in Appendix 5, Table 31.

Column percentages may not add exactly to 100 due to rounding.

## Activities after leaving first non-apprenticeship VET course

### *Education and training*

Subsequent education and training undertaken by persons who had left their first non-apprenticeship VET course—through withdrawal, deferral, course change or course completion—is reported in Panel 1 of Table 11. The most common type of education and training undertaken was a second non-apprenticeship VET course (24% of persons who had left their first VET course), followed by higher education (11%) and New Apprenticeships (9%).

The first non-apprenticeship VET course outcome was related to the subsequent education and training undertaken. Compared to those who had completed a course at diploma-level or above, those who had completed a certificate or discontinued their first course were more likely to commence a New Apprenticeship or second non-apprenticeship VET course but less likely to move into the higher education sector. Supplementary analyses, reported in Appendix 5, Table 32, also revealed some differences among certificate completers. Those who completed Certificate I/II courses were more likely than those who completed Certificate III/IV courses to subsequently commence New Apprenticeships, but less likely to commence non-apprenticeship VET or higher education courses.

**Table 11 Outcome of first non-apprenticeship VET course, by subsequent education and training<sup>a</sup>**

Outcome of first VET course	Subsequent education and training				Total %	Total N (weighted)
	None %	New Apprentic. %	Other VET %	Higher education %		
<b>Panel 1: Persons</b>						
Discontinued course	55	11	23	11	100	317
Completed certificate <sup>b</sup>	51	10	31	8	100	526
Completed diploma or above	67	4	11	18	100	292
Total persons	56	9	24	11	100	1136
<b>Panel 2: School non-completers</b>						
Discontinued course	66	10	24	0	100	44
Completed certificate	51	11	37	<1	100	133
Completed diploma or above	#	#	#	#	100	16
Total school non-completers	57	10	32	1	100	193
<b>Panel 3: School completers</b>						
Discontinued course	53	11	23	13	100	274
Completed certificate	51	10	29	10	100	393
Completed diploma or above	66	4	11	19	100	276
Total school completers	56	9	22	13	100	943
<b>Panel 4: Females</b>						
Discontinued course	54	10	27	9	100	189
Completed certificate	50	7	35	9	100	300
Completed diploma or above	65	3	14	18	100	186
Total females	55	7	27	11	100	675
<b>Panel 5: Males</b>						
Discontinued course	56	11	18	14	100	128
Completed certificate	53	15	26	6	100	227
Completed diploma or above	70	5	6	19	100	107
Total males	58	12	19	11	100	461

Notes: a. Persons still enrolled in their first non-apprenticeship VET course were excluded from analysis.

b. Results based upon a more detailed course level classification are reported in Appendix 5, Table 32.

# Sample size too small to report results.

Row percentages may not add exactly to 100 due to rounding.

The non-apprenticeship VET course outcomes and subsequent education and training pathways of school non-completers are reported in Panel 2 of Table 11, and those of school completers are reported in Panel 3 of Table 11. Among those who discontinued a non-apprenticeship VET course, school non-completers were less likely than school completers to move into higher education, while their uptake of New Apprenticeships and other VET study was similar to that of school completers. Among those who completed a certificate, school non-completers and school completers were equally likely to undertake subsequent education and training. There were, however, differences among the certificate completers in the types of courses undertaken. School non-completers were more likely than school completers to move into another non-apprenticeship VET course, while school completers were more likely than school non-completers to move into a university course, possibly reflecting different entry requirements.

The non-apprenticeship VET course outcomes and subsequent education and training pathways of females are reported in Panel 4 of Table 11 and in Panel 5 of Table 11 for males. Similar proportions of females and males did not engage in further education and training following their first non-apprenticeship VET course. Among those who did engage in further education and training, gender differences were evident: males (especially male certificate completers) were more likely than females to enter New Apprenticeships, while females were more likely than males to enter a second non-apprenticeship VET course. Females and males were equally likely to move into higher education.

*Main activities after leaving first VET course*

Another way of describing the destinations of VET participants is to examine their activities at particular time points. The most detailed information on the labour market activities of the 1995 Year 9 LSAY cohort relates to the time of the annual interviews, which were usually conducted between September and December of each calendar year. This information is used to describe the main activities of VET participants at the time of the first annual interview after the semester in which they completed or left their first VET course. Panel 1 of Table 12 shows that the majority of young people, after leaving VET, engaged in full-time education, training or labour market activities; however, 16 per cent were engaged in part-time activities only, and 12 per cent were not in education or employment after their first VET course. Persons who completed a diploma or above were substantially less likely to be in the latter category than were those who completed a certificate (especially Certificate I/II courses) and those who discontinued their VET studies (see also Appendix 5, Table 33).

**Table 12 Main activity after first non-apprenticeship VET course, by course level and course completion status<sup>a,b</sup>**

Outcome of first VET course	Subsequent activity					Total %	Total N (weighted)
	Full-time study %	New Apprent %	Full-time work %	Part-time work/study %	No work and no study %		
<b>Panel 1: Persons</b>							
Discontinued course	14	7	47	20	12	100	311
Completed certificate <sup>c</sup>	20	10	40	15	15	100	510
Completed diploma or above	24	4	51	16	5	100	252
Total persons	19	8	45	16	12	100	1073
<b>Panel 2: School non-completers</b>							
Discontinued course	0	14	46	21	19	100	43
Completed certificate	10	12	38	14	25	100	126
Completed diploma or above	#	#	#	#	#	100	15
Total school non-completers	7	12	40	18	23	100	183
<b>Panel 3: School completers</b>							
Discontinued course	17	6	47	19	11	100	269
Completed certificate	23	10	40	15	12	100	384
Completed diploma or above	25	4	52	14	5	100	237
Total school completers	22	7	46	16	10	100	890
<b>Panel 4: Females</b>							
Discontinued course	13	7	44	23	12	100	186
Completed certificate	19	8	44	16	14	100	294
Completed diploma or above	24	2	54	17	3	100	169
Total females	18	6	46	18	11	100	650
<b>Panel 5: Males</b>							
Discontinued course	16	7	50	15	11	100	125
Completed certificate	22	14	35	13	16	100	215
Completed diploma or above	24	7	47	13	9	100	83
Total males	21	11	42	14	13	100	423

Notes: a. Main activity was measured at the time of the first annual interview after the semester of leaving the first VET course; persons who left their first VET course in Semester 2 of 2001 were excluded from analysis.

b. Persons still enrolled in their first non-apprenticeship VET course and persons who had not been out of VET sufficiently long to participate in the interview were excluded from analysis.

c. Results based upon a more detailed course level classification are reported in Appendix 5, Table 33.

# Sample size too small to report results.

Column percentages may not add exactly to 100 due to rounding.

The non-apprenticeship VET course outcomes and subsequent main activities of school non-completers are reported in Panel 2 of Table 12, and those of school completers are reported in Panel 3 of Table 12. Among those who discontinued a non-apprenticeship VET course, school non-completers were less likely than school completers to be in full-time study, more likely than school completers to be in a New Apprenticeship or to be not working and not studying, and equally as likely as school completers to be in full-time work or part-time activities. Among those who completed a certificate, school non-completers were less likely than school completers to be in full-time study, and more likely than school completers to be not in work or study.

The non-apprenticeship VET course outcomes and subsequent main activities of females are reported in Panel 4 of Table 12, and those of males are reported in Panel 5 of Table 12. Some gender differences are apparent, although they are not as marked as those between school non-completers and school completers. Males who completed a VET course were more likely than females who completed a VET course to subsequently enter a New Apprenticeship, but less likely than females to enter full-time work. Irrespective of the outcome of their first VET course, males were less likely than females to enter part-time work/part-time study, but males who completed a higher-level VET course were more likely than females who completed a higher-level VET course to be neither working nor studying.

*Comparisons with young people who had not participated in post-secondary education and training*

It is also of interest to know how the activities of past VET students compare to the activities of other young people in 2001, at approximately age 20. Comparisons are drawn between the pathways of young people who had commenced a non-apprenticeship VET course by 2000, and those who had not participated in any post-secondary education and training by 2000; that is, those who had not commenced a New Apprenticeship, other post-secondary VET, or a university course.<sup>10</sup> The time period covered in this report precludes comparisons with the activities of New Apprentices and higher education entrants, the majority of whom were still undertaking their education and training in 2001 (Ainley & Corrigan, 2005; McMillan, 2005).

The results for the total sample are shown in Panel 1 of Table 13. The first point to note is that among those who had not commenced post-secondary education and training by 2000, 8 per cent had entered full-time study or a New Apprenticeship by 2001. Nevertheless, they were far less likely to be in full-time study than those who had previously completed or discontinued a VET course, and somewhat more likely to be in full-time employment or to be not working and not studying than those who had previously completed or discontinued a VET course.

The 2001 activities of selected groups of school non-completers are shown in Panel 2 of Table 13, while those of school completers are shown in Panel 3 of Table 13. There are some differences between school non-completers and school completers in the relationship between tertiary education pathway and subsequent activities. In particular, among school non-completers, 35 per cent of those with no experience of tertiary study up to 2000 were neither working nor studying, compared to 21 per cent of those who had completed a certificate, and 17 per cent of those who had discontinued their first VET course. Among school completers, the relationship between tertiary pathways and not working/not studying was less marked, although completing a diploma did appear to offer some protection against moving into this category.

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<sup>10</sup> The comparison group was defined as persons who indicated no tertiary participation in the 2001 retrospective data *or* in the 1997-2000 annual interviews. The annual interview data were used in order to ensure that all persons who had engaged in tertiary study were excluded from the comparison group. Appendix 2 contains information on the comparison between the annual interview data and the retrospective data.

**Table 13 Main activity of selected groups in 2001 (approximately age 20) <sup>a,b</sup>**

Group	Activity in 2001 (age 20)					Total %	Total N (weighted)
	Full-time study %	New Apprent %	Full-time work %	Part-time work/ study %	No work and no study %		
<b>Panel 1: Persons</b>							
Completed certificate <sup>c</sup>	16	7	51	12	14	100	524
Completed diploma+	22	3	55	15	6	100	288
Discontinued VET course	11	6	58	14	12	100	317
No tertiary ed./training by 2000	4	4	60	12	20	100	845
<b>Panel 2: School non-completers</b>							
Completed certificate	11	7	48	12	21	100	133
Completed diploma+	#	#	#	#	#	100	15
Discontinued VET course	3	1	74	6	17	100	44
No tertiary ed./training by 2000	1	3	51	10	35	100	257
<b>Panel 3: School completers</b>							
Completed certificate	18	6	52	12	12	100	391
Completed diploma+	23	3	55	15	6	100	273
Discontinued VET course	12	7	55	15	12	100	274
No tertiary ed./training by 2000	5	5	64	12	14	100	587
<b>Panel 4: Females</b>							
Completed certificate	18	2	57	12	11	100	297
Completed diploma+	23	1	55	17	4	100	184
Discontinued VET course	10	5	58	10	16	100	189
No tertiary ed./training by 2000	4	4	53	15	24	100	412
<b>Panel 5: Males</b>							
Completed certificate	14	12	44	12	18	100	227
Completed diploma+	20	6	54	11	10	100	104
Discontinued VET course	11	7	57	19	7	100	128
No tertiary ed./training by 2000	3	4	67	9	16	100	433

Notes: a. Main activity was measured at the time of the 2001 annual interview.  
 b. Persons still enrolled in first non-apprenticeship VET course were excluded from analysis.  
 c. Results based upon a more detailed course level classification are reported in Appendix 5, Table 34.  
 # Sample size too small to report results.  
 Row percentages may not add exactly to 100 due to rounding.

Similarly, there were gender differences in the relationship between tertiary pathways and not being in study or work in 2001. Among females, those with no experience of tertiary education and training were most likely to be outside work and study in 2001 (24%), followed by those who had discontinued VET (16%), completed a certificate (11%) or completed a diploma (4%), as shown in Panel 4 of Table 13. Among males, the relationship was weaker: those with no tertiary experience and those who had completed a certificate displayed similar levels of being outside work and study (16% and 18%, respectively), followed by those who had completed a diploma (10%) and those who had discontinued a course (7%) (see Panel 5 of Table 13).

### Summary of pathways into, through and out of non-apprenticeship VET

Table 14 presents a summary of pathways into, through and out of non-apprenticeship VET.

- Three pathways into VET, measured as the main activity at the time of interview prior to entry to VET, were identified: school; other full-time activity (full-time employment or full-time post-school education and training, including university study, apprenticeships and traineeships); and other activities (part-time work, part-time education, or not working and not studying).
- Two pathways through VET were identified: completed first course; and discontinued first course.
- Two destinations, measured by main activity at the time of the 2001 interview, were identified: full-time activity (full-time employment or full-time post-school education or training, including full-time enrolment in a second non-apprenticeship TAFE course); and other activity (part-time education or training, part-time work, or not working and not studying).

Due to sample size constraints, more detailed pathways could not be examined, nor could the pathways of school completers and school non-completers, certificate entrants and diploma entrants, or males and females, be examined separately.

Those who were engaged in full-time post-school education, training or employment prior to entry to VET (Paths 3 & 4) had the highest rates of engagement in full-time activities in late 2001 when they were approximately 20 years of age, followed by those who were in school prior to entry to VET (Paths 1 & 2). Within both of these broad groupings, those who completed a VET course were more likely than those who discontinued their course to be engaged in full-time activities. Those who were not in school, other full-time education and training, or full-time employment prior to entry to VET (Paths 5 & 6) and those who had not engaged in tertiary study by 2000 (Path 7) were the least likely to be engaged in full-time activities in 2001. Some caution needs to be exercised in interpreting these results, as the numbers of young people who discontinued their VET courses (Paths 4 & 6) are small.

**Table 14 Post-school pathways and destinations for those who participated in VET<sup>a</sup>**

Post-school pathway	Destination (main activity in 2001)		Total	Total N (weighted)
	Full-time activity <sup>b</sup>	Other activity <sup>c</sup>		
	%	%	%	
Path 1: School → completed 1st VET course	78	22	100	649
Path 2: School → discontinued 1st VET course	74	26	100	255
Path 3: Other full-time activity <sup>b</sup> → completed 1st VET course	86	14	100	75
Path 4: Other full-time activity <sup>b</sup> → discontinued 1 <sup>st</sup> VET course	79	21	100	34
Path 5: Other activity <sup>c</sup> → completed 1 <sup>st</sup> VET course	52	48	100	87
Path 6: Other activity <sup>c</sup> → discontinued 1 <sup>st</sup> VET course	68	32	100	28
Path 7: No tertiary study by 2000	68	32	100	845

Notes: a. Persons still enrolled in first non-apprenticeship VET course were excluded from analysis.

b. 'Full-time activity' includes full-time employment and full-time post-secondary education and training. When referring to destinations, this includes full-time enrolment in a second non-apprenticeship VET course.

c. 'Other activity' includes part-time employment, part-time post-secondary education and training, and neither working nor studying. When referring to destinations, this includes part-time enrolment in a second non-apprenticeship VET course.

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## Summary

This chapter has described the pathways followed by non-apprenticeship VET entrants in the 1995 Year 9 LSAY cohort. By 2001, at approximately age 20, 60 per cent of the non-apprenticeship VET entrants had completed their first course, 14 per cent were still enrolled in their course, and just under one-quarter had discontinued their first course. Those who enrolled in diploma and higher-level courses were more likely to discontinue than those in certificate-level courses. Most cases of discontinuation occurred within a year of enrolment.

Leaving a first non-apprenticeship VET course through completion or discontinuation did not necessarily signal the end of education and training: 24 per cent of those who had left their first course commenced a second non-apprenticeship VET course, 11 per cent entered university and 9 per cent started a New Apprenticeship by age 20.

There are some indications that VET studies may yield benefits in the early post-school years. After leaving their first VET course through completion or discontinuation, the majority of young people were engaged in full-time education, training or labour market activities. Compared to those who did not undertake tertiary studies, past VET students who had been in school or other full-time education, training and labour market activities prior to their VET studies were more likely to be in full-time education, training or labour market activities at age 20. Such comparisons should be treated with some caution, however. Differences in outcomes may be the result of differences in pathways followed, or the result of the characteristics of the young people following particular pathways. Further research, as the cohort ages, will permit a more detailed analysis of the outcomes of VET participation.

## 5. FACTORS ASSOCIATED WITH COURSE PROGRESS

This chapter identifies a range of factors associated with progress through non-apprenticeship VET courses up to age 20. As noted in the previous chapter, a significant proportion of sample members were still enrolled in their first non-apprenticeship VET course at age 20. Consequently, successful progress is measured by whether a student completed or was still enrolled in their first course. In the first section of this chapter, the characteristics of students who persist in their first course are examined. This is followed by an examination of the reasons given by those who discontinue their first course.

### Characteristics associated with course progress

The analyses presented in this section are based upon members of the 1995 Year 9 LSAY cohort who commenced their first non-apprenticeship VET course by 2000 (approximately age 19). The characteristics of students who persisted in their first course are compared to the characteristics of those who had discontinued their first course by late in 2001. The characteristics examined include socio-demographic factors (parents' occupation, parents' education, gender, language background and home location), educational factors and aspirations measured while at school (literacy, numeracy, self-assessed academic ability, school sector, participation in VET in Schools, completion of senior secondary school and educational aspirations), and factors relating to the tertiary experience (course preference, deferred entry, course level, mode of attendance, field of education and State/Territory of VET institution), and paid work and student finances (whether in paid work while studying, hours of paid work and receipt of Youth Allowance). Some of these characteristics were related to course progress at either the bivariate or multivariate level.<sup>11</sup> Table 15 presents bivariate (two-way) statistics for each of those characteristics, showing course progress for various socio-demographic, educational and labour market groups. The multivariate (combined) results for each of those characteristics, based on a regression analysis to examine the net influences of each of the variables on course progress, are presented in Table 16. Characteristics that preliminary analysis showed were unrelated to course progress at both the bivariate and multivariate level were excluded from the bivariate tables and the final multivariate models.

#### *Socio-demographic factors*

Students whose parents were in para-professional, clerical or sales occupations were less likely than those whose parents were in manual occupations and those whose parents were in professional and managerial occupations to persist in their first non-apprenticeship VET course (69%, 78% and 78%, respectively) (Table 15). This relationship remained statistically significant after controlling for the other socio-demographic, educational, and labour market variables included in the multivariate model (Table 16).

Another aspect of family socioeconomic status—parents' education—also displayed a statistically significant bivariate association with course progress. Seventy-eight per cent of students whose parents had no tertiary qualifications persisted in their first non-apprenticeship VET course, compared to 73 per cent of those whose parents had a degree or diploma and 71 per cent of those whose parents had a trade or technical qualification (Table 15). After controlling for a range of educational and attitudinal factors, however, parents' education was not significantly related to course progress (Model 2 in Table 16).

<sup>11</sup> Bivariate analyses show the cross tabulation of two variables, such as course progress and sex, allowing comparisons of course progress between males and females. Multivariate analyses use two or more groups for comparison on an outcome, such as course progress by sex and language background. Multivariate analyses show how individual variables contribute to the outcome when other variables remain unchanged.

**Table 15 Course progress, by socio-demographic, educational and labour market group<sup>a</sup>**

	Completed or still enrolled in first course	Discontinued first course	Total	Total N (weighted)
	%	%	%	
Total (commenced VET before 2001)	76	24	100	1323
<b>Parents' occupation</b>				
Professional/managerial	78	22	100	414
Para-professional/clerical/sales	69	31	100	283
Manual	78	22	100	601
<b>Parents' education</b>				
Degree/diploma	73	27	100	276
Trade/technical qualification	71	29	100	201
No tertiary qualification	78	22	100	847
<b>Numeracy</b>				
Lowest quartile	79	21	100	536
Second quartile	76	24	100	414
Third quartile	72	28	100	208
Highest quartile	73	27	100	149
<b>Self-assessed academic ability</b>				
Very high	83	17	100	161
Above average	78	23	100	415
Average or lower	73	27	100	713
<b>Educational aspirations</b>				
None	73	27	100	286
VET	82	18	100	465
University	73	27	100	573
<b>Course was first preference</b>				
Yes	78	22	100	1010
No	65	35	100	201
Started in other course <sup>b</sup>	78	22	100	97
<b>Course level</b>				
Certificate I/II	83	17	100	214
Certificate III/IV	81	19	100	418
Certificate (level unknown)	73	27	100	100
Diploma or higher	71	29	100	592
<b>Field of education</b>				
Engineering & related technol.	82	18	100	101
Food, hospitality & personal serv.	81	19	100	230
Creative arts	78	22	100	113
Management & commerce	77	23	100	365
Other	72	28	100	323
Society & culture	71	29	100	191
<b>State/Territory</b>				
Queensland	69	31	100	222
Western Australia	70	30	100	160
Victoria	74	26	100	317
New South Wales	81	19	100	473
Other	81	19	100	130
<b>In paid work</b>				
Yes	72	28	100	752
No	81	19	100	572

Notes: a. Chi-square tests indicated that each of the socio-demographic, educational and labour market characteristics (except numeracy) were significantly related to course progress ( $p < 0.05$ ).  
b. Persons whose first non-apprenticeship VET course was not their first episode of tertiary education and training were not asked whether their non-apprenticeship VET course was their first preference.

As preliminary analyses showed that the other socio-demographic factors examined in this report – gender, language background, and home location – were not associated with course progress among non-apprenticeship VET entrants at either the bivariate or multivariate level, these variables were not included in the final model reported in Table 16.

**Table 16 Influences on course persistence: full sample (unstandardised logistic regression coefficients)**

	Model 1: Socio-demographic factors	Model 2: + factors while at school	Model 3: + post-school factors
Intercept	1.32***	0.90***	0.56*
<b>Parents' occupation (relative to manual)</b>			
Professional, managerial	0.14	0.20	0.24
Paraprofessional, clerical, sales	-0.42*	-0.38*	-0.39*
<b>Parents' education (relative to no tertiary study)</b>			
Degree or diploma	-0.26	-0.20	-0.20
Trade or technical	-0.37*	-0.32	-0.30
<b>Numeracy</b>			
Standardised test score		-0.20**	-0.16*
<b>Self-assessed academic ability (relative to average or below)</b>			
Very well		0.61**	0.67**
Better than average		0.39*	0.38*
<b>Educational aspirations (relative to no tertiary study)</b>			
VET		0.53**	0.54**
University		-0.01	0.10
<b>Course preference (relative to not first preference)</b>			
First preference			0.55**
Not first tertiary course <sup>a</sup>			0.56
<b>Course level (relative to Diploma or above)</b>			
Certificate I/II			0.54*
Certificate III/IV			0.57***
Certificate (level unknown)			-0.21
<b>In paid work (relative to not in paid work)</b>			
In paid work			-0.67***
Nagelkerke R <sup>2</sup>	0.02	0.05	0.11

Notes: a. Persons whose first non-apprenticeship VET course was not their first episode of tertiary education and training were not asked whether their non-apprenticeship VET course was their first preference. The sign of the logistic coefficient indicates if the factor has a positive influence (that is, whether it increases course persistence) or a negative influence (that is, whether it decreases course persistence).  
\* p<0.05, \*\* p<0.01, \*\*\* p<0.001

#### *Educational factors and aspirations measured while at school*

Numeracy, as measured by test scores in Year 9, was negatively associated with course persistence; that is, lower achievers were more likely than higher achievers to persist in their first non-apprenticeship VET course. While this relationship was not statistically significant at the bivariate level, it did reach statistical significance after controlling for a range of other socio-demographic, educational and labour market variables.

In contrast, self-assessed academic ability while at school was positively associated with course persistence. Non-apprenticeship VET entrants who had reported very high levels of self-assessed academic ability while at school displayed higher levels of course persistence than students with above average and average/lower levels of self-assessed ability (83%, 78% and 73%, respectively).

This relationship was also statistically significant in the multivariate model. This suggests that VET courses may not necessarily demand the same level of mathematics required to be successful in secondary school.

Non-apprenticeship VET entrants who indicated during secondary school that they aspired to undertake VET studies displayed higher rates of course persistence than students who did not have tertiary study aspirations and students who wanted to go to university (82%, 73% and 73%, respectively). Again, this factor exerted a net effect on course persistence after controlling for the other factors in the multivariate model.

Other educational factors measured while at school—literacy levels, school sector, participation in VET in Schools and completion of senior secondary school—did not have a statistically significant association with course progress among non-apprenticeship VET entrants at either the bivariate or multivariate level. These variables were not included in the final multivariate model reported in Table 16.

#### *Factors relating to the tertiary experience*

Non-apprenticeship VET entrants who enrolled in their course of first preference were more likely than students who entered a course other than their first preference to persist in their first course (78% and 65%, respectively). Course preference remained statistically significant in the multivariate model.

Course level was also related to course persistence: students enrolled in diploma or higher-level courses displayed lower levels of course persistence than students enrolled in Certificate I/II/III/IV courses (71% and 81-83%, respectively). This relationship remained statistically significant after controlling for other factors. Levels of course persistence among students in Certificate I/II courses and students in Certificate III/IV courses, however, did not differ substantially (83% and 81%, respectively).

Field of education was associated with course progress at the bivariate level. Examples of fields with relatively high levels of course persistence include engineering and related technologies (82%), food, hospitality and personal services (81%), creative arts (77%) and management and commerce (77%). In contrast, entrants in the field of society and culture displayed a relatively low level of course persistence (71%). Field of education, however, was unrelated to course progress after controlling for other socio-demographic, educational and labour market variables. Similarly, the State/Territory of VET institution was associated with course progress at the bivariate level, but not at the multivariate level.

Other variables that did not have a statistically significant association with course progress at either the bivariate or multivariate level included commencing a non-apprenticeship VET course immediately after leaving school and mode of attendance (full-time or part-time).

#### *Paid work and student finances*

Engagement in paid work was associated with course progress. Non-apprenticeship VET students who were employed at the commencement of their course had a lower rate of course persistence than students who were not in paid work at that time (72% and 81%, respectively). This relationship was also statistically significant in the multivariate model.

In order to assess whether higher hours of paid work were associated with a decreased likelihood of course persistence, it was necessary to conduct a supplementary analysis. Hours of paid work were measured near the end of the calendar year in which the student commenced their first non-apprenticeship VET course, and the dependent variable was whether or not the student

discontinued their course *after* that date.<sup>12</sup> Students who left their course before that date and part-time students were excluded from analysis. The bivariate results are presented in Table 17.

**Table 17 Course progress by hours of paid work for supplementary sample**

Hours of paid work	Completed or still enrolled in first course	Discontinued first course	Total	Total N (weighted)
	%	%	%	
0	90	10	100	182
1-10	91	9	100	91
11-20	81	19	100	103
21-30	90	10	100	32
>30	78	22	100	49

Notes: Analysis restricted to full-time non-apprenticeship VET entrants who had not left their course before the end of the calendar year in which they first commenced. The relationship is statistically significant ( $\chi^2=11.0112$ ,  $p=0.0264$ ).

Consistent with the results relating to the full sample, full-time students not in paid work displayed a high level of course persistence (90%). This rate was similar to that for students working between one and ten hours per week (91%), suggesting that relatively low levels of paid work do not negatively affect course progress. In contrast, longer hours of paid work were generally associated with lower levels of course persistence: 81 per cent of students who worked between 11 and 20 hours per week persisted in their course; and 78 per cent of students who worked more than 30 hours per week persisted in their course. The one exception to this trend was students who worked between 21 and 30 hours per week, who displayed high levels of course persistence (90%). This latter result should be treated with some caution, however, due to the small number of students in this category (weighted number=32). The relationship between hours of paid work and course persistence was also statistically significant in the multivariate model. Compared to students not in paid employment, those working between 11 and 20 hours and those working over 30 hours per week were significantly less likely to persist in their course after the end of the calendar year in which they commenced that course (see Table 18).

**Table 18 Influence of hours of paid work on course completion for supplementary sample (unstandardised logistic regression coefficients)**

	Standardised logistic regression coefficient
Intercept	3.25***
Hours of paid work (relative to 0 hours)	
1-10	0.05
11-20	-1.04*
21-30	-0.28
>30	-1.71**
Nagelkerke R <sup>2</sup>	0.13

Notes: Analysis restricted to full-time non-apprenticeship VET entrants who had not left their course before the end of the calendar year in which they first commenced. The analysis controlled for the effects of parents' education, parents' occupation, numeracy, self-assessed academic ability, educational aspirations, whether the course was the student's first preference, course level and receipt of Youth Allowance.

\*  $p<0.05$ , \*\*  $p<0.01$ , \*\*\*  $p<0.001$

<sup>12</sup> LSAY does not contain information on hours of paid work at the commencement of a course, but does have information on hours of paid work at the time of each annual interview (usually conducted between September and December of each calendar year).

The supplementary sample was also used to test whether the receipt of Youth Allowance was related to course persistence. Both the bivariate and the multivariate results suggested that receiving Youth Allowance was unrelated to course progress after the end of the calendar year in which a student commenced higher education. It was not possible to test the effects of Youth Allowance on course discontinuation occurring before the end of the first calendar year.

### Reasons for discontinuing first course

Another way of examining the factors associated with course progression is to ask those who discontinued their studies why they left their course. These subjective explanations have the potential to provide a greater understanding of the influences on student flows. In particular, students' reasons can help in the assessment of whether course discontinuation represents a positive or a negative outcome.

**Table 19 Reasons deferred or withdrew from first non-apprenticeship VET course (weighted n=296)**

	A consideration (% agreeing with statement)	Main reason (column %)
<b>Interests and course preferences</b>		
The course turned out to be not what you wanted	47	17
You just lost interest, you never really wanted to study	44	17
You never really intended to complete the course	6	1
Sub-total		35
<b>Career, work, and finances</b>		
Wanted to get a job, apprenticeship or traineeship	41	22
Had problems juggling study & work commitments	28	9
Financially you couldn't afford to continue	24	8
It wouldn't have led to a good job or career	17	3
Sub-total		42
<b>Study load and results</b>		
You had been getting poor results	17	1
The study load was too heavy	11	2
Sub-total		3
<b>Other</b>		
Because of health or personal reasons	20	9
Because of problems with access or transport	9	3
Other	n/a	7
Sub-total		19

All non-apprenticeship VET students in the 1995 Year 9 LSAY cohort who were no longer in their first course of study were asked whether they had completed, withdrawn from or deferred their studies, or changed to another course. In response to this question, 93 per cent of those who discontinued their first course indicated that they had withdrawn or deferred, while 7 per cent indicated that they had changed to a second course before completing their first course. These two sub-groups of course discontinuers received different sets of questions aimed at eliciting reasons for leaving their first course. Each group was presented with a set of reasons why people might leave their first course. The sets were designed to cover a range of issues including interests and course preferences, career and work issues, finances, study load, academic results, health and personal factors. Respondents were asked to indicate whether each reason was a factor in their decision to leave their course and to indicate the main reason why they left that course. They were

permitted to specify a reason other than those listed. A summary of the responses provided by those who had withdrawn or deferred from their first course is provided in Table 19. The reasons provided by those who changed to a second course before completing their first course are not reported due to the small number of sample members in this category (n=21).

The three most commonly cited reasons for withdrawal or deferral were ‘the course turned out to be not what you wanted’ (47%), ‘you just lost interest, you never really wanted to study’ (44%), and ‘you wanted to get a job, apprenticeship or traineeship’ (41%). These were also the most common main reasons for withdrawal or deferral (17%, 17% and 22%, respectively). Current work and finances also played a role: 28 per cent indicated that problems juggling study and work commitments were a consideration in their decision to defer/withdraw, while just under one-quarter indicated that financially they could not afford to continue. Academic factors, such as poor results and a high study load, were less prominent considerations, with three per cent indicating that one of these factors was their main reason for withdrawing or deferring.

### **Summary**

This chapter identified a number of characteristics of non-apprenticeship VET entrants who persist in their first course—either through completing the course or by still being enrolled at age 20—and described the reasons given by discontinuers for leaving their course. The findings presented in the first section of this chapter suggest that a number of student background, educational and labour market characteristics are related to course persistence among young people. Among non-apprenticeship VET entrants, groups that displayed relatively low levels of course persistence include those whose parents are in para-professional, clerical or sales occupations, those who displayed higher levels of numeracy while at school, those with low levels of self-assessed academic ability while in school, those whose earlier educational aspirations had not included VET studies, those whose course was not their first preference, those in diploma or higher-level courses, and long hours of paid work.

The reasons that course discontinuers give for leaving their first course can add to our understanding of student flows. The results presented in the second section of this chapter suggest that interests play a major role. For example, just over one-fifth of the discontinuers indicated that their main reason for leaving their course was that they wanted to get a job, apprenticeship or traineeship, while just under one-fifth of discontinuers indicated that their main reason was that the course turned out to be not what they had wanted.

Relatively few of the discontinuers cited academic difficulties as the main reason for leaving their first course. This can be contrasted with the somewhat contradictory findings in the multivariate model relating to a negative effect of numeracy on course persistence and a positive effect of self-assessed academic ability on course persistence. Just under 10 per cent of the discontinuers indicated that problems juggling work and study was the main reason for leaving their first course, consistent with the multivariate finding that relatively long hours of paid work are associated with lower levels of course persistence. Finally, while the multivariate analysis suggested that receipt of Youth Allowance was unrelated to course persistence after the first year of enrolment, eight per cent of discontinuers indicated that their main reason for leaving their first course was that financially they could not afford to continue.

## 6. SUMMARY AND CONCLUSION

This report had two broad purposes: first, to describe the nature of participation in non-apprenticeship VET and the educational, training and labour market pathways of non-apprenticeship VET entrants; and second, to identify factors associated with persistence in or non-completion of non-apprenticeship VET courses. The findings were based upon a sample of young people who had been in Year 9 in 1995, and who commenced their first non-apprenticeship VET course by 2000. Their education, training and labour market activities were tracked until late in 2001, when they were approximately 20 years of age.

### Non-apprenticeship VET pathways

Among the 1995 Year 9 LSAY cohort, 23 per cent of females and 17 per cent of males had commenced a non-apprenticeship VET course by 2000 (approximately age 19). Eighty per cent of the entrants commenced their study within a year of leaving school and, reflecting this, the vast majority of entrants did not have previous experience of tertiary education and training. Three per cent had previously commenced a New Apprenticeship and four per cent had previous experience in the higher education sector. In the year prior to course entry, seven per cent of the entrants had been in full-time employment.

By late in 2001, at approximately age 20, 60 per cent of the non-apprenticeship VET entrants who were part of the LSAY 1995 Year 9 cohort had completed their first course, 14 per cent were still enrolled in their first course, and just under one-quarter had discontinued their first course. Over three-quarters of those who discontinued their first course did so within a year of enrolment. These completion rates are higher than those reported elsewhere because they are based on longitudinal data, not administrative data.

Completing or discontinuing a non-apprenticeship VET course did not necessarily signal the end of post-secondary education and training. Among those who had left their first course through completion or discontinuation, 24 per cent commenced a second non-apprenticeship VET course, 11 per cent commenced a university course, and 9 per cent commenced a New Apprenticeship by age 20.

The main activities of those who had completed or discontinued their first non-apprenticeship VET course were examined at the time of the first interview following the semester in which they left their course. The majority of this group had moved into full-time activities such as employment, education and training. Sixteen per cent reported being engaged in only part-time work or part-time study, and 12 per cent reported that they were not engaged in work or study.

The question of whether participation in non-apprenticeship VET is beneficial was addressed by comparing the post-course activities of persons who had completed or discontinued their first non-apprenticeship VET course with those who had not commenced post-secondary education and training. At age 20, those who had completed a diploma reported the highest level of participation in full-time activities such as employment, education and training (79%), followed by those who had completed a certificate or discontinued their non-apprenticeship VET course (74%). In contrast, those who had not participated in tertiary education and training by age 19 reported the lowest level of participation in full-time activities (68%).

An examination of how young people move into, through and out of non-apprenticeship VET provided some evidence that particular combinations of activities in the post-school years are associated with more positive outcomes by age 20. Of those who had been in full-time work or full-time post-school education and training prior to commencing VET, 86 per cent of VET course completers and 79 per cent of VET course discontinuers reported being in full-time activities in 2001. Those who had been in school in the year prior to commencing VET reported slightly lower levels of participation in full-time activities at age 20 (78% of VET course completers and 74% of

VET course discontinuers). Compared to each of the former groups, those who had been in activities other than school, full-time work or full-time study before commencing VET and those with no experience of tertiary education and training reported the lowest levels of participation in full-time activities in 2001 (52% to 68%).

Differences between the non-apprenticeship VET pathways of school non-completers and school completers, certificate and higher-level courses, and males and females were also reported. Some of the major findings are listed below.

#### *School completion status and VET pathways*

Reflecting the entry requirements of different courses, school non-completers were more likely than school completers to enrol in courses at Certificate I, Certificate II and Certificate III levels, but less likely than school completers to enrol in courses at Certificate IV, Diploma and higher levels. As school non-completers had been out of school for a relatively longer period of time, it is perhaps unsurprising that they were more likely than school completers to have completed their VET course and less likely to be still studying in their first course. They were also slightly less likely than school completers to have discontinued their first course.

A number of differences in outflows were also noted. For example, among those who had completed or discontinued a non-apprenticeship VET course, school non-completers were less likely than school completers to be engaged in full-time education, training or work at the first interview after the semester in which they stopped their first course (59% and 74%, respectively).

#### *Course level and VET pathways*

Compared to entrants to certificate-level courses, entrants to higher-level courses were less likely to have completed their course and were more likely to still be enrolled in their course or to have discontinued it. Among those who completed their first non-apprenticeship VET course, course level was related to subsequent activities. For example, compared to those who had completed a certificate, those who completed a higher-level course were less likely to commence a New Apprenticeship or second non-apprenticeship VET course but more likely to move into the higher education sector by age 20. Those who had completed a higher-level qualification were more likely than certificate graduates to be engaged in full-time education, training or labour market activities at age 20, and less likely to report being in neither education nor work.

#### *Gender and VET pathways*

Among VET entrants, there were marked gender differences in fields of education, with males being more likely than females to enrol in fields such as information technology, engineering and related technologies, and architecture and building, while females were more likely than males to enrol in fields such as management and commerce, society and culture, and food, hospitality and personal services. Males were more likely than females to be still studying in their first course and less likely than females to have completed their first course by age 20. While males and females displayed similar rates of course discontinuation, females tended to stop earlier than males.

There were some gender differences in the relationship between tertiary pathways and main activity at age 20. Among females, those with no experience of tertiary education and training were most likely to be outside work and study (24%), followed by those who had discontinued VET (16%), completed a certificate (11%) or completed a diploma (4%). Among males, the relationship was weaker: those with no tertiary experience and those who had completed a certificate displayed similar levels of being outside work and study (16% and 18%, respectively), followed by those who had completed a diploma (10%) and those who had discontinued a course (7%).

## Factors associated with course progress

For the purpose of this report, successful course progress was defined as completing a course or still being enrolled by age 20. The findings show that a number of student background, educational and labour market characteristics are associated with course progress and that students' interests and preferences are also important.

### *Social background and Youth Allowance*

Socioeconomic status (SES) comprises a number of dimensions including education, occupation and wealth. Two aspects of family SES—parents' education and parents' occupation—were examined in this report. Receipt of Youth Allowance, which is related to family wealth, was also examined. The results suggest that low SES VET entrants are not disadvantaged in terms of course progress. Students with parents in manual occupations were *more* likely to persist in their courses than those with parents in para-professional, clerical or sales occupations, and had similar levels of course persistence as those with parents in professional and managerial occupations. Parents' education and Youth Allowance were unrelated to course progress after controlling for a range of other background, educational and labour market factors. Similarly, no differences in course progress were noted among the other socio-demographic groups examined in this report, as measured by gender, language background and home location. This is consistent with recent findings relating to New Apprentices of a similar age, where background and educational factors explained very little variance in course progress (Ainley & Corrigan, 2005).

### *Numeracy*

Numeracy—measured at school in Year 9—was negatively associated with course persistence. It may be the case that those with higher levels of numeracy have more available options, and thus are more likely to discontinue their first non-apprenticeship VET course.

### *Course level*

Course level was associated with course progress. Entrants to certificate-level courses were more likely to persist than entrants to relatively longer higher-level courses. This finding is consistent with previous research (Grant, 2002; Lamb et al, 1998; Shah & Burke, 2003).

### *Paid work*

The competing demands of paid work and study had a negative impact on course progress. Young people in paid work were less likely than those not in paid work to persist in their first non-apprenticeship VET course, other things being equal. The intensity of paid work was also a factor. Students working relatively few hours per week were as likely to persist as students who were not in paid work. In contrast, students who worked between 11 and 20 hours per week and students who worked more than 30 hours per week were less likely than students not in paid work to persist in their course. This is consistent with the findings relating to the reasons discontinuers give for leaving their course: nine per cent of discontinuers indicated that their main reason for discontinuing was problems juggling study and work commitments. This finding is also consistent with recent research on attrition from higher education (McMillan, 2005).

### *Attitudinal factors*

Finally, attitudinal factors were also important. The multivariate results demonstrated that higher self-perceptions of academic ability were associated with higher levels of course persistence, as were previous aspirations to undertake VET studies and getting into the course of first preference. The reasons given by discontinuers for leaving their first course also emphasise the importance of preferences and interests: wanting to get a job, apprenticeship or traineeship; the course turning out to be not what the student wanted; and losing interest were common reasons for withdrawal or

deferral. Attitudinal factors were also significant in a recent study of attrition from higher education (McMillan, 2005).

### **Implications**

The high proportion of course discontinuers indicating that their first course turned out to be not what they wanted, or that they wanted to get a job, apprenticeship or traineeship suggests a need for students to have better access to course and career guidance prior to entry to tertiary study. As noted in Chapter 1, a range of other VET studies have also emphasised the potential benefits of good careers advice (Morgan & Ambaye, 2003; Walstab et al, 2001).

The extent to which student flows differ between various socio-demographic groups has important equity implications. The current report suggests that among non-apprenticeship VET entrants, low SES students are not disadvantaged in relation to course progress, and that gender, language background, and region are unrelated to course persistence. Any new policy initiatives targeting these equity groups should focus on entry to tertiary education or on branching points earlier in young people's educational pathways.

Is participation in non-apprenticeship VET beneficial? There is some evidence that VET participation—relative to not undertaking tertiary education and training—is beneficial in terms of being engaged on a full-time basis in education, training and labour market activities at age 20. It will be necessary, however, to examine the pathways of young people over a longer period of time in order to provide a more accurate assessment of the benefits or otherwise of non-apprenticeship VET participation. In particular, it will be of interest to compare the labour market outcomes of non-apprenticeship VET entrants with those of young people who had entered New Apprenticeships and university, as well as those of young people with no experience of tertiary education and training.

## REFERENCES

- Ainley, J. & Corrigan, M. (2005). *Participation in and progress through New Apprenticeships*. LSAY Research Report No. 44. Melbourne: ACER.
- Australian Bureau of Statistics (2001). *Australian Standard Classification of Education (ASCED) 2001*. Catalogue no. 1272.0. Canberra: ABS.
- Australian National Training Authority (2001). *Completion, non-completion and re-orientation*. Brisbane: ANTA.
- Australian National Training Authority (2002). *Annual national report on the Australian vocational education and training system 2001*, Volume 3. Brisbane: ANTA.
- Balatti, J., Gargano, L., Goldman, M., Wood, G. & Woodlock, J. (2004). *Improving Indigenous completion rates in mainstream TAFE: An action research approach*. Adelaide: NCVER.
- Ball, K. & Lamb, S. (2001). *Participation and achievement in VET of non-completers of school*. LSAY Research Report No. 20. Melbourne: ACER.
- Cleary, M. and Nicholls, R. (1998). *Understanding and improving module completion rates*. Melbourne: Office of Training and Further Education, Victoria.
- Department of Education, Training and Youth Affairs (2001). *Higher education students: Time series tables 2000*. Canberra: DETYA.
- Dawe, S. (2004). *Moving on from enabling courses: Why do some students remain in enabling courses?* Adelaide: NCVER.
- Dumbrell, T., de Montfort, R. & Finnegan, W. (2001). *Outcomes for vocational education and training diploma and associate diploma students*. Adelaide: NCVER.
- Foyster, J., Hon, K.F. & Shah, C. (2000). *Student flows through Australian TAFE courses*. Adelaide: NCVER.
- Fullarton, S. (2001). *VET in schools: Participation and pathways*, LSAY Research Report No. 21. Melbourne: ACER.
- Grant, P. (2002). *Staying on course. Factors which impact on students completing their courses*. Adelaide: NCVER.
- Lamb, S., Long, M. & Malley, J. (1998). *Access and equity in vocational education and training: Results from longitudinal surveys of Australian youth*. ACER Research Monograph No. 55. Melbourne: ACER.
- Long, M., Carpenter, P. & Hayden, M. (1999). *Participation in education and training 1980-1994*. LSAY Research Report No. 13. Melbourne: ACER.
- Long, M., McKenzie, P. & Sturman, A. (1996). *Labour market and income consequences of participation in TAFE*. ACER Research Monograph No. 49. Melbourne: ACER.
- Marks, G.N. & Fleming, N. (1998a). *Factors influencing youth unemployment in Australia: 1980-1994*. LSAY Research Report No. 7. Melbourne: ACER.
- Marks, G.N. & Fleming, N. (1998b). *Youth earnings in Australia 1980-1994: A comparison of three youth cohorts*. LSAY Research Report No. 8. Melbourne: ACER.
- Marks, G.N. & Long, M. (2000). *Weighting the 1995 Year 9 LSAY cohort sample for differential response rates and sample attrition*. LSAY Technical Report No. 15. Melbourne: ACER.
- McInnis, C., Hartley, R., Polesel, J. & Teese, R. (2000). *Non-completion in vocational education and training and higher education*. Canberra: DETYA.
- McMillan, J. (2005). *Course change and attrition from higher education*. LSAY Research Report No 39. Melbourne: ACER.
- McMillan, J & Marks, G.N. (2003). *School leavers in Australia: Profiles and pathways*. LSAY Research Report No. 31. Melbourne: ACER.
- Misko, J. (2000). *The effects of different modes of delivery: Student outcomes and evaluations*. Adelaide: NCVER.
- Morgan, P. & Ambaye, H. (2003). *Deciding on a better future: Improving student attrition through better course selection*. Perth: Department of Education and Training.
- National Centre for Vocational Education Research (2002). *Australian vocational education and training statistics 2001: TAFE and university graduates 15-24 years - At a glance*. Adelaide: NCVER.

- National Centre for Vocational Education Research (2002). *Vocational education and training in Australia 1991 to 2000*. Adelaide: NCVER.
- National Centre for Vocational Education Research (2005a). *Australian vocational education and training statistics: Student outcomes 2004*. Adelaide: NCVER.
- National Centre for Vocational Education Research (2005b). *Australian vocational education and training statistics: Students and courses 2004*. Adelaide: NCVER. (Online document available at <http://www.ncver.edu.au/publications/1602.html>, accessed 18 July 2005).
- Phan, O. & Ball, K. (2001). *Outcomes from enabling courses*. Adelaide: NCVER.
- Rothman, S. (forthcoming). *Estimating attrition bias in the Year 9 cohorts of the Longitudinal Surveys of Australian Youth*. LSAY Technical Report. Melbourne: ACER.
- Ryan, C. (2000). *Where to next? Graduate outcomes from the Australian higher education and training sectors*. Adelaide: NCVER.
- Ryan, C. (2002). *Longer term outcomes for individuals completing vocational education and training qualifications*. Adelaide: NCVER.
- Shah, C., & Burke, G. (2003). *Completion and partial completion of courses in TAFE, Australia*. Working Paper No. 51. Melbourne: Monash University–ACER Centre for the Economics of Education and Training.
- Uren, J. (2001). *Improving completion rates for TAFE students*. Paper presented at the 4th National Conference of the Australian Vocational Education and Training Research Association, Adelaide.
- Walstab, A., Golding, B., Teese, R., Charlton, M. & Polesel, J. (2001). *Attrition and wastage in tertiary education*. Canberra: University of Canberra.

## APPENDIX 1: THE 1995 YEAR 9 LSAY COHORT

Data for this report are based upon a cohort of students who were in Year 9 in 1995 and who form part of the Longitudinal Surveys of Australian Youth (LSAY) program. The sampling design for LSAY's 1995 Year 9 cohort was a two-stage stratified random sample, with schools selected with a probability proportional to size in each State and Territory, and classes of Year 9 students randomly selected within each participating school. All students in the selected classes were invited to participate in the study. The initial sample included 13 613 students from approximately 300 government, Catholic and independent schools (see Long, 1996 for details).

The students were first surveyed in their school in 1995, where they completed a questionnaire about themselves and their families, and undertook reading comprehension and numeracy tests. Further data on education, training and labour market activities have been collected from the sample members on an annual basis: by mail questionnaire in wave 2, and by computer-assisted telephone interviews in subsequent waves.

Extensive retrospective data on post-secondary education and training pathways were also collected as part of the 2001 interviews. Retrospective questions were designed to pick up instances of participation in tertiary education missed in the earlier annual surveys, and to collect more detailed information on courses and movement between courses throughout the entire period since leaving school. While it is acknowledged that retrospective data are subject to recall bias, all information relating to non-apprenticeship VET participation in this report is derived from the detailed retrospective data collected in the 2001 interviews. This is consistent with the approach adopted in other recent LSAY reports on New Apprenticeships (Ainley & Corrigan, 2005) and higher education (McMillan, 2005). A discussion of the accuracy of the 2001 retrospective data on non-apprenticeship VET participation is provided in Appendix 2.

At the time of the 2001 data collection, the modal age of cohort members was 20. For those who completed Year 12 (approximately 80% of the 1995 Year 9 LSAY cohort), data are available on their post-secondary pathways, which span a three-year period from 1999 to late in 2001. For those who did not remain at school until the end of Year 12 (approximately 20% of the 1995 Year 9 LSAY cohort), data are also available on post-school pathways up to late in 2001 but this covers a longer period of time, ranging from three to six years, depending upon when the student left school.

At the time of the 2001 data collection, 6876 respondents remained in the active sample. All results presented in this report have been weighted to correct for the original sample design and subsequent survey attrition. A technical paper by Marks and Long (2000) details the weighting procedure and another by Rothman (forthcoming) examines the effect of attrition bias. Where the sample size permitted, analyses were reported separately for school non-completers and completers, for Certificate and Diploma/Associate Degree courses, and for males and females. Results pertaining to early school leavers and certificate-level courses should be treated with some caution as they may be subject to greater error (see Appendix 2 for further details).

## APPENDIX 2: ACCURACY OF RETROSPECTIVE DATA

### Two methods of collecting data on post-secondary education and training from the 1995 Year 9 LSAY cohort

#### *1997–2000 annual interviews*

Since 1997, data on participation in post-secondary education and training have been collected from the 1995 Year 9 LSAY cohort on an annual basis. In each year up to 2000, respondents were asked whether they had completed a qualification since their last interview (or since leaving school, whichever occurred later), and to describe that qualification. Respondents were also asked whether they were engaged in education or training at the time of the interview.

In most years, respondents were *not* asked to describe courses that were commenced but then discontinued between two consecutive interviews (or between leaving school and the subsequent interview). As the annual interviews were conducted late in each calendar year, the majority of courses that were commenced and discontinued during the same calendar year were likely to have been missed in the annual data collections. This poses a significant problem for analyses of the tertiary education and training pathways of young people. In order to facilitate such analyses, retrospective data on *all* tertiary courses commenced since leaving school were collected from sample members in late 2001.

#### *2001 retrospective data collection*

As part of the 2001 annual interview, respondents were asked to describe up to three courses that they had commenced since leaving school, and to then provide details on current study and training (if not already described). This method of data collection was designed to be more inclusive than the questions used in the previous annual interviews. Less than 30 respondents described four courses, so only allowing for the description of this number of courses was unlikely to have resulted in a significant underestimate of participation in post-secondary education and training by sample members.

Compared to the previous annual questionnaires, however, the 2001 retrospective questions were subject to greater respondent error due to a relatively longer recall period (of up to six years in the case of very early school leavers). Possible sources of respondent error include not recalling courses undertaken (especially courses of short duration, courses that were discontinued after a very short period of time, and courses that were stopped several years earlier) and a greater tendency to provide inaccurate details about courses undertaken several years ago.

### **Comparison of results from the two methods of data collection**

As discussed above, respondents were asked to provide details about a wider range of tertiary courses (including discontinued courses) in the 2001 retrospective data collection but conversely, respondents may have been better able to recall participation (in completed and current courses) in the earlier annual interviews. Given these two countervailing tendencies, it is perhaps unsurprising that the two methods of data collection yielded similar rates of overall participation in non-apprenticeship VET.<sup>13</sup> Just under 17 per cent of respondents indicated that they had participated in a non-apprenticeship VET course in the 1997-2000 annual interviews, while 18 per cent of respondents indicated that they had commenced a course (by 2000) in the 2001 retrospective data (Table 20).

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<sup>13</sup> In this appendix, the measure of participation derived from the 2001 retrospective data is restricted to non-apprenticeship VET courses commenced by 2000, so as to be comparable with the reference period covered by the 1997-2000 annual interviews. All results are based upon respondents who remained in the active sample in 2001.

**Table 20 Level of participation in non-apprenticeship VET by late in 2000, annual and retrospective data (unweighted)**

Participated in non-apprenticeship VET	Annual data		Retrospective data	
	N	%	N	%
Yes	1137	17	1232	18
No	5739	83	5638	82
Total	6876	100	6870	100

Note: Analysis restricted to persons who remained in the active sample in 2001.

A comparison of how individuals were classified by the two methods also reveals a moderately high level of agreement. Just over 75 per cent of respondents were classified as non-participants in both methods and 10 per cent of respondents were classified as participants in both methods. However, a number of respondents did receive different classifications under the two methods of data collection (Table 21).

**Table 21 Participation in non-apprenticeship VET by late in 2000: Comparison of how individuals were classified in the annual and retrospective data (unweighted)**

	N	%
<b>Agreement between methods</b>		
Non-participant	5205	76
Participant	701	10
<b>Disagreement between methods</b>		
Only retrospective data indicates participation	531	8
Only annual data indicates participation	433	6
Total	6870	100

Note: Analysis restricted to persons who remained in the active sample in 2001.

In some cases, these discrepancies were desirable. For example, the retrospective data collection appears to have achieved its aim of picking up instances of participation missed in the earlier annual data collections. Eight per cent of respondents did not describe a non-apprenticeship VET course in the 1997-2000 annual data collections but were classified as having participated in non-apprenticeship VET (by 2000) in the 2001 retrospective data.

Other discrepancies potentially were more problematic. Six per cent of respondents were classified as non-apprenticeship VET participants in the earlier annual data but not in the retrospective data. As this report is based upon the retrospective data, recall (and other) errors occurring in the retrospective data were of particular concern and required further investigation.

Table 22 shows how frequently non-apprenticeship VET participation (as reported in the 1997-2000 annual data) was recalled in the 2001 retrospective data. Courses commenced in earlier years were less likely to be recalled than courses commenced in later years. Similarly, school non-completers (many of whom would have commenced their courses before the school completers had even left school) were less likely than the school completers to recall courses previously described in the annual data collections. Certificate-level courses were less likely than diploma-level courses to be recalled.

**Table 22 Amount of non-apprenticeship VET participation (as identified in the 1997-2000 annual data) that was recalled in the 2001 retrospective data collection, by selected characteristics (unweighted)**

	Respondents who were classified as VET participants in the annual data		
	<i>N</i>	Classified as VET participants in the retrospective data	<i>Not</i> classified as VET participants in the retrospective data
		%	%
<b>All<sup>a</sup></b>	<i>1134</i>	62	38
<b>Year commenced VET</b>			
1996	<i>8</i>	38	63
1997	<i>133</i>	33	67
1998	<i>60</i>	50	50
1999	<i>700</i>	69	31
2000	<i>226</i>	62	38
<b>School completion status</b>			
School non-completer	<i>272</i>	39	61
School completer	<i>862</i>	69	31
<b>Course level</b>			
Certificate	<i>719</i>	54	46
Diploma	<i>415</i>	76	24

Note: a. The sample analysed for this table comprised persons who were classified as non-apprenticeship VET participants in the 1997–2000 annual data collections.

It cannot be assumed, however, that all of the 433 instances of respondents being classified as non-apprenticeship VET participants in the annual data but not in the retrospective data arose from respondent recall error in 2001. The 1997-2000 annual data for this subgroup also contained errors. For example, respondents who may have been incorrectly identified as non-apprenticeship VET participants in estimates based upon the annual data include some of those who commenced a VET course while still at school, were apprentices or trainees, or were enrolled only in a single module. Misclassification errors such as these could account for up to 40 per cent of the cases where respondents were classified as non-apprenticeship VET participants in the annual data but not in the retrospective data, although the actual incidence of these errors cannot be ascertained (see Table 23 for details).

### Summary and approach adopted in this report

This appendix has described the two methods used to collect data on post-secondary education and training from the 1995 Year 9 LSAY cohort. Similar overall non-apprenticeship VET participation rates are yielded by both methods and more importantly, the majority of individuals receive the same classification in both methods. A number of the discrepancies in the classification of individuals reflect improvements in data quality resulting from the 2001 retrospective questions. For example, the retrospective data picked up cases of participation missed in the earlier annual data, and a number of courses had been incorrectly classified as non-apprenticeship VET in the annual data. Other discrepancies are of greater concern. In particular, lower-level courses and courses commenced in the earlier years (or by school non-completers) were more likely to have been missed in the retrospective data collection.

The measure of non-apprenticeship VET participation used in the main body of this report is based upon the 2001 retrospective data. Persons who had (correctly) indicated non-apprenticeship VET participation in the 1997-2000 annual interviews but not in the 2001 retrospective interview could not be included in the analyses as the annual data did not include many of the variables included in

the 2001 retrospective data, and where similar variables were included, often the response options varied between the data collections.

In order to partially take into account recall error in the 2001 data, the following strategies were adopted in the report:

- ❑ Where the sample size permitted, analyses were reported separately for school non-completers and completers, and for certificate and diploma/associate degree courses. Results pertaining to early school leavers and certificate-level courses should be treated with some caution as they may be subject to greater error.
- ❑ Some of the analyses reported in Chapter 3 required a comparison group – persons who had *not* participated in education and training since leaving school. Only respondents who did not indicate tertiary participation in any of the 1997-2000 annual interviews nor in the 2001 retrospective data were included in the comparison group. This was to ensure that tertiary participants were not included in the comparison group on the basis of an incorrect ‘non-participation’ response in the 2001 retrospective data.

**Table 23 Respondents who were classified as non-apprenticeship VET participants in the 1997-2000 annual data but not in the 2001 retrospective data: Examples of possible misclassification errors in the annual data**

Example	Explanation and number of cases affected
Commenced a VET course while still at school	This includes up to 30 cases where, in the 1997-2000 annual data, the VET commencement date was missing or was prior to the school leaving date. Within this group, respondents who were actually participating in VET in Schools cannot be distinguished from those who provided incorrect dates.
Apprentices and trainees	Comparisons of the annual and retrospective data on course commencement and withdrawal/completion dates, fields of study, course levels and institutions revealed that sometimes the same course was described differently in the different data collections. At least 58 apprentices and trainees were incorrectly classified as non-apprenticeship VET participants in the 1997-2000 data.
Enrolled only in a single module	The 2001 retrospective data collection was designed to identify courses rather than modules. Persons who indicated in the 1997-1999 annual data that they had participated in a non-apprenticeship VET course for only a short duration may have in fact been working towards a single module rather than a full qualification. For example, in the annual data, 40 respondents were in courses for two months or less.
Other misclassification errors	A range of other possible misclassification errors were identified in 45 cases.
Total	Up to 173 cases (or 40% of respondents who were classified as non-apprenticeship VET participants in the annual data but not in the retrospective data) may have been misclassified in estimates based upon the annual data.

### APPENDIX 3: MEASURES

**Course completion:** See description of course progress.

**Course discontinuation:** See description of course progress.

**Course level:** The level of the first non-apprenticeship VET course was measured as follows: Certificate I, Certificate II, Certificate III, Certificate IV, Certificate (level unknown), Diploma, and Advanced Diploma/Associate Degree. For the purposes of some analyses, these categories were collapsed into four categories (Certificate I/II, Certificate III/IV, Certificate (level unknown), Diploma or higher); or to form a dichotomous variable (certificate-level course, higher-level course).

**Course persistence:** See description of course progress.

**Course progress:** Retrospective data on all tertiary study undertaken were collected in late 2001 and used to identify the progress of students who first commenced a non-apprenticeship VET course between leaving school and 2000. Three categories of progress were identified: completed first non-apprenticeship VET course by late in 2001; still enrolled in first non-apprenticeship VET course by late in 2001; and discontinued first non-apprenticeship VET course by late in 2001.

For the purposes of some analyses, this measure was collapsed to form variable comprising two categories: persisted in first non-apprenticeship VET course (persons who had completed or were still enrolled in their first course by late in 2001); and discontinued first non-apprenticeship VET course by late in 2001.

**Course was first preference:** In 2001, all students who had commenced VET/university study since leaving secondary school were asked whether their first tertiary course was their first preference when they first applied to study. This information was used to create a categorical variable: first non-apprenticeship VET course was first preference; first non-apprenticeship VET course was *not* first preference; first non-apprenticeship VET course was not the first tertiary course commenced.

**Deferred entry:** Information on the date left school and the date first commenced non-apprenticeship VET were used to create a dichotomous variable measuring whether or not a student commenced their VET course in the semester immediately after leaving school.

**Educational aspirations (student):** In 1995, students were asked whether they planned to do any further study at any time after leaving school, and to indicate the type of course they planned to do. This information was used to distinguish students who planned to do a VET course from other students. Where data on educational aspirations in 1995 were missing, similar data collected in 1997 or 1998 were used.

**Field of education:** Information provided in the 2001 telephone interview on all VET and higher education courses commenced since leaving school was classified according to the Australian Standard Classification of Education's broad fields of education (ABS, 2001). The classification comprises 12 broad fields: natural and physical sciences; information technology; engineering and related technologies; architecture and building; agriculture, environmental and related studies; health; education; management and commerce; society and culture; creative arts; food, hospitality and personal services; and mixed field programs. These broad fields and an 'other' category comprising uncodeable and missing data were used to describe students' participation in non-apprenticeship VET (Chapter 3), and a collapsed version was used in the analysis of factors related to course persistence (Chapter 4).

**Gender:** In 1995, students were asked to indicate whether they were male or female. In cases where this information was not provided, the students' names were used to infer their gender. This information was confirmed in subsequent telephone interviews.

**Home location:** The Jones classification (Jones, 2002) was used to classify the postcode of a student's home address in 1995 into one of six categories: mainland state capital; major urban region; large provincial city; small provincial city, other provincial (inner/outer); remote.

**Hours of paid work:** Data on current hours of paid work were collected from persons in paid work at the time of each annual interview. This information was used to create a variables measuring hours of paid work near the end of the calendar year of initial enrolment in the initial non-apprenticeship VET course. No data are available for students who left their initial course before the time of interview in the year of course commencement.

**In paid work while doing VET:** Data on the months in the previous year in which respondents were in paid work were collected at the time of each annual interview. This information was used to create a dichotomous variable measuring whether or not a student was in paid work in the month they commenced their initial course.

**Language background:** Language background was based upon data on father's country of birth, which was collected in the 1995 survey. If information on father's country of birth was not available, information on mother's country of birth was used. The measure consists of three levels: Australia, other English-speaking country (including Canada, Ireland, New Zealand, South Africa, the United Kingdom and the United States), and non-English-speaking country.

**Literacy and numeracy:** Literacy and numeracy achievement in Year 9 were measured by the respondents' scores on ACER administered literacy and numeracy tests undertaken in 1995. The tests include many items used in previous national studies of literacy and numeracy (the 1975 and 1980 ASSP studies) and in longitudinal studies of Australian young people (the 1989 *Youth in Transition* study and the *Australian Youth Survey*).

The literacy test comprised 20 items. Students were asked to read some text and then to answer several questions about what they had read. The text comprised short newspaper articles and longer textual passages. The material from newspapers included stories about a tug of war with a camel, a hang gliding flight, an armed robbery, birds trapped by dumped oil, scientific explanations of floating, and the flight of bees. The longer textual passages were on diverse topics such as the birth of a volcano, a railway worker's near fatal experience with an express train, and a dispute between two motorists.

The numeracy test comprised 20 questions. Three broad types of questions were asked. The first type dealt with mathematical operations (mainly computations) with little or no practical component. This included simple operations such as addition and subtraction, and more complex operations such as long division, fractions, squares, cubes, and square roots. The second type of questions required practical applications of numerical skills. Examples are questions about buying things, reading scales, tables and graphs, and calculating interest. The third type of questions required the application of abstract mathematical concepts. These were mainly logical and spatial problems.

Two scores were calculated: one for literacy and one for numeracy. The scores were standardised to a mean of zero and a standard deviation of one. These continuous measures were used in the multivariate analyses reported in Chapter 4. For the presentation of the bivariate analyses in Chapter 4, the continuous measures were split into four categories based upon quartiles of achievement.

**Mode of attendance:** A dichotomous mode of attendance measure (full-time/part-time) was developed for the initial non-apprenticeship VET course commenced. This measure was based upon information provided in the 2001 telephone interview from past students on whether they had

mainly studied for each of their courses on a full-time or part-time basis, and information from current students on their current mode of enrolment.

**Parents' education:** In 1995, respondents were asked to report the highest level of education completed by each of their parents. Information on the parent with the highest qualification forms the basis of a parental education measure comprising five categories: degree/diploma; trade/technical qualification; completed secondary school; some/no secondary school; and don't know/missing. The full version of this measure was used in Chapter 2, while a collapsed version was used in Chapter 4.

**Parents' occupation:** The parental occupational measure comprises six categories: manager; professional; para-professional; clerical/sales/personal service workers; skilled manual; and semi/unskilled manual. The most recent parental occupational data were collected in 1997, when the majority of students were in Year 11; similar data were collected in 1995. The measure was based upon the male parent's occupation in 1997. If this information was missing, the female parent's occupation in 1997 was used. If information on both parents' occupations in 1997 was missing, the information supplied in 1995 was used. The full version of this measure was used in Chapter 2, while a collapsed version was used in Chapter 4.

**School completion status:** School completion status was identified by questions in the 1996, 1997, 1998 and 1999 survey instruments on whether respondents were at school and if they were not, the year level (grade) and month in which they left school. The surveys clearly distinguished between students who changed schools and those who had permanently left school. School non-completers were defined as persons who left school before August of Year 12. The August threshold was chosen so as to be consistent with the Australian Bureau of Statistics' census date for the National Schools Statistics Collection (ABS, 2000:122). School completers were defined as persons who commenced Year 12 and remained in school until at least August of that year.

**School sector:** This measure refers to the school last attended, and comprises three categories – government schools, Catholic non-government schools, and non-Catholic non-government schools – identified respectively as government, Catholic and independent. The measure is based upon information from the sampling frame (school sector in Year 9), updated where applicable from responses to annual interview questions on whether the student had changed schools and the sector of their new school.

**Self-assessed academic ability (Year 9):** Self-assessed academic ability was measured in 1995 by responses to the question; 'Compared with most of the students in your year level at school, how well are you doing in your school subjects overall?' Five response options were provided: very well; better than average; about average; not very well; and very poorly. For the purposes of this report, the last three categories were collapsed to form the category 'average or lower'.

**State/territory of VET institution:** This categorical measure was based upon the state or territory in which the students' VET provider was located.

**VET-in-Schools:** Students' participation in VET subjects while in Years 11 and 12 was measured in the 1997 and 1998 annual interviews. These data were used to create a three-category measure: participated in VET subjects while in senior secondary school; participated in senior secondary school but did not undertake VET subjects; and did not participate in senior secondary school.

**Youth Allowance recipient:** At the time of each annual interview, currently enrolled VET students were asked whether they were presently receiving Youth Allowance or Abstudy payments. This information was used to create a dichotomous variable measuring receipt of benefits near the end of the first calendar year in which the initial course was first commenced. No data are available for students who discontinued their first/most recent course before the time of interview in the year of course commencement.

## APPENDIX 4: MULTIVARIATE TECHNIQUES

### Model specification

Multivariate techniques such as logistic regression allow for the identification of factors that exert an independent or net effect, after controlling for all other factors in the model. The use of multivariate techniques raises the question of model specification; that is, which factors should be included in the analysis. While it could be argued that the models should include all variables that influence course persistence, there are likely to be dozens of factors that are correlated with student flows. Including all these factors in a single analysis would increase the complexity in the interpretation of the results and may cause statistical problems. Rather, model specification should be guided by the most appropriate and parsimonious specification for the particular research question. The analyses in this report are based on a model that includes theoretically and empirically important influences. The key variables identified for inclusion have been selected on the basis of an extensive review of the literature (Chapter 1), earlier analyses of LSAY data (Ball & Lamb, 2001), and their policy relevance.

### Logistic regression

Multivariate logistic regression is used because of the dichotomous nature of the dependent (outcome) variable, course persistence. Unstandardised logistic regression coefficients are presented in Chapter 5. The sign of the logistic coefficient indicates if the factor has a positive influence (that is, whether it increases course persistence) or a negative influence (that is, whether it decreases course persistence). The interpretation of the results differs according to whether the independent variable is dichotomous, categorical or continuous.

For dichotomous independent variables (that is, variables which have only two categories such as male/female), the size of the logistic regression coefficients can be compared. The further away the coefficient is from zero, the stronger its effect.

For categorical independent variables (which comprise three or more categories, such as self-assessed academic ability), the size of the regression coefficients can also be compared but the size is always relative to the reference category. For example, Table 16 shows that the effect on course persistence of having a very high self assessment of academic ability (relative to an average or below average assessment) is greater than the effect of having a better than average self assessment of academic ability (relative to an average or below average assessment). The choice of the reference category does not change the relative differences in the logistic regression coefficients between categories.

For continuous independent variables such as a scale measuring numeracy achievement, the regression coefficients represent the effect on the dependent variable for a one unit change in the independent variable. Therefore, the interpretation of the size of an effect needs to take into account the way in which a variable was measured.

The significance tests for logistic regression are the same as for other parametric statistics; that is, they are tests of the probability of the null hypothesis. Statistically significant estimates are indicated in the tables by asterisks if the probability of the null hypothesis is less than 0.05 (that is, five chances in one hundred) (\*), less than 0.01 (\*\*), or less than 0.001 (\*\*\*).

## APPENDIX 5: SUPPLEMENTARY TABLES

**Table 24 Background characteristics of 1995 Year 9 LSAY cohort members and percentage commencing a non-apprenticeship VET course prior to 2001**

	Total n (weighted)	Commenced non-apprenticeship VET
	N	%
<b>Total cohort</b>	6876	20
<b>State</b>		
New South Wales	2246	23
Victoria	1641	19
ACT	127	17
Queensland	1377	16
South Australia	510	15
Western Australia	714	25
Northern Territory	54	13
Tasmania	206	9
<b>Parents' education (highest level)</b>		
Degree/diploma	1780	16
Trade/technical qualification	1035	20
Completed secondary school	1160	21
Did not complete school	1252	20
Don't know/missing	1650	23
<b>Parents' occupation</b>		
Managerial	1389	20
Professional	1102	15
Para-professional	379	22
Clerical/sales	969	21
Trades	1421	21
Other manual	1480	22
Don't know/missing	136	19
<b>Literacy test scores</b>		
Lowest quartile	1620	24
Second quartile	1631	24
Third quartile	2125	18
Highest quartile	1431	13
<b>Numeracy test scores</b>		
Lowest quartile	1529	27
Second quartile	1954	23
Third quartile	1921	18
Highest quartile	1389	11
<b>Gender</b>		
Female	3517	23
Male	3359	17

**Table 24** (continued)

	Total n (weighted)	Commenced non-apprenticeship VET
	N	%
<b>Home location</b>		
Mainland state capital	3893	22
Major urban region	650	17
Large provincial city	485	13
Small provincial city	286	18
Other provincial	1346	18
Remote	217	18
<b>Parents' country of birth</b>		
Australia	4507	19
Other English-speaking country	703	22
Non-English-speaking country	1429	23
<b>School completion status</b>		
Completed Year 12	5484	21
School non-completer	1390	16
<b>Type of school course</b>		
VET subjects, completed year 12	1286	27
No VET subjects, compl year 12	4198	19
School non-completer	1390	16
<b>School sector</b>		
Government	4647	21
Catholic	1352	21
Independent	878	15

Notes: Non-apprenticeship VET courses were restricted to those commenced *after* leaving secondary school.  
Row percentages may not add exactly to 100 due to rounding.

**Table 25 Broad field of education, by course level**

Field of education	Certificate I/II	Certificate III/IV	Certificate (level unknown)	Diploma or higher	All
	%	%	%	%	%
Information technology	3	11	2	7	7
Engineering & related technologies	8	3	16	8	7
Architecture & building	7	2	10	4	5
Agriculture, environ. & related studies	5	6	3	1	4
Health	1	5	9	2	3
Management & commerce	22	24	20	31	27
Society & culture	8	14	3	18	14
Creative arts	9	8	9	8	8
Food, hospitality & personal services	25	22	17	10	17
Other	2	2	4	4	3
Don't know/missing	10	2	7	6	5
Total	100	100	100	100	100
<i>Total N (weighted)</i>	<i>233</i>	<i>419</i>	<i>105</i>	<i>615</i>	<i>1372</i>

Note: Column percentages may not add exactly to 100 due to rounding.

**Table 26 State/Territory of VET institution, by course level**

	Certificate I/II	Certificate III/IV	Certificate (level unknown)	Diploma or higher	All
State/Territory	%	%	%	%	%
New South Wales	39	43	29	28	34
Victoria	17	18	22	29	23
Queensland	12	13	18	20	16
Western Australia	10	15	11	10	12
South Australia	6	6	8	5	6
ACT, Northern Territory & Tasmania	5	4	3	4	4
Missing	10	1	9	6	5
Total	100	100	100	100	100
<i>Total N (weighted)</i>	<i>233</i>	<i>419</i>	<i>105</i>	<i>615</i>	<i>1372</i>

Note: Column percentages may not add exactly to 100 due to rounding.

**Table 27 Number of years between leaving school and commencing first non-apprenticeship VET course, by course level**

	Certificate I/II	Certificate III/IV	Certificate (level unknown)	Diploma or higher	All
Commenced ...	%	%	%	%	%
In the year left school	11	3	2	1	3
1 <sup>st</sup> year after leaving school	59	75	73	85	76
2 <sup>nd</sup> year after leaving school	25	19	19	13	17
3 <sup>rd</sup> year after leaving school	5	1	5	1	2
4 <sup>th</sup> year after leaving school	<1	3	1	0	1
Total	100	100	100	100	100
<i>Total N (weighted)</i>	<i>231</i>	<i>418</i>	<i>105</i>	<i>613</i>	<i>1368</i>

Note: Column percentages may not add exactly to 100 due to rounding.

**Table 28 Highest level of education and training commenced prior to first non-apprenticeship VET course, by course level**

	Certificate I/II	Certificate III/IV	Certificate (level unknown)	Diploma or higher	All
Highest level of education	%	%	%	%	%
School only	95	92	93	94	93
New Apprenticeship	2	4	3	2	3
Higher education	3	4	4	4	4
Total	100	100	100	100	100
<i>Total N (weighted)</i>	<i>233</i>	<i>419</i>	<i>105</i>	<i>615</i>	<i>1372</i>

Note: Column percentages may not add exactly to 100 due to rounding.

**Table 29 Main activity in the year prior to entry to non-apprenticeship VET, by course level**

	Certificate I/II	Certificate III/IV	Certificate (level unknown)	Diploma or higher	All
Main activity	%	%	%	%	%
Secondary school	64	77	70	85	78
Higher education	2	2	1	3	2
New Apprenticeship	4	3	5	1	2
Full-time employment	10	9	10	4	7
Part-time employment and/or part-time study	8	5	5	3	5
Not working and not studying	13	5	9	4	6
Total	100	100	100	100	100
<i>Total N (weighted)</i>	<i>233</i>	<i>419</i>	<i>103</i>	<i>615</i>	<i>1370</i>

Notes: Main activity was measured at the time of the last annual interview prior to entry to VET.  
 Column percentages may not add exactly to 100 due to rounding.

**Table 30 Student progress, by course level**

	Certificate I/II	Certificate III/IV	Certificate (level unknown)	Diploma or higher	All
Progress	%	%	%	%	%
Completed first course	81	71	55	49	62
Continuing in first course	2	9	18	21	14
Discontinued first course					
- Commenced a second course	3	4	5	8	6
- No further non-apprenticeship VET	14	15	22	22	18
Total	100	100	100	100	100
<i>Total N (weighted)</i>	<i>214</i>	<i>418</i>	<i>100</i>	<i>592</i>	<i>1323</i>

Note: Column percentages may not add exactly to 100 due to rounding.

**Table 31 Number of semesters between commencing and discontinuing course, by course level**

	Certificate I/II	Certificate III/IV	Certificate (level unknown)	Diploma or higher	All
Discontinued ...	%	%	%	%	%
In the semester commenced	25	20	#	20	22
Second semester	62	65	#	52	56
Third semester	5	8	#	11	9
Fourth semester or later	9	7	#	17	13
Total	100	100	100	100	100
<i>Total N (weighted)</i>	<i>35</i>	<i>76</i>	<i>24</i>	<i>172</i>	<i>306</i>

Notes: Analysis restricted to students who discontinued their first non-apprenticeship VET course.  
 Column percentages may not add exactly to 100 due to rounding.  
 # Sample size too small to report results.

**Table 32 Outcome of first non-apprenticeship VET course, by subsequent education and training**

	Subsequent education and training				Total	<i>Total N (weighted)</i>
	None	New Apprent.	Other VET	Higher education		
Outcome of first VET course	%	%	%	%	%	
Discontinued course	55	11	23	11	100	317
Completed Certificate I/II	48	20	27	6	100	173
Completed Certificate III/IV	50	4	35	10	100	298
Completed Certificate (level unknown)	64	13	23	0	100	55
Completed diploma or above	67	4	11	18	100	292
Total	56	9	24	11	100	1136

Notes: Persons still enrolled in their first non-apprenticeship VET course were excluded from analysis.

Row percentages may not add exactly to 100 due to rounding.

**Table 33 Main activity after first non-apprenticeship VET course, by course level and course completion status<sup>a,b</sup>**

	Subsequent activity					Total	<i>Total N (weighted)</i>
	FT study	New Apprent	FT work	PT work/ PT study	No work & no study		
Outcome of first VET course	%	%	%	%	%	%	
Discontinued course	14	7	47	20	12	100	311
Completed Certificate I/II	15	18	34	15	18	100	171
Completed Certificate III/IV	24	5	42	16	13	100	285
Completed Certificate (level unknown)	16	12	45	10	17	100	53
Completed Diploma or above	24	4	51	16	5	100	252
Total	19	8	45	16	12	100	1073

Notes: a. Main activity was measured at the time of the first annual interview after the semester of leaving the first VET course; persons who left their first VET course in Semester 2 of 2001 are excluded from analysis.

b. Persons still enrolled in their first non-apprenticeship VET course and persons who had not been out of VET sufficiently long to participate in the interview were excluded from analysis.

Row percentages may not add exactly to 100 due to rounding.

**Table 34 Main activity of selected groups in 2001 (approximately age 20)<sup>a,b</sup>**

Group	Activity in 2001 (age 20)					Total	<i>Total N (weighted)</i>
	FT study	New Apprent	FT work	PT work/ PT study	No work & no study		
Completed Certificate I/II	12	11	47	13	17	100	173
Completed Certificate III/IV	20	4	53	11	12	100	298
Completed Certificate (level unknown)	13	6	55	10	17	100	53
Completed Diploma or higher	22	3	55	15	6	100	288
Discontinued VET course	11	6	58	14	12	100	317
No tertiary ed./training by 2000	4	4	60	12	20	100	845

Notes: a. Main activity was measured at the time of the 2001 annual interview.

b. Persons still enrolled in first non-apprenticeship VET course were excluded from analysis.

Row percentages may not add exactly to 100 due to rounding.