

# Pre-apprenticeships in three key trades

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The views and opinions expressed in this document are those of the author/project team and do not necessarily reflect the views of the Australian Government, state and territory governments or NCVER

## Publisher's note

Additional information relating to this research is available in *Pre-apprenticeships in three key trades: Support document*. It can be accessed from NCVER's website <<http://www.ncver.edu.au/publications/1781.html>>.

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# Foreword

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This research was undertaken as part of the National Vocational Education and Training Research and Evaluation program, a national research program managed by the National Centre for Vocational Education Research (NCVER) and funded by the Department of Education, Science and Training on behalf of the Australian Government and state and territory governments.

Pre-apprenticeship programs in one form or another have been in existence in Australia since the early twentieth century as a means of increasing the supply of potential apprentices. Their other important function is to act as a filter—to help young people to decide whether a particular trade would be suitable for them. It is hoped that those who participate in these programs and go on to an apprenticeship are more likely to complete it.

The aim of this report is to examine whether pre-apprenticeships do assist in addressing skills shortages by increasing the number and suitability of potential apprentices; the research also examines the effect of pre-apprenticeships on subsequent apprentice retention and completion rates. The electro-technology, automotive and engineering trades—large and important trades in Australia—are used as case studies in this research.

The research finds very clearly that employers are very much in favour of pre-apprenticeships and that those who undertake them like them. However, hard data on the impact of apprenticeship completion rates remain elusive. It would seem that an apprentice tracking survey is required to answer this question.

This report will be of interest to vocational education and training (VET) policy-makers and those who are involved with apprenticeship training, particularly TAFE institutes and group training companies, and industry skills councils.

Tom Karmel  
Managing Director, NCVER



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# Key messages

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This study examines the characteristics of pre-apprenticeships in Australia and how they might contribute to addressing shortages of skills in some of the key trades. Pre-apprenticeships are courses which provide initial training in a particular industry or occupation. If completed successfully, the courses can assist participants in obtaining an apprenticeship. The study found that pre-apprenticeships have been used in Australia and elsewhere for many years and are widely regarded as a valuable strategy for increasing the supply and quality of potential apprentices.

- ✧ Employers are in favour of pre-apprenticeships; they see them as weeding out unsuitable candidates. Hence, pre-apprenticeships are likely to improve retention.
- ✧ Prospective apprentices like them. They see them as a useful way into an apprenticeship and are positive about the experience.
- ✧ Those who undertake pre-apprenticeships are more engaged with the occupation and are more likely to have plans for higher-level training after they complete their apprenticeships.
- ✧ Pre-apprenticeships should not be seen as getting students 'work ready'; they are more about engagement with the trade.

# Executive summary

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Shortages of skilled trade-level workers in Australia are currently widespread. Pre-apprenticeships represent one strategy that has been used in Australia and other countries for many years to augment the supply of potential tradespeople. Pre-apprenticeships are courses which provide initial training in a particular industry or occupation. If completed successfully, the courses can assist participants in obtaining an apprenticeship. The arguments in favour of this approach have been twofold. One, a supply-side argument, is that pre-apprenticeships more effectively prepare young people for specific industries—by exposing them to the expectations of workplaces employing apprentices. Moreover, pre-apprenticeships can often provide additional educational preparation for apprenticeship study. This strategy therefore promotes the position that pre-apprenticeships augment the total supply of applicants suitable for selection as apprentices.

The other is a demand-side argument that pre-apprenticeships can have an effect on the overall demand for apprentices, and thus eventually the number of tradespersons, by increasing employers' confidence in employing apprentices. This argument often assumes, based on studies of employer attitudes, that many applicants for apprenticeships are unsuitable, their having not been adequately prepared for the workplace by their schooling. Pre-apprenticeships therefore, by better matching the attributes of potential apprentices to the needs of employers, can increase the number of apprenticeship positions employers are willing to offer.

This study aims to determine whether pre-apprenticeships increase the potential supply, and retention and completion rates, of tradespersons, focusing specifically on electro-technology, automotive and engineering students. The study has employed a range of approaches, including analysing available national statistical data; reviewing the limited literature on pre-apprenticeships; interviewing key organisations and providers of pre-apprenticeship training; and surveying employers, pre-apprenticeship students and current apprentices. Demand-side issues have also been explored, mainly through consultations with a range of employers.

The research cannot at this stage supply a definitive answer to the question of whether pre-apprenticeships enhance retention and completion rates in apprenticeships, and subsequent transition into related trades. Nevertheless, the study has achieved a number of goals in attempting to address this and related questions, including gaining a clearer picture of students undertaking pre-apprenticeship courses. Because the study design did not incorporate a lengthy time span, it has not been possible to track individuals from a pre-apprenticeship or other sources, through an apprenticeship, and finally into post-apprenticeship destinations.

An early part of the study involved scrutinising national training data to identify courses offered for the period 2000–04 that are likely to meet the definition of pre-apprenticeship courses. When these were identified, data were obtained from the National Centre for Vocational Education Research (NCVER) on the characteristics of students enrolled in these courses. This analysis revealed that about three-quarters of pre-apprenticeship students were males aged under 25, were disproportionately (compared with the general population) from non-capital city areas and were disproportionately Indigenous people. Most were enrolled in courses that were usually longer than 400 hours. About one-third of the students had Year 10 education as their highest level, compared with about 40% with higher levels. Over the 2000–04 period there was an increasing proportion of

students with Year 9 or lower school levels, suggesting that pre-apprenticeship courses were increasingly being used as equity programs for early school leavers. It should be stressed that there is no national identifier for pre-apprenticeship courses, and hence no definitive count of such courses is possible from the database alone. Later analysis indicated that our count of presumed pre-apprenticeship courses is likely to be very conservative, although the characteristics identified are believed to be reasonably representative of pre-apprenticeship students.

A series of 19 interviews with state training agencies, peak bodies and training providers across four states revealed a common understanding of the role of pre-apprenticeship courses as being to prepare students for specific apprenticeships. However, there was inconsistency in the terminology, with the term ‘pre-vocational’ often being used rather than ‘pre-apprenticeship’. There was also no consistency in the granting of credit or time off for apprentices who had completed pre-apprenticeships. There was, however, clear evidence of renewed interest in the use of pre-apprenticeships as a strategy for addressing emerging trade skill shortages, although a constant tension was apparent between those who saw pre-apprenticeships as a skill-formation strategy and those who regarded them as a type of labour market program aimed at weaker and disadvantaged students.

The later stages of the study involved surveying apprentices, their employers and pre-apprentices. Apprentices were surveyed by approaching a sample of employers and requesting that they distribute questionnaires to their apprentices and return them to the researchers. Pre-apprentice students were surveyed via their training provider. Employers of apprentices were interviewed to gain their views on the value of pre-apprenticeships; the providers of training to pre-apprentices were also interviewed.

The employers participating in this survey were generally in favour of pre-apprenticeships, with four of the 12 regarding their use as essential in recruiting apprentices, two regarding them as important, and five, as useful. Most saw the benefit of pre-apprenticeships as weeding out unsuitable candidates for apprenticeships, and three employers said that pre-apprenticeships improved retention and completion rates in apprenticeship. None saw any disadvantages in pre-apprenticeships.

A total of 255 questionnaires were returned from apprentices employed by 14 enterprises, which between them employed about 1600 apprentices nationally. The following are the main findings from these data.

- ✧ 85% of apprentices said they intended to do further study related to their apprenticeship after finishing and those who had done a pre-apprenticeship were significantly more likely to be planning further study than those who had not, suggesting a stronger attachment to the occupation and greater prospects of retention.
- ✧ 98% of apprentices who undertook a pre-apprenticeship agreed or strongly agreed that they had learnt a lot in their course.
- ✧ 93% agreed or strongly agreed that they had enjoyed their pre-apprenticeship.
- ✧ From matching the survey data with NCVER records on contracts of training, those who had done a pre-apprenticeship were younger than those who had not but were more likely to have completed Year 12.

Data gathered through questionnaires from 106 pre-apprenticeship students in South Australia and Victoria found similarly high levels of support for their course, with over 90% agreeing or strongly agreeing that they were learning a lot in their course.

The analysis of data from the survey and case studies of pre-apprenticeship students dispelled one common notion about pre-apprenticeships—that they provided employability skills. Almost all of these students had worked previously, about a quarter in full-time work, and hence they were unlikely to be lacking in basic employability skills. On the other hand, these students were mainly

seeking to enter a different industry sector and their pre-apprenticeship course thus needed to focus on more industry-specific employability requirements. About two-thirds of these students were doing the course either to get into an apprenticeship or because they had missed out on an apprenticeship and saw this option as the next best. About three-quarters of these students also believed that their course was assisting them to achieve their career goals. The career objective of 83% of these students was either to find an apprenticeship or to start an apprenticeship they had already organised. This is a high rate of conversion and a finding supportive of the value of pre-apprenticeships as a pathway into apprenticeships.

In summary, the study provides some evidence that pre-apprenticeship courses facilitate entry into related apprenticeships. Other studies of completion rates in apprenticeships identify having realistic expectations about workplaces and a commitment to a career path as important contributors to retention and completion. This study found that apprentices who had done a pre-apprenticeship were more likely to be planning further study related to their trade than those who had not undertaken such a course. Comments from training providers and from surveyed apprentices support the view that pre-apprenticeship courses develop learning-to-learn skills, which have been identified as critical in retention of apprentices.

# Introduction

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## Research objectives

Very little has been published in the Australian vocational education and training (VET) literature on the topic of pre-apprenticeships. Nevertheless, pre-apprenticeships have been in existence for many years. With growing concern over skills shortages in Australia, this research study has sought to address the role of pre-apprenticeship courses in addressing skill shortages in the electro-technology, automotive and engineering trades, some of the largest trades in Australia. The principal objective of this study is therefore to determine whether the use of pre-apprenticeships increases the size and suitability of the supply of entrants to the traditional apprenticeships, whether retention rates in apprenticeship are influenced by the completion of pre-apprenticeship courses and whether apprenticeship completion rates are enhanced by undertaking a pre-apprenticeship.

The main research questions that are addressed by this study were:

- ✧ What is the current level of pre-apprenticeship provision nationally (state by state and by sector)? As there is no uniform definition of pre-apprenticeships and there is no ready way to determine the actual level of enrolments or courses, the estimates arrived at are preliminary.
- ✧ What are the demographic characteristics of pre-apprentices?
- ✧ In general terms, does the completion of a pre-apprenticeship facilitate entry to apprenticeships?
- ✧ How do training providers view the purpose of pre-apprenticeships?
- ✧ What is the role of work placement in pre-apprenticeships? What use is currently made of work placement to provide authentic on-the-job experience and to meet training package requirements?
- ✧ Does completion of a pre-apprenticeship have an effect upon retention rates within apprenticeships and does completion of a pre-apprenticeship accelerate completion of related apprenticeships?
- ✧ What do apprentices and pre-apprentices think of their pre-apprenticeship courses?

The main limitation of this study is that it is seeking to draw conclusions about pre-apprenticeship programs in general by focusing on three industry sectors, rather than covering the field of pre-apprenticeship programs in all sectors. Its inability to track students over an extended period, such as from completion of a pre-apprenticeship through to completion of a trade and into employment, is another limitation, although this capacity was not part of the methodology.

## Methodology

The methodology for this study was broken into a number of stages. Stage 1 involved an analysis of the limited literature available on pre-apprenticeships in Australia, together with a review of similar programs in a range of foreign countries. This stage also included an initial analysis of some statistical data on pre-apprenticeships, which in essence involved updating a data series from an earlier study of pre-apprenticeships undertaken by one of the authors of this present study (Dumbrell 2003). A reference group (see appendix 1 in the support document which can be accessed from NCVER's website < <http://www.ncver.edu.au/publications/1781.html>>) to

provide expert advice on the study was also established in stage 1. Members of the reference group provided guidance in the selection of training providers and enterprises included in the later stages of the study, as well as advice on the questions used in the interviews.

Stage 2 involved a series of 19 structured face-to-face and telephone interviews with peak bodies, such as state training agencies, representatives of training providers and key industry groups. A list of participants and the interview guide used in this stage are provided at appendix 2 (in the support document). The structured interviews for this stage of the project were conducted in New South Wales, Victoria, Queensland and South Australia. Interviews were either by telephone or face to face with respective state training agencies in those states.

Stage 3 of the study involved ten structured interviews with training providers that deliver pre-apprenticeship courses. Again, a list of participants and the interview guide used are provided at appendix 2 (support document). These interviews were conducted in New South Wales, Queensland and South Australia with public and private training providers. Because some of the same issues were canvassed in these two stages, for purposes of clarity, the findings from both those stages are reported on together.

Stage 4 of the study involved questionnaire surveys of apprentices and structured interviews with their employers. A copy of the questionnaire used is provided in appendix 3 (see Support Document). Enterprises across four states (New South Wales, Victoria, Queensland and South Australia) were surveyed. Other states and territories were excluded in order to contain both travel and communication costs. Some of the employer interviews were completed through face-to-face interviews, while others were undertaken via post and email. The major objective of this stage was to capture differences between those apprentices who had and those who had not undertaken pre-apprenticeship courses. An initial list of 42 enterprises was compiled using a variety of sources, including input from members of the Reference Group, published lists of members of industry bodies and other public sources. Most of these enterprises were contacted initially by telephone and, of the initial 42 enterprises listed, 23 agreed to participate in the study, including distributing the questionnaires to their apprentices and returning the completed questionnaires. These enterprises between them employed approximately 1600 apprentices across Australia. A structured interview was used in interviewing the participating enterprises and several rounds of follow-up phone calls or emails were organised to seek the return of apprentice questionnaires.

Stage 5 involved case studies and surveys of students undertaking pre-apprenticeship courses in New South Wales, Victoria and South Australia. Again, the survey instruments used in this stage are provided at appendix 4 (see support document). Stage 5 consisted of two parts. The questionnaire survey included 106 students in nine pre-apprenticeship courses in South Australia and Victoria in technical and further education (TAFE) colleges and in one private training organisation.

The second part of this stage involved two longitudinal, qualitative studies of students in two pre-apprenticeship courses in a TAFE college in New South Wales and a private provider in Victoria undertaking study in electro-technology and automotive courses.

The study provided a comprehensive overview of major stakeholders' views and experiences with pre-apprenticeships. These data were supplemented by detailed findings from the three industry areas that not only confirmed previous research but uncovered new issues for policy attention.

## Stage 1: Literature review and preliminary data analysis

### Literature review

Apprenticeships in Australia remained concentrated in the traditional trades until the 1980s, at which time there were around 150 000 apprentices. They were mainly undertaken by young males (NCVER 2001); the only trade in which young women were heavily represented was hairdressing. Twenty years ago the first of a series of major changes to Australia's apprenticeship system, the introduction of the Australian Traineeship System, was initiated by the Kirby Inquiry (Kirby 1985). Traineeships are apprentice-like contracts of training, generally at lower levels of qualification and lasting for one or sometimes two years rather than the three or four years of apprenticeships. Overall, numbers in apprenticeships and traineeships grew relatively slowly over the following ten years, responding to broader labour market conditions (for example, see Brooks 2004, p.9), but traineeship numbers began to grow strongly in 1996. In 1998 the umbrella terms, 'New Apprenticeships' and subsequently in 2006 'Australian Apprenticeships', were adopted to cover apprenticeships and traineeships, although common usage still separates the two programs.

Almost all the recent growth in Australian apprenticeships can be attributed to 'non-traditional' industry areas and occupations (that is, traineeship areas), which have risen considerably, so that now trainees account for around twice the number of trade apprentices. The number of traditional apprentices in training has, however, also been rising since the mid-1990s. By December 2005 the total numbers of apprentices and trainees in training reached 389 000, with around 38% (148 400) in the traditional trades and the remainder in traineeships. The percentage of traditional apprentices in training as a proportion of total employed tradespersons is an important measure of the ability of industries to replace their skilled workers. This percentage actually rose between 1996 and 2002 from 8.9% to 9.8%, suggesting some improvement in the capacity of the system to address emerging skills shortages. As part of the 1990s training reforms in Australia, adults were allowed full access to apprenticeships and traineeships, an initiative that has generally not spread to other countries until very recently. For instance, England was only beginning to pilot adult apprenticeships in one industry (construction) in 2005. In the last few years, arguments have been put forward that adult workers should not be subject to the same regulation and funding regimes as young apprentices (for example, Australian Industry Group 2005).

Identifying the precise origins of pre-apprenticeships in Australia has proven elusive, but there is evidence that such programs began in the early twentieth century and that they were common, for example, in the 1930s in New South Wales as part of measures to combat unemployment. They were widely delivered during the 1950s and 1960s (Ray in Smart 2001). Their existence is well documented by the 1970s, and by the end of that decade measures had been taken to expand the number of pre-apprenticeship courses (NCVER 2001). The introduction of traineeships following the recommendations of the Kirby Inquiry of 1984–85 may have diverted interest in pre-apprenticeships towards traineeships as a means of initial engagement of young people in apprenticed trades. There were early expectations that traineeships could readily provide a pathway into apprenticeships, but in fact traineeships became popular in sectors other than the apprenticed trades and did not greatly assist in addressing emerging skill shortages in some skilled trade areas.

Dumbrell (2003) found that, while it was not possible to identify precisely the number of pre-apprenticeships commenced in Australia, the available data seemed to indicate a decline in the usage of this pathway during the 1990s. It appeared that total enrolments in Australia in 1999 were around 27 000 (Dumbrell 2003, p.18) and that they were greatest in Queensland and Victoria, with only small numbers in other states and territories. There was also considerable variation among states and territories in the nature of the provision and in beliefs about the purpose of pre-apprenticeships.

Some other recent developments may have partly addressed the needs that pre-apprenticeships meet. The rapid growth in popularity of VET in Schools programs over the past ten years signals their ability to allow young people to gain industry qualifications and some workplace experience while completing their high school education. By 2002, over 185 000 students were studying VET in Schools programs, representing 44% of senior secondary students (Smith 2004). School students may also undertake part-time apprenticeships or traineeships either as part of their school curriculum or independently (Smith & Wilson 2002). In the December quarter 2005, 5.5% of all new apprenticeship commencements were school-based (NCVER 2006). The use of school-based Australian apprenticeships still varies sharply between the states and territories, with less than 0.5% of commencements being school-based in Tasmania compared with almost 11% in Queensland. Australian technical colleges introduced in 2006 will increase the number of school-based apprenticeships.

### *Pre-apprenticeships in other countries*

Many countries share similar concerns to Australia about encouraging young people into traditional trade occupations. Programs called 'pre-apprenticeships' exist in a number of other countries; however, they generally do not appear to be exactly equivalent to the Australian model. In Canada, 'pre-apprenticeship courses' are available in a number of provinces. In Scotland a pre-apprenticeship program (Dundee Construction Pre-Apprentice Training Initiative) was established in 2003 and aimed at the 13 to 15 years age group, described as 'those who have not integrated comfortably with school and may be likely to leave with few/no qualifications'. In England 'youth apprenticeships' have been in operation since 2004, but these programs, while sharing similar aims, are more like VET in Schools than Australian pre-apprenticeships, although the VET qualification is always undertaken away from school premises, and they are aimed at 14 to 16-year-olds rather than at young people of school-leaving age (Department for Education and Skills 2004).

In the United States of America (see websites in the references section) there is evidence of pre-apprenticeship courses for construction trade workers and electrical lineworkers. Some of these courses appear to be equity programs aimed at minority groups and females, although other courses appear to be integrated into state-based apprenticeship programs and are offered through community colleges.

In Germany concern has been expressed (Deissinger pers. comm. 2005) over a decline in apprenticeship places in recent years. Between 2002 and 2003 new apprenticeship contracts in Germany fell by 2.6%, prompting greater numbers of young people to seek entry to skilled occupations through means other than the traditional apprenticeship route, such as via full-time courses at post-compulsory vocational schools which provide the off-the-job training in the dual system. In April 2005 the new German *Vocational Training Act (Berufsbildungsgesetz)* came into operation, which aims to improve the transferability of these VET qualifications gained in full-time vocational schools.

### *Attrition and retention in apprenticeship*

If one major purpose of pre-apprenticeships is to improve the chances of retention when the pre-apprentice gains an apprenticeship on completion of the course, then it is of importance to examine the literature on attrition and retention. Completion rates in apprenticeships have declined,

although they are higher than for traineeships; for apprentices commencing in 1999 completion rates were around 60% (Ball & John 2005, p.5). Ball and John's study detected some evidence that retention rates may be improving with apprentices commencing more recently.

While there have been many studies of this issue the story has remained quite constant. A 1990 TAFE NSW report (College Curriculum Services Unit 1990, p.6) found, in a survey of separated apprentices, the following reasons for leaving their apprenticeships:

- ✧ 17% lost their jobs
- ✧ 17% had poor relations with their employer/supervisors
- ✧ 14% were disillusioned with the trade
- ✧ 13% were disappointed with the low wages
- ✧ 7% gave personal reasons
- ✧ 7% found the job boring
- ✧ 7% were generally dissatisfied with working conditions.

These findings have essentially been replicated in other studies. For example, Cully and Curtain (2001, p.22) found that apprentices left their contracts of training more often for job-related than training-related reasons, and cited the top five reasons as 'no longer wanted to work in that job, poor relationship, dismissed, made redundant, and transfer to another apprenticeship'. Callan's (2000) study in Queensland and a German study (BiBB 2003 cited in West 2005) found very similar results.

As Simons et al. (2000) point out, reasons for completion or non-completion reside not only in the context (the job and training), as is evidenced by studies asking apprentices why they left, but also within the individual (motivation, personal characteristics and so on). Of relevance to the current study is the analysis in the 1990 New South Wales study (College Curriculum Services Unit) of the characteristics of apprentices who completed and did not complete. These can be summarised as follows:

<b>Apprentices who completed were more likely to have:</b>	<b>Apprentices who did not complete were more likely to have:</b>
✧ concerns about using apprenticeship to build career	✧ had more haphazard entry patterns
✧ arranged apprenticeship before leaving school	✧ had a gap after leaving school before entering apprenticeship
✧ actively sought an apprenticeship through approaching employers	✧ failed to get an apprenticeship in their preferred trade
✧ left school in Year 10 rather than earlier or later	✧ had another preferred career choice before apprenticeship
✧ showed more initial interest in the trade	✧ enjoyed their trade training less.
✧ enjoyed their trade training more.	

Source: Adapted from College Curriculum Services Unit (1990, p.6)

While some features of this analysis are unlikely to hold true in the mid-2000s (such as the more favourable results for Year 10 school leavers or the emphasis on moving straight from school to apprenticeship), there are some features that might help to guide selection of pre-apprentices and course content.

Callan (2000) found that females, Indigenous apprentices and those with literacy or numeracy difficulties were less likely to complete apprenticeships than others. The implication of this is that pre-apprenticeship programs might assist those with these characteristics to prepare better for an apprenticeship. Ball and John (2005) found also that younger apprentices were less likely to complete.

All studies have found a marked difference between trades, with the trades in the current study—electro-technology, engineering and automotive—having higher-than-average completion rates.

Some of the studies made recommendations for improved retention. Those that have particular relevance for the current study have been extracted. Callan (2000) suggested that more attention was needed to match apprentices to employers. Cully and Curtain (2001) supported this and also proposed better monitoring of apprentices' workplace experiences. Simons et al. (2000, pp.70–1) suggested the following interventions:

- ✧ career counselling
- ✧ better selection process
- ✧ clear articulation of expectations of apprenticeship
- ✧ need for apprentices to have 'learning to learn' skills and to know how to integrate learning from different environments
- ✧ curriculum in apprenticeships linking to previous programs such as pre-apprenticeship.

Sadler and Smith (2004), in a British study, identified the following features of relevance:

- ✧ correct program choice
- ✧ provision of realistic expectations of the workplace
- ✧ identification of at-risk learners
- ✧ access to a mentor
- ✧ celebration of learners' success early in programs.

West (2005), in a British study of completion in apprenticeships, points out the importance of considering other 'rivals'—other employment (which is more of a rival in times of full employment) and full-time education. In a comparison of other countries with Britain, he identified strong labour market regulation, lengthy apprentice terms, higher perceived status of the contract of training, and the presence of trial periods as matters which might improve retention.

Improving retention rates in apprenticeships is one of many strategies likely to be needed in coming years to meet demand for skilled tradespeople. Indications from an analysis of projected population growth undertaken by the Monash University Centre of Policy Studies for the Productivity Commission (Giesecke & Meagher 2005) are that it will become more difficult over the next 20 years to satisfy the demand for apprentices from the traditional source of those in the 15 to 19 years age group. Over the last ten years the average annual growth rate of the population aged 15–19 has been 0.83% per year compared with the overall population growth rate over that period of 1.44% per year (Giesecke & Meagher 2005, p.11) Over that period the growth rate for the population aged 20–24 was actually negative, -0.47% per year. This MONASH Model shows that, over the next 20 years, the 15 to 19 years age group population will grow at an annual average of only 0.19% and by 0.22% for the 20 to 24 years age group, compared with the average annual total population growth of 1.19% projected over that period. Labour force and employment growth rates are projected to show similar trends, meaning that the traditional recruitment approach of filling apprenticeships via young people is unlikely to be sufficient to meet the demand for trade skills, without increased attention to programs that feed young people into apprenticeships.

## Characteristics of recent Australian pre-apprenticeship courses and students

One of the challenges of this study has been the lack of a national identifier of pre-apprenticeship courses in the national database. The researchers have found that pre-apprenticeship-type courses have various titles, including 'pre-apprenticeships', 'pre-vocational' and 'pre-employment', yet share the characteristic of preparing students for entry to a traditional apprenticeship. As a first stage in

this study the national database of courses was scrutinised to identify courses which had labels identifying them as likely to be pre-apprenticeship courses. Initially, the National Centre for Vocational Education Research (NCVER) provided the researchers with a comprehensive listing of all courses recorded on the VET national database for the period 2000 to 2004 by name and course identifier. From this listing a filtered list was derived which included all courses above certificate I level referred to as pre-apprenticeships, together with all courses that appeared to be related to traditional trade areas and bore names such as ‘pre-vocational’ and ‘pre-employment’. These data attempted to replicate the methodology used in an earlier paper by one of the authors (Dumbrell 2003) in order to provide comparable data over an extended period (1994–99 for the earlier data and 2000–04 for the later data). In this report these courses are frequently referred to as ‘identified’ pre-apprenticeship courses.

Subsequent analysis of these data initially revealed a discontinuity between 1998 and 1999 due to changed practices in course nomenclature at the state and territory level. This discontinuity coincides with an apparent reduction in both pre-apprenticeship course numbers and enrolments. Whether there was, in fact, a ‘real’ reduction in such courses and enrolments is impossible to discern from the data. There was some evidence from interviews with state training agencies that there had been a real reduction in pre-apprenticeship courses in the mid-to late 1990s. There was, however, also evidence that state training agencies were now increasing funding for such courses both as a response to trades skills shortages and to a lesser extent as an equity measure.

The researchers believe that those courses identified as pre-apprenticeship for the period 2000–04 in this current study represent at least a baseline minimum of pre-apprenticeship courses, and as such can provide some insights into the characteristics of the courses and of the students undertaking them. Subsequent discussions with training providers added weight to our belief that our estimates of the number of pre-apprenticeship courses and enrolments are conservative.

The number of courses in our estimates ranged between 192 in 2000 down to 155 in 2004, with enrolments over the same period falling from just over 10 000 students in 2000 down to about 5500 in 2004. (Detailed data tables are provided at appendix 5 in the support document.) The most common course duration was between 720 and 999 hours. There appears to have been an increase in course duration between 2000 and 2004, with courses of between 720 and 999 hours increasing to just over half of all presumed pre-apprenticeship courses. Table 1 shows the percentage distribution of courses by duration over the five-year period.

**Table 1 Identified pre-apprenticeship courses by duration, 2000–2004, percentages**

	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>
Number of ‘identified’ courses	192	156	146	185	155
	%	%	%	%	%
Hours <= 149	0.1	10.6	11.0	0.1	0.1
Hours 150–249	0.3	0.2	0.2	0.4	0.2
Hours 250–399	4.2	1.9	0.7	7.0	10.7
Hours 400–539	15.5	7.9	13.9	18.6	20.6
Hours 540–719	34.9	40.2	11.5	21.0	5.7
Hours 720–999	35.1	20.5	48.3	39.3	50.1
Hours >= 1000	9.9	18.8	14.5	13.6	12.6

Source: Derived from NCVER national data by the authors

The main characteristics of students enrolled in these courses are summarised below.

- ✧ In both 2001 and 2002, over 10% of courses were of fewer than 149 hours duration; however, by 2003 and 2004, pre-apprenticeship courses of fewer than 250 hours had all but disappeared.

- ✧ Over the 2000–04 period the gender breakdown was about 88% male, to 12% female. (In 2004, almost 48% of all VET students were female.)
- ✧ 64% of participants were males aged 15–19 and 71% of all participants were in this age group; a further 9% were males aged 20–24. Across all VET students in 2004 only about 42% of all males were under 25. In 2004 almost 39% of commencing apprentices in traditional trades were aged 19 years and under, indicating that pre-apprentices are younger than commencing apprentices.
- ✧ About 81% were non-Indigenous, 7% were identified as Indigenous and 12% did not show Indigenous status, suggesting a relatively high participation by Indigenous people in pre-apprenticeships; this is in the context of Indigenous people representing only about 3.6% of all VET students and about 2.2% of the total population.
- ✧ Predictably, most enrolments (51%) occur in capital cities, although this figure is well below the capital cities' share of population, which is 61%. It is, however, close to the figure of 53.8% for all VET students (with a known residential address.)
- ✧ Fewer than 5% of students enrolled in pre-apprenticeship courses over 2000–04 recorded a non-English speaking background (although 9% did not show language spoken at home). About 69% of all VET students show their language spoken at home as English, with about 19% not providing details of their language.
- ✧ About a third of students have Year 10-level education as their highest level, compared with just under 20% for all VET students in 2004, while around 40% have higher school levels, compared with about 45% for all VET students. Interestingly, between 2000 and 2004 the proportion enrolled in pre-apprenticeship courses with Year 9 schooling or below increased from just over 10% to nearly 15%. Over the same period comparable data for all VET students showed a slight increase from 7.2% to 8% for those with Year 9 or lower. Table 2 shows more detail on enrolments by year left school.

As noted above, these data showed a percentage increase in early school leavers undertaking pre-apprenticeship courses between 2000 and 2004. The following table shows the percentage distribution of enrolments by highest level of schooling over this period. The proportion of Year 10 leavers has remained reasonably constant, while Year 11 leavers have declined in significance.

**Table 2 Enrolments in identified pre-apprenticeship courses by highest school level completed, 2000–04, percentages**

	Yr 9 or below	Yr 10	Yr 11	Yr 12	Unknown	Total
2000	10.4	33.9	18.3	23.5	13.9	100
2001	10.9	32.6	15.8	27.6	13.2	100
2002	11.2	34.1	15.3	25.8	13.6	100
2003	13.1	34.4	15.1	27.1	10.3	100
2004	14.9	33.0	14.8	25.9	11.5	100

Source: Derived from NCVET national data by the authors

## Stages 2 and 3: Findings from interviews with peak bodies and training providers

For stage 2 of the project, 19 structured interviews were conducted by the researchers with respondents in New South Wales, Victoria, Queensland and South Australia, including interviews either by telephone or face to face with respective state training agencies in those states. For stage 3 of the project (the survey of training organisations), ten structured interviews were conducted in New South Wales, Queensland and South Australia with public and private training providers. A

number of the same issues were canvassed in these two stages so, for purposes of clarity, the findings from both those stages have been combined in this section.

## Definitional issues

There is no consistency of usage of the terms ‘pre-apprenticeship’, ‘pre-vocational’ and ‘pre-employment’, and there are often no practical differences between these terms. There was some evidence that the term ‘pre-apprenticeship’ was becoming more common; however, elsewhere the term ‘pre-vocational’ seemed to be favoured as a more generic term. Some respondents believed that the variability in terminology was not important from the perspective of the student, since their primary objective was ultimately to find employment. There was some evidence, on the other hand, that the terminology caused confusion among employers and that national consistency in course titles would be of benefit in improving employer recognition of such programs.

Despite the linguistic confusion, it is possible to say that the term ‘pre-apprenticeship’ is generally, in the jurisdictions covered in the study, understood to refer to courses with the following characteristics.

- ✧ The courses are intended to lead into existing apprenticeship courses (and in fact those pre-vocational programs funded directly by the Australian Government such as the Australian Apprenticeships Access Programme require that this be the case).
- ✧ There were some instances noted where completion of the pre-apprenticeship course provided credit towards the first year of off-the-job study in a traditional apprenticeship, although it did not necessarily reduce the period of the apprenticeship indenture. New South Wales has introduced the Trade Start program, a 16-week pre-apprenticeship program, which does in fact allow for a reduction in the formal period of apprenticeship indenture. This program funded more than 600 places in New South Wales in 2005. New South Wales reported that there had been no industrial difficulties experienced in negotiating up to 12 months reduction in the apprenticeship indenture period. Similar initiatives in Victoria have seen 12 months reduction there in apprenticeships in automotive, building and construction, engineering, hairdressing and furnishing trades for pre-apprenticeship graduates.
- ✧ Pre-apprenticeship courses often incorporate actual rather than simulated work experience for a period of between two and six weeks, although the Australian Government funding of the Australian Apprenticeships Access Programme does not require work experience. In some areas, especially construction, there are concerns over workplace safety issues that can rule out actual work placement.
- ✧ Respondents in this stage of the study believed that pre-apprenticeship courses are typically of between 12 and 26 weeks duration, although there were examples of such courses lasting for one year. In this latter case, such courses were often pilots and/or targeted at special needs students. Australian-Government-funded programs in this area require a minimum of 150 hours training, which can include some work placement. As noted earlier, our analysis of identified pre-apprenticeship courses would indicate most courses were closer to 26 weeks.

## Purposes of pre-apprenticeship courses

From the interviews conducted in stages 2 and 3 of the study, it became apparent that, among peak bodies and training providers, there is no single purpose understood for pre-apprenticeship courses. Nevertheless, it became quite clear that all respondents saw a small cluster of related purposes, with the importance of each generally varying according to the perspective of the respondent.

It is fair to say that the most commonly understood purpose of pre-apprenticeship courses among all respondents was to address shortages of skills in the traditional trades. This focus is clearly the primary focus of the Australian Government and at least some of the state training agencies.

In summary, respondents generally saw pre-apprenticeships as enlarging the pool of suitable applicants for apprenticeships by increasing work-readiness among potential applicants. They were also perceived as functioning as a filtering device for both employers and applicants for apprenticeships and as a means of preparing students for the formal apprenticeship course by exposing them to industry conditions and by identifying and addressing any personal learning needs. It was also apparent that most respondents saw an equity aspect to pre-apprenticeships, by targeting, for example, early school leavers.

Despite the potential augmentation of sources of supply for training in skilled trades resulting from the 2006 Council of Australian Governments (COAG) decision to remove time served requirements from apprenticeships, the issue of low earnings experienced by apprentices was cited by a number of contacts, peak bodies, training providers and, later in stage 4, by employers and apprentices, as a barrier to attracting students into pre-apprenticeships. Several contacts noted that many students undertaking pre-apprenticeship courses and then progressing to an apprenticeship need to move away from home and become at least partly self-supporting. The older age of those entering apprenticeships (that is, not mature-age entrants but older school leavers) meant that there were now often more income pressures than had been the case when entrants to apprenticeships were typically 15- or 16-year-olds.

During stage 3 structured interviews were conducted with ten providers (including four private training organisations) of pre-apprenticeship courses in New South Wales, Queensland and South Australia, covering 14 campuses. In total, these interviews gathered information on 110 courses per year, with enrolments of more than 2000 students. This is a strong indicator that our estimate of total pre-apprenticeship courses noted earlier was quite conservative.

The purpose of these interviews was to gain a better understanding of the challenges faced by providers in delivering and filling places in such courses, the methods used to attract students to these courses, how courses were selected, and the degree to which training organisations liaised with local employers to develop their courses. The interviews also aimed to gather information on the barriers students faced in getting information on pre-apprenticeships, what factors favoured successful outcomes in these courses and, in general, how the perceptions of those delivering pre-apprenticeship courses differed from the views of policy-makers and peak bodies.

The pre-apprenticeship courses in the institutions surveyed were generally targeted at the most common trades and were often quite specific in the trade targeted. For example, one TAFE provided pre-apprenticeship courses that prepared students for entry to motor mechanics, vehicle painting and panelbeating. The most common pre-apprenticeship courses provided by those interviewed were electrical, engineering and metal trades (including boilermaking, welding, fitting and machining), automotive, hairdressing and carpentry and joinery.

Most of the pre-apprenticeship courses in the surveyed training organisations lasted between 180 hours and six months, with TAFE colleges more likely to be delivering longer courses. Several courses delivered by TAFE colleges on behalf of group training companies were 240-hour courses. Some participants commented that 150-hour courses were too short to deliver an effective pre-apprenticeship program. TAFE respondents in the three states represented all regarded pre-apprenticeship courses as primarily concerned with increasing the 'work readiness' of young people, particularly for employment as apprentices.

As noted earlier, most respondents saw an equity aspect to pre-apprenticeships. While many pre-apprenticeship courses do not explicitly target equity groups, a number of respondents indicated that the applicants for these courses often exhibited poor self-esteem and lacked the academic skills in some areas that would enable them to undertake an apprenticeship successfully. Pre-apprenticeship courses frequently incorporated elements to address such issues. It was apparent that there were relatively few females undertaking pre-apprenticeship courses, and some colleges commented that it was particularly difficult to attract young women to these courses. At the college

level there were demonstrated efforts to include specific equity groups in pre-apprenticeship courses, including refugees, school students at risk and intellectually disabled people.

Several respondents noted that recruitment to pre-apprenticeship courses had become more difficult in recent years, attributing this to the declining youth population share, declining unemployment levels and more direct entry into apprenticeships because of the scarcity of suitable apprentices. In this regard it was noted that at least some pre-apprenticeship courses now included substantial numbers of mature-age persons. There was, however, by no means unanimous agreement that it was difficult to recruit students into pre-apprenticeship courses.

Other barriers to recruiting students into pre-apprenticeship courses cited by respondents were the competing attractiveness of casual work for young people and the absence of income support for many pre-apprenticeship students. The difficulties of recruitment into apprenticeships and pre-apprenticeship courses reflect a wider dilemma which will increasingly affect the education sector more generally, namely the declining relative significance of the population aged under 25 in relation to the whole population. The Australian Bureau of Statistics (ABS) projection of the Australian population (series B) shows the population aged under 20 actually falling in absolute numbers over the next 15 years. This is a demographic shift that will have an impact wider than just upon the education sector.

In an earlier study of pre-apprenticeship (Dumbrell 2003) one significant issue identified as hindering the supply of entrants to pre-apprenticeship courses was the poor provision of information on apprenticeships and pathways into apprenticeship to students at school. While some respondents continued to identify the need for improved information provision, there was widespread agreement across all jurisdictions surveyed that the provision of information on VET and apprenticeship pathways had significantly improved over the last three years. Much of this improvement appeared to have been the result of intensive efforts by TAFE and private training organisations to improve their level of liaison with local schools. Many respondents believed that information provided to school students on trade training and pathways into trades, including pre-apprenticeships, could still be significantly improved.

## Stage 4: Survey of apprentices and employers

Stage 4 involved a series of interviews with employers, together with a questionnaire survey of those employers' apprentices in order to obtain details of any differences between apprentices who had and had not undertaken pre-apprenticeships. To begin this stage a list of employers likely to employ apprentices in the three focus areas of this study was compiled from a variety of sources. Some were employers known to the industry skills council representatives on the Reference Group, some were selected from employers previously known to the researchers, while others were selected from a variety of public sources, such as industry association membership listings.

In consultation with the Reference Group, the researchers developed questions to be covered in the interviews with enterprises, while the questionnaire to be distributed to these employers' apprentices was developed in consultation with NCVET. The questionnaire used is given in appendix 3 in the support document.

Contact details for 42 enterprises were recorded, and telephone calls were made to them, mainly during May 2006, to request their participation in the study. Contact was also made with several industry associations to seek their support and assistance in recruiting some additional survey participants. Of the initial 42 enterprises listed, 23 agreed to participate in the study, including distributing the questionnaires to their apprentices and returning the completed questionnaires. While this was less than the researchers would have liked, these enterprises between them employed more than 1600 apprentices across Australia. Almost 500 questionnaires were distributed

to these enterprises, located in New South Wales, Victoria, Queensland, South Australia and the Australian Capital Territory.

Despite numerous follow-up phone calls, only 14 enterprises returned questionnaires from their apprentices, amounting to 255 questionnaires in all. While apprentices in electrical (155) and automotive trades (83) were well represented in the returned questionnaires, only 17 questionnaires were received from apprentices in engineering trades. To some extent this shortcoming was addressed in stage 5 of the study, with greater coverage of engineering students in pre-apprenticeship courses. About half of the enterprises provided written responses, while the others provided verbal responses via either face-to-face or telephone interviews. Unfortunately, none of the five enterprises surveyed in Queensland provided responses or returned apprentices' questionnaires.

## Employers' characteristics and views

Useable comments were obtained from 12 employers spread across New South Wales, Victoria and South Australia, although the small response rate means these views cannot be regarded as representative of industry generally. These responding firms among them employed more than 1600 apprentices; hence, they do embody substantial experience in recruiting and employing apprentices. Although engineering apprentices were poorly represented in the questionnaires returned by the apprentices, eight of the responding enterprises were small-to-medium-sized engineering enterprises. Of the remainder there were two group training companies (whose apprentices worked in a large number of enterprises) and two other enterprises, one each in the electrical and automotive industries. Several enterprises which returned apprentices' questionnaires did not provide separate comments on their views of pre-apprenticeships. One of the researchers interviewed the eight training managers of one of the two group training companies, which in effect provided the views of eight additional employers with whom these managers worked closely, as well as the views of their group training company. However, this interview has been counted as just one employer in the reported data.

The most common apprentice recruitment methods reported were newspaper advertising and word of mouth. The majority of enterprises provided work experience, and four used special selection tests in their recruitment of apprentices. Eight of the ten responding to the question believed that apprentices' wages were too low and most regarded this feature as a major impediment to improving the attractiveness of apprenticeships. Six of the eight respondents did not believe that apprentices' wages were so high as to be a disincentive to their recruitment, although two of the eight did. This view accorded with opinions expressed earlier by contacts in stages 2 and 3 of the study—that low apprentice wages was one of the key influencing factors in recruiting apprentices and in retaining apprentices. Some might find it difficult to reconcile these employers' views on apprentices' wages. It might be that labour productivity of apprentices is too low to warrant higher pay but that alternative employment offers higher immediate earnings, depressing the supply of apprentices. The completion of a pre-apprenticeship might reduce the employer's risk of investing in such an apprentice through the apprentice delivering higher and more immediate productivity; furthermore, the apprentice's loss of immediate income might be offset by a higher expectation of completing the apprenticeship, and hence eventually securing higher earnings.

Four of the enterprises regarded completion of a pre-apprenticeship as essential for recruitment as an apprentice, two regarded it as important and a further five regarded a pre-apprenticeship as 'useful'. Only one enterprise regarded a pre-apprenticeship as not useful and none believed they were a disadvantage. Six enterprises saw the value of a pre-apprenticeship as mainly 'weeding out' unsuitable applicants, while three believed that pre-apprenticeship completers achieved better retention and completion rates. Three enterprises believed that the main benefit of completion of a pre-apprenticeship was in giving the student a better understanding of the industry they were entering as an apprentice, while one believed pre-apprenticeships conferred no benefits. Completion of a pre-apprenticeship did not shorten the apprenticeship duration in any of the responding enterprises.

## Survey of apprentices

A total of 255 questionnaires were received from apprentices employed in 14 enterprises in New South Wales, Victoria, South Australia and the Australian Capital Territory. Aggregated responses from these apprentices are provided in appendix 6 in the support document. The main findings from those returns are outlined below. Enterprises returning these questionnaires on behalf of their apprentices were requested to add each apprentice's contract number so that the record could be matched with the national apprenticeship database. Of the 255 apprentice questionnaires received, 209 recorded a contract number.

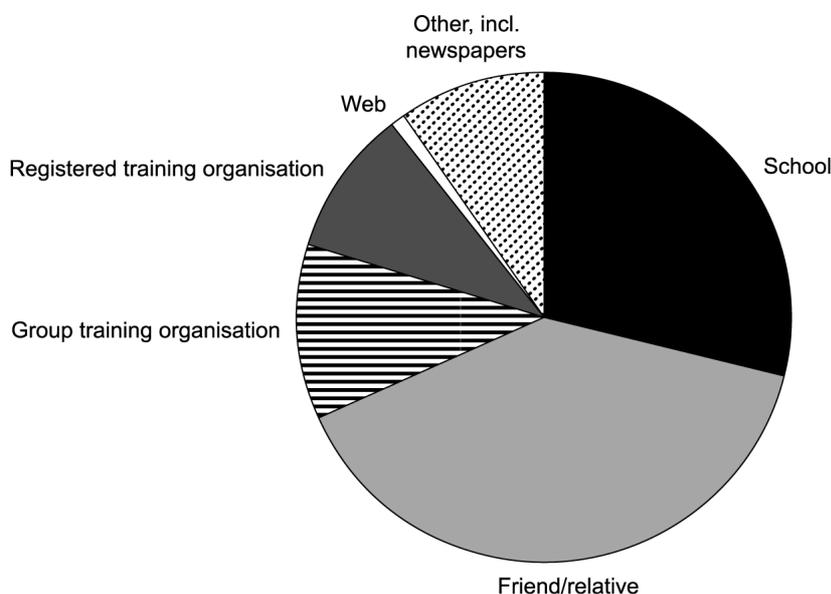
Of the 255 apprentices responding, 40% had undertaken a pre-apprenticeship or similar course.

Of those who had undertaken a pre-apprenticeship:

- ✧ 92% of those starting a pre-apprenticeship course completed it
- ✧ about one-third experienced placement in a real workplace as part of their course
- ✧ 57% strongly agreed and a further 41% agreed that they had learnt a lot in their pre-apprenticeship course
- ✧ 40% strongly agreed and 53% agreed that they had enjoyed their pre-apprenticeship course.

Those who had done a pre-apprenticeship received information about the course from diverse sources, as shown in figure 1. As with students doing pre-apprenticeship courses surveyed in stage 5, the majority learnt about the course either from a friend or relative or from their school. Note that not all respondents answered all questions and thus the total for each response might vary.

**Figure 1 Where surveyed apprentices learnt of their pre-apprenticeship course, numbers**

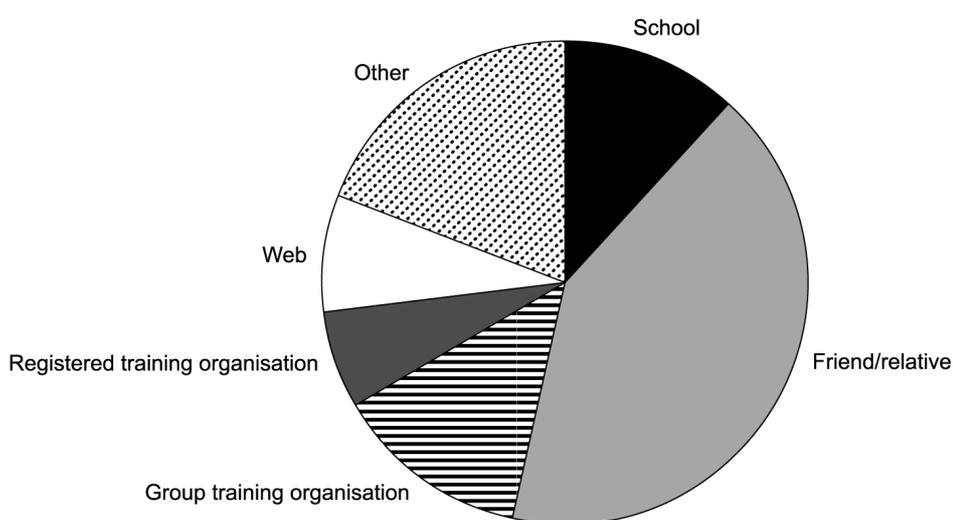


Looking at the data for all apprentice respondents revealed the following characteristics.

- ✧ A surprisingly high 85% said they intended to do further study after their apprenticeship, with 69% nominating VET study related to their trade and 23% nominating university study related to their trade course as their likely option.
- ✧ Those apprentices who had done a pre-apprenticeship were more likely than those who had not to be planning further study ( $0.10 > P > 0.05$ ).

- ✧ 81% reported that they were enjoying their apprenticeship, while only 3% said that they should have done something different.
- ✧ Apprentices who had completed a pre-apprenticeship were more likely to have found their apprenticeship via their training organisation or via a friend or relative, while those who had not done a pre-apprenticeship were more likely to have found their apprenticeship via other means, such as newspaper advertising or the web ( $P < 0.01$ ; however, the critical cells have rather low occurrences). Figure 2 summarises the source of information about their apprenticeship for all surveyed apprentices.
- ✧ Electrical apprentices were more likely than those in automotive trades ( $0.05 > P > 0.02$ ) to have done a pre-apprenticeship course.
- ✧ Whether or not the apprentice had done a pre-apprenticeship did not appear to influence significantly, positively or negatively, their opinion of their apprenticeship course ( $P > 0.8$ ).

**Figure 2 Where apprentices learnt about their apprenticeship, numbers**



NCVER was able to match contract numbers to 146 of the 209 records provided that showed a contract number. The main findings from these matched records were:

- ✧ Electrical apprentices were more likely to have left at Year 12 than automotive apprentices.
- ✧ The majority of electrical and automotive apprentices who had done a pre-apprenticeship course were Year 12 leavers, while, especially for automotive apprentices, those who had not done a pre-apprenticeship were predominantly Year 10 leavers. The numbers in these samples are small and probably not statistically significant.
- ✧ Three of the 146 apprentices were of Indigenous background, one of them female; none had done a pre-apprenticeship. The two non-Indigenous females had both done a pre-apprenticeship.
- ✧ The apprentices who had done a pre-apprenticeship were younger than those who had not done a pre-apprenticeship, with about 75% of those with a pre-apprenticeship in the 15 to 19 years age group compared with only 62% of those in the non-pre-apprenticeship group. This finding is, however, surprising, in that those who had done a pre-apprenticeship were more likely to have left after Year 12 rather than Year 10. It seems likely, from comments in some of the questionnaires received, that low wages for older apprentices is a significant issue in contributing to attrition. Hence, if pre-apprenticeships can hasten the completion of the apprenticeship, they should assist in reducing attrition rates.

The high completion rate and the high level of satisfaction with the pre-apprenticeship courses are strong indicators that students doing pre-apprenticeship courses are likely to be committed to their

chosen career. Supporting this is the finding that those who completed a pre-apprenticeship were more likely than those who had not to be planning to do further study related to their trade course after completing their apprenticeship. Some of the surveyed apprentices included additional comments on their questionnaires. The following are some of the most common comments offered.

- ✧ Apprentice wages were too low for most apprentices to be self-supporting.
- ✧ Many who had done a pre-apprenticeship felt there should have been some financial assistance, such as transport subsidies while studying.
- ✧ For those who had done a pre-apprenticeship, the time spent in a workshop before going out on the job as an apprentice was most helpful.
- ✧ As in the later survey of pre-apprenticeship students (stage 5), many of the surveyed apprentices who had done a pre-apprenticeship said they would change nothing about the pre-apprenticeship course they had done; those who advocated any changes generally wanted more on-the-job experience or to be paid.

It is also of interest that pre-apprenticeship completers were more likely to have completed Year 12 than other apprentices, indicating possibly greater learning-to-learn capacity and the ability to cope with the off-the-job study components. These characteristics are indicative of better retention and completion rates. However, this finding does need to be matched with the earlier finding from the identified pre-apprenticeship course data that a growing proportion of pre-apprenticeship students had Year 9 or lower schooling. This suggests that there is diversity among these students. Electro-technology apprentices in particular are likely to be Year 12 leavers (also see data from stage 5 described below) and required to have done a pre-apprenticeship. At the same time, more early school leavers are apparently being prepared for other apprenticeships via pre-apprenticeship courses outside the focus of this study. While pre-apprenticeships do not appear to be having a significant impact on increasing the entry of female and non-English speaking background students into these traditional apprenticeships, there does appear to be an encouraging level of participation among Indigenous students.

## Stage 5: Survey and case studies of pre-apprenticeship students

Stage 5 of the project consisted of research with pre-apprentices enrolled in courses at the time of the study. A survey was carried out among pre-apprentices in two states: South Australia and Victoria.<sup>1</sup> One hundred and six usable responses were received from pre-apprentices in nine courses; all except one of the courses were in TAFE institutes. In addition, two longitudinal qualitative studies were carried out, one with automotive students in a pre-apprenticeship course in a New South Wales TAFE institute and one with electro-technology students in a Victorian training provider.

### Survey findings

#### *Nature of respondents*

The majority of the respondents were in Victoria (60 or 56.6%) with 46 (43.4%) in South Australia. In both Victoria and South Australia, respondents were in metropolitan and rural areas. The largest proportion of respondents were in electro-technology courses (67 or 63.2%), followed by engineering with 31 (29.2%). Only eight (7.5%) were in automotive courses. Only one of the

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<sup>1</sup> Unfortunately we were unable to gain data from other states. Negotiations with TAFE institutes in two other states and territories proved fruitless. One institute head teacher who had undertaken to administer the survey subsequently claimed that all the pre-apprentices had left because they had found jobs, but it was not possible to verify this claim.

pre-apprentices was female; she was enrolled in an automotive course. The age distribution of the respondents was quite varied. Table 3 shows distribution across four age bands, by industry area.

**Table 3 Age of pre-apprentice survey respondents, by industry area**

Age	Course							
	Automotive		Electro-technology		Engineering		Total	
	No.	%	No.	%	No.	%	No.	%
15–17	6	75.0	12	19.1	19	61.3	37	36.3
18–20	1	12.5	41	65.0	6	19.4	48	47.0
21–25	0	0	8	12.8	5	16.1	13	12.7
26–46	1	12.5	2	3.2	1	3.2	4	4.0
<b>Total</b>	<b>8</b>	<b>100.0</b>	<b>63</b>	<b>100.0</b>	<b>31</b>	<b>100.0</b>	<b>102</b>	<b>100.0</b>

The automotive pre-apprentices were concentrated in the youngest age group, but as they were all in one course, this may not necessarily be typical. Electro-technology pre-apprentices were concentrated more than other industry areas in the 18 to 20 years age group. Analysis by highest completed year of schooling showed that 72.3% of the electro-technology pre-apprentices had completed Year 12 or 13, compared with only 25.8% of the engineering and none of the automotive pre-apprentices. In total, 22.1% of the respondents had only completed Year 9 or Year 10. This finding supports the finding from stage 4 that electro-technology students are more likely than students in the other industry sectors to have completed Year 12.

Almost two-thirds of the respondents (62.7%) were working part-time at the same time as undertaking their pre-apprenticeship course; engineering students (54.8%) were least likely to have a job. Only one respondent had never had a part-time job. Most said that their current part-time work was necessary (55.4%) or helpful (30.8%) to support them financially while studying. Almost half found it either a little difficult (35.8%) or very difficult (7.5%) to fit their working hours in with their study. This finding strongly argues against one of the common beliefs about pre-apprenticeship courses expressed by some respondents in earlier stages of the study—that pre-apprenticeship courses were designed to increase the ‘work readiness’ of students. Unless the employers’ expectations of apprentices are substantially different from those of other employers, such a purpose for pre-apprenticeships cannot be sustained on this evidence.

Very few current or previous part-time jobs related to the industry area of the pre-apprentice course (7.4%); however, the jobs of the respondents were less likely than average to be in the most common employment areas for teenagers; only 45.7% were in retail or fast food.

Over a quarter (29%) had worked in a full-time job previously; of these 27 students, only two had worked in the same industry area as their pre-apprentice course. Therefore, if pre-apprenticeships have a role akin to making students work-ready, it is more a role of orienting students to a particular industry rather than to workplaces in general.

### *Enrolment in the pre-apprenticeship*

Table 4 shows that sources of information about the course varied quite widely.

Table 4 shows that word of mouth (friend/relative) was the most common source for electro-technology pre-apprentices. The automotive students were most likely to hear about the program through school, but this may have been due to the nature of the particular course, as only one course was involved. Engineering students were largely divided among school, word of mouth, and training provider.

**Table 4 Sources of information about pre-apprenticeship course, by industry area**

	Course						Total	
	Automotive		Electro-technology		Engineering		No.	%
	No.	%	No.	%	No.	%	No.	%
Information from:								
Your school	4	57.1	17	25.4	9	29.0	30	28.6
Friend/relative	0	0	24	35.8	7	22.6	31	29.5
Group training organisation	1	14.3	2	3.0	3	9.7	6	5.7
Training provider (e.g. TAFE)	1	14.3	10	14.9	7	22.6	18	17.1
Website	0	0	7	10.4	0	0	7	6.7
Somewhere else	0	0	2	3.0	5	16.1	7	6.7
Ticked more than one	1	14.3	5	7.5	0	0	6	5.7
<b>Total</b>	<b>7</b>	<b>100.0</b>	<b>67</b>	<b>100.0</b>	<b>31</b>	<b>100.0</b>	<b>105</b>	<b>100.0</b>

Source: Sample survey of pre-apprenticeship students

Stage 4 data showed similar findings.

Responses to the question on motivation for undertaking the pre-apprenticeship were quite consistent across the industry sectors. The responses given to a set of provided reasons (in descending order)<sup>2</sup> were:

- ✧ it was a good way to get into an apprenticeship (59%)
- ✧ other reason (11.4%)
- ✧ missed out on an apprenticeship (7.6%)
- ✧ not sure if I wanted to do an apprenticeship (7.6%)
- ✧ better than staying at school (4.8%)
- ✧ parents wanted me to do it (2.9%).

These responses indicate generally very positive reasons for enrolling in their courses. ‘Other’ responses were mainly related to the wish for a career change or a better future (3), to prepare themselves for an apprenticeship (3), or the students’ outside interests (2, both automotive).

### *Work placements as part of the course*

There was considerable variation among the industry areas in response to a question about work placements (which was defined as ‘time spent in a real workplace as part of the course’). Nearly all of the automotive (87.5%) and the engineering (90.0%) pre-apprentices said they had already had, or would have, a work placement. On the other hand, only 23.9% of the electro-technology pre-apprentices said that their course involved a work placement. The length of the placements varied, mostly between one and four weeks.

The students were asked who organised the work placements. One-quarter said their training provider organised the placement; nearly 60% claimed that they organised it themselves or with the help of their parents. In contrast, only about one-third of the apprentices surveyed in stage 4 who had done a pre-apprenticeship had on-the-job experience as part of their pre-apprenticeship, although this might reflect the high proportion of electro-technology students in the stage 4 sample.

<sup>2</sup> Note: 6.7% ticked more than one response, in error, so their responses could not be included in these figures.

### *Respondents' views about the course and their future destinations*

Tables 5 and 6 show the views of the pre-apprentices about the extent to which they were learning from, and enjoying, their courses.

**Table 5 The extent to which pre-apprentices self-reported that they were learning from their courses**

	Course							
	Automotive		Electro-technology		Engineering		Total	
	No.	%	No.	%	No.	%	No.	%
Extent of agreement that they were learning a lot								
Strongly agree	2	25.0	19	28.4	16	53.3	<b>37</b>	<b>35.2</b>
Agree	6	75.0	41	61.2	14	46.7	<b>61</b>	<b>58.1</b>
Not sure	0	0	5	7.5	0	0	<b>5</b>	<b>4.8</b>
Disagree	0	0	2	3.0	0	0	<b>2</b>	<b>1.9</b>
<b>Total</b>	<b>8</b>	<b>100.0</b>	<b>67</b>	<b>100.0</b>	<b>30</b>	<b>100.0</b>	<b>105</b>	<b>100.0</b>

**Table 6 The extent to which pre-apprentices were enjoying their courses**

	Course							
	Automotive		Electro-technology		Engineering		Total	
	No.	%	No.	%	No.	%	No.	%
Extent of agreement that they were enjoying the course								
Strongly agree	2	25.0	11	16.4	19	61.3	<b>32</b>	<b>30.2</b>
Agree	6	75.0	32	47.8	11	35.5	<b>49</b>	<b>46.2</b>
Not sure	0	0	19	28.4	1	3.2	<b>20</b>	<b>18.9</b>
Disagree	0	0	5	7.5	0	0	<b>5</b>	<b>4.7</b>
<b>Total</b>	<b>8</b>	<b>100.0</b>	<b>67</b>	<b>100.0</b>	<b>31</b>	<b>100.0</b>	<b>106</b>	<b>100.0</b>

Source: Sample survey of pre-apprenticeship students

Responses were positive on both questions, with only 6.7% not sure or disagreeing that they were 'learning a lot' and a rather less positive result on the 'enjoyment' front, with 23.6% not sure or disagreeing that they were 'really enjoying' the course. Electro-technology students seemed to be less satisfied with both their learning and their enjoyment—although the majority were still enjoying their course. They appeared to be more 'critical consumers'; this may be related to their higher education level.

Respondents were asked to write the best thing about doing their course. All responded, and nearly all responses centred on the following issues, in descending order of frequency:

- ✧ the amount they were learning; this divided fairly equally into learning *skills* and learning *about the industry*
- ✧ the hands-on and therefore enjoyable nature of the course
- ✧ the envisaged outcome of an apprenticeship
- ✧ friends made during the course
- ✧ the teachers.

Interesting one-off responses were:

- ✧ learning how to work in Australia

- ✧ seeing if I like this area of work before I actually start the job
- ✧ the fact that it is government-funded and all hands-on training is available without a fee
- ✧ confidence and self-esteem
- ✧ better than school.

Pre-apprentices were asked about one thing they would change if they were in charge of the course; responses could all be included under the following issues, which are listed below by industry area.

<b>Automotive</b>	<b>Electro-technology</b>	<b>Engineering</b>
<ul style="list-style-type: none"> <li>✧ Better tools and equipment</li> <li>✧ Remove some students who were disruptive</li> </ul>	<ul style="list-style-type: none"> <li>✧ More hands-on classes</li> <li>✧ Improve the quality of some teachers</li> <li>✧ Remove communication and computing classes</li> <li>✧ Reduce hours but use time better</li> <li>✧ Add work placements and work visits</li> <li>✧ Improve the organisation of the course</li> <li>✧ Assess more regularly</li> </ul>	<ul style="list-style-type: none"> <li>✧ More practical work</li> <li>✧ Reduce hours but use time better</li> <li>✧ Improve the quality of some teachers</li> <li>✧ Better resources and equipment</li> <li>✧ Remove some students who were disruptive</li> <li>✧ 'Nothing, because the course is great as it is' (4 responses were along these lines)</li> </ul>

Nearly all expected to finish their course, with only five answering 'not sure', of whom most were in engineering courses. There was, however, a rather muted response to a question asking the extent of respondents' agreement with the statement 'my pre-apprenticeship course is assisting me with achieving my career goals'. Although three-quarters agreed or strongly agreed, only 29 (27.6%) were in strong agreement; 22.9% were not sure. Qualitative comments from electro-technology students were mainly negative, while engineering students were more positive.

When asked about their plans when the course was finished, responses to a set of provided destinations were (in descending order)<sup>3</sup>:

- ✧ find an apprenticeship (74.5%)
- ✧ start an apprenticeship that was already organised (8.5%)
- ✧ start another job that was not an apprenticeship (5.7%)
- ✧ do a TAFE or other VET course (2.8%)
- ✧ travel—no job (0.9%).

Unfortunately, we did not ask at what point in their course they were answering the questionnaire, so it is not possible to comment on the low proportion that had an apprenticeship already lined up. Nevertheless, the fact that 83% were either going into an apprenticeship or were intending to seek one indicates a likely high conversion rate from pre-apprenticeship into apprenticeship. On this basis, any failure to convert their pre-apprenticeship into an apprenticeship is more likely to be the result of an inadequate demand for apprentices rather than a failure in the supply of applicants.

Qualitative comments (all from electro-technology students) indicated that students would have appreciated more assistance with job seeking. These comments included the following.

<sup>3</sup> 7.5% ticked more than one, so their responses cannot be included.

- ✧ *I wish we were given more help in getting into the field we want.*
- ✧ *There should be an apprenticeship available for all students that get over 80%.*
- ✧ *I believe this course should help students to get some work experience in a real workplace.*

Final comments from students included some very positive remarks.

- ✧ *The lecturers are fantastic, very helpful and make the course thoroughly enjoyable! (automotive).*
- ✧ *I thank all the teachers for teaching me and my mates, [I] really really enjoyed coming and haven't missed a day (electro-technology).*
- ✧ *I consider myself fortunate to be able to participate in this course (engineering).*

## Case study findings

The two case studies were designed, primarily, to provide a more in-depth picture than the pre-apprentice student survey. They also introduced teacher and employer perspectives, which were not included in the survey of pre-apprentices. To provide some breadth, although only two case studies were carried out, they involved two different states (Victoria and New South Wales), TAFE and non-TAFE sites, and metropolitan and rural locations. Details are as follows:

Name	Course	State	TAFE/Non-TAFE	Location
CABLE CO	Electro-technology	Vic.	Non-TAFE	Metropolitan
Country Town TAFE	Automotive	NSW	TAFE	Rural

That one of the case studies was in the automotive area somewhat redressed the balance of the survey of pre-apprentices, which had accessed very few automotive pre-apprentices.

Case studies were longitudinal, undertaken between February and June 2006, with three visits taking place near the beginning, in the middle, and at the end of the course. The three visits enabled the researcher to track changes over the life of the course and find out why there was attrition from courses. The case studies also set out to identify the final destinations of students. At each of the visits, students were interviewed in groups. The course coordinator and teacher were interviewed at the first and third visits, and two employers were visited during each case study; owing to the unavailability of the teaching staff on the scheduled date, the final interview for the automotive case study was undertaken by phone and written questionnaire.

	Students	Course coordinator	Teacher	Employer
Visit 1	Focus group (s)	Interview	Interview	Two interviews
Visit 2	Focus group (s)			
Visit 3	Focus group (s)	Interview	Interview	

During the third visit, students also completed a short individual questionnaire about their destinations and their overall view of the course; it was decided inappropriate that they be required to reveal these details to other students as part of the focus group. The interview, focus group protocols and questionnaires can be found at appendix 7 in the support document. All focus groups and interviews, which lasted between 30 minutes and an hour, were taped and transcribed, with permission. Full case study reports can be found at appendix 8 (support document).

### *The nature of the two courses*

'CABLE CO' was a private non-profit company set up by the employer and employee associations. It had been running pre-apprenticeships for eight years and took several intakes each year. The company also operated as a training organisation for apprentices and for other electro-technology courses, and had a group training organisation with around 250 electro-technology apprentices. 'Country Town TAFE' was a small rural TAFE campus also offering apprenticeship courses in automotive (and a range of other courses) and usually had two pre-apprentice courses each semester. At Country town TAFE, the pre-apprentices took most of their classes with the apprentices; this was not the case at CABLE CO.

### *What were the characteristics of the pre-apprentices?*

At CABLE CO the pre-apprentices in the course studied were all males aged between 17 and 23. Most had completed Year 12 and two had turned down university places to undertake the course. Most had part-time jobs, although a few had given them up because the course hours were so long. At Country Town TAFE, the pre-apprentices who attended the focus groups were more varied. There were two women, both with children, and one male in his mid-twenties; the remainder were males aged under 20. The Country Town TAFE group was not as sure as the CABLE CO group that they definitely wanted careers in the industry; some were taking the course because of an interest in cars but not necessarily in an automotive career.

### *What did the pre-apprentices think of their course?*

Because only a few teachers were involved, the pre-apprentices at Country Town TAFE enjoyed the close relationship they had with the teachers. They particularly liked the practical work and received extra help with learning problems. They enjoyed the opportunity to work on their own cars or their friends' cars. At CABLE CO the students were not quite so satisfied; they tended to expect higher standards and found the course a little disorganised, with some modules not very interesting, but overall they too were satisfied. Despite being better educated, the electro-technology students found their course more difficult than did the automotive students. All students tended to enjoy the practical work more than the theory work.

### *What is the role of work placements?*

In the electro-technology course there were no work placements and in the automotive course placements were only offered to the most able students. In the latter case the course co-coordinator would have liked to extend the practice, had more resources been made available. In the former, the course coordinator was wary about possible exploitation by employers and would have preferred to spend additional resources on a more realistic simulated work environment.

### *Does the completion of a pre-apprenticeship facilitate entry to apprenticeships?*

In the electro-technology industry in Victoria a pre-apprenticeship seemed to be more or less a requirement for gaining entry to an apprenticeship in the larger companies. Companies liked the fact that ex-pre-apprentices had basic skills and knowledge of the industry and that they had received extra maths tuition. In the automotive industry in the rural area of the case study, employers were not so decisive about a preference for pre-apprentices. In the Country Town TAFE case study the teachers felt that the course had succeeded not only if a student had gained an apprenticeship, but also if he or she had been rehabilitated from drug or alcohol problems or if he or she enrolled in another course. A few of their students said they still did not feel ready for work even near the end of the course.

### *What factors contribute to attrition in pre-apprenticeships?*

A distinction was drawn between ‘positive’ attrition where a pre-apprentice left for an apprenticeship or similar job, and ‘negative’ attrition where people left for other reasons. A reason cited by several people was that people might enrol in the course as a requirement of retaining Centrelink benefits, and then leave once attendance had been established.<sup>4</sup>

What could be improved and what lessons can other industries learn?

The quality of the curriculum appeared to be quite important. The electro-technology pre-apprentices were quite critical consumers and noticed if the material was not up to date or if a particular teacher was not very effective. They attended for long hours and expected the time to be used well. In both cases it seemed that quite close contact was maintained with employers and, in the electro-technology case, with other pre-apprentice providers as well. It is suggested that this contact could perhaps be used for more advice about curriculum, including advice about how to simulate workplace conditions more effectively, considering the difficulties that seemed to be posed by work placements.

## Conclusions

This study has established that pre-apprenticeships are not uniquely Australian. Although the role of programs under this name in other countries varies, most do appear to be designed to increase the supply of skilled trade workers. Moreover, pre-apprenticeships have existed for more than half a century in Australia and perhaps for more than 70 years, suggesting that they enjoy considerable community support.

The research cannot at this stage supply a *definitive* answer to the question of whether pre-apprenticeships enhance retention and completion rates in apprenticeships and subsequent transition into related trades. Nevertheless, the study has achieved a number of goals in attempting to address this and related questions, including gaining a clearer picture of students undertaking pre-apprenticeship courses. Because the study design did not incorporate a lengthy time span, it has not been possible to track individuals from a pre-apprenticeship or other sources, then through an apprenticeship, and finally into post-apprenticeship destinations.

The literature on pre-apprenticeship is limited; however, studies of separation from apprenticeship have shown, *inter alia*, that retention is enhanced through apprentices seeing their trade training as part of a career pathway and actually enjoying their course of study. On these criteria, the findings of this study are equivocal. The survey of apprentices conducted in stage 4 showed a significantly greater proportion of apprentices who had done a pre-apprenticeship planning to undertake further study related to their trade course, by comparison with apprentices who had not done a pre-apprenticeship. This suggests a greater commitment among former pre-apprentices to their career pathway. On the other hand, whether or not the apprentice had undertaken a pre-apprenticeship course did not appear to influence their enjoyment of their apprenticeship—although the total number of apprentices less than satisfied with their course in this sample was very small (12/225).

Studies of retention rates in apprenticeship (Simons et al. 2000; Cully & Curtain 2001; Callan 2000) have suggested that enhanced retention can be addressed by better matching of apprentices to the workplace, better counselling, clearer articulation of the expectations of apprentices, and apprentices having ‘learning to learn’ skills. It was apparent from interviews with employers, peak bodies, government agencies and training organisations that pre-apprenticeship courses were designed to address at least several of these criteria. Common findings in these interviews were that

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<sup>4</sup> It has not been verified whether this would in fact be sufficient to retain benefits, at least currently.

pre-apprenticeships provided students with a better understanding of the destination industry and what an apprenticeship in that industry entailed, provided a filtering mechanism to divert unsuitable candidates, and provided learning-to-learn skills in an environment different from school.

Apprentices in our sample survey who had done a pre-apprenticeship were likely to have higher educational levels (and hence probably better learning-to-learn skills) than those who had not, although, paradoxically, they were younger than apprentices who had not done a pre-apprenticeship. This finding is, however, based on our relatively small sample and other findings do not necessarily support it. In this respect, the relatively high proportion of electro-technology apprentices in our apprentices sample might have artificially inflated educational levels. This does also reflect the preponderance of the pre-apprenticeship model in the electro-technology industry and might mean better-quality applicants are attracted to these apprenticeships.

There was substantial evidence from interviews and from students that the low pay of apprentices is one of the key issues in deterring potential apprentices, and possibly a cause of attrition. Some contacts observed that this issue has risen in significance as apprentices increasingly have Year 12 levels of school attainment and are thus well into their 20s when they are in their final stages of their apprenticeship.

Despite a general belief among interview subjects that apprentices were entering apprenticeships at older ages, according to the national database, the proportion of students in identified pre-apprenticeship courses with Year 9 or lower school credentials had increased from about 10% in 2000 to nearly 15% in 2004. This was offset by a drop in Year 11 leavers entering pre-apprenticeships over that period. This might indicate several different trends in pre-apprenticeship. It might show an increasing use of pre-apprenticeship as an equity program for students at risk of dropping out of education and training—a trend supported by some of the interviews with TAFE providers. In turn, this could be seen as extending the supply of students for apprenticeships, since many Year 9 leavers could be regarded by employers as unsuited to entering an apprenticeship without some specific additional preparation.

There was a widespread belief among interview subjects (employers, training organisations, government bodies and employer bodies) that pre-apprenticeships provided employability skills for young people who were failing to acquire such skills at school. Our findings cannot fully support this view, since our data show that almost all students enrolled in the pre-apprenticeship courses studied in stage 5 had worked before entering the course. Very little of this prior work experience, however, related to the industry sector in which they were now studying. As well, the data obtained from NCVER on those enrolled in courses identified as pre-apprenticeships showed about 15% were aged 25 or more. Presumably, most in this group would have had prior work experience of some kind. Apprentices surveyed in stage 4 were not asked about employment before their apprenticeship or pre-apprenticeship, although some respondents in this survey wrote comments indicating that their pre-apprenticeship course had prepared them for their workplaces. Any employability skills imparted through pre-apprenticeship courses are likely to be specifically related to an industry sector, rather than being more generic skills. Some contacts and some apprentices surveyed in stage 4 did in fact make this point, acknowledging the pre-apprenticeship as providing some students with the first opportunity, for example, to use hand tools.

One barrier to answering the central research questions with some confidence is the current difficulty in identifying, from the national data collection, precisely which courses are to be regarded as 'pre-apprenticeships'. It was apparent that our analysis of the national records failed to reveal some courses that should have been regarded as pre-apprenticeships. This is a substantial barrier to providing a more definitive answer to the research questions posed.

The initial research questions follow, together with a summary of our findings in relation to each.

What is the current level of pre-apprenticeship provision nationally (state by state and by sector)?

For reasons discussed above, this question cannot, at this stage, be answered. It is apparent, however, that our initial estimates for recent years at least are below what is probably the real level. For 2004 these estimates were 5500 students in 155 courses. We believe the actual figures are likely to be higher than this. By comparison, there were about 53 700 commencements in traditional trades apprenticeships across Australia in 2004.

What are the demographic characteristics of pre-apprentices?

This question is addressed in data examined in stages 2 and 3, 4 and 5. The main picture is that pre-apprenticeship students are predominantly males aged under 25, reflecting the wider picture of males who are commencing apprenticeships, of whom about 88% were aged under 25 in 2004. Pre-apprenticeship students were also disproportionately from non-capital cities, around 40% have above Year 10 school levels, but an increasing proportion are Year 9 leavers or lower. Most are doing courses of more than 400 hours duration.

In general terms, does the completion of a pre-apprenticeship facilitate entry to apprenticeships and, in particular, entry to apprenticeships related to the pre-apprenticeship undertaken?

Only a lengthy and costly longitudinal study using matched cohorts could provide a definitive answer to this question and that has not been the design of this study. Our findings do, however, provide some evidence that pre-apprenticeship courses do facilitate entry into related apprenticeships. Studies of retention and completion in apprenticeships identify the provision of realistic expectations about workplaces and commitment to a career path as important contributors to retention and completion. This study found that apprentices who had done a pre-apprenticeship were more likely to be planning further study related to their trade than those who had not done a pre-apprenticeship. Other studies of retention and completion have also identified 'learning to learn' skills as important success factors. Comments from training providers and from surveyed apprentices, as well as some survey data, support the view that pre-apprenticeship courses develop these skills.

What training and, ultimately, occupational pathways do pre-apprenticeships connect to now and to what extent do pre-apprenticeships constitute a pathway into apprenticeships by comparison with other course options, again focusing on the three identified occupational areas?

The study found that most pre-apprentices surveyed intended to seek or had already arranged entry into the trade related to their course. It appeared that, for electro-technology students in particular, this was the pathway preferred by many employers in the industry. Some employers regarded pre-apprenticeships as essential for entry to apprenticeships, while most at least saw them as valuable.

What proportion of pre-apprentices move into related apprenticeships?

From interviews with training providers, it seems that most pre-apprentices move into apprenticeships in related areas but no numerical estimate can be provided.

How do training providers view the purpose of pre-apprenticeships? Are there some areas where pre-apprenticeships are inappropriate?

Most regarded pre-apprenticeships as having several purposes, including providing work-related skills suitable for employment as an apprentice, assisting students with inadequate educational preparation to reach a level suitable for apprentices, ensuring apprentices' expectations about

working in their trade matched the reality, and providing a filtering mechanism for employers to reduce attrition from apprenticeships. While no inappropriate trades for pre-apprenticeships were identified, the study found pre-apprenticeships strongly established in electro-technology trades.

What is the role of work placement in pre-apprenticeships? What use is currently made of work placement to provide authentic on-the-job experience and to meet training package requirements?

Access to work experience in pre-apprenticeship courses varied between one-third of the apprentices surveyed (who had done a pre-apprenticeship course) to most of the pre-apprentices surveyed. It appears that real work experience varies by industry, with electro-technology students less likely than other students to have access to it.

What attrition rates apply in the pre-apprenticeship courses under examination and what factors contribute to early separation from pre-apprenticeship courses?

The study found that completion rates were high and that separation is often associated with early entry to an apprenticeship.

Does completion of a pre-apprenticeship have an effect upon retention rates within apprenticeships and does completion of a pre-apprenticeship accelerate completion of related apprenticeships?

Completion of a pre-apprenticeship can in some cases accelerate completion of apprenticeships, although there does not appear to be a great deal of consistency in these arrangements. While there was no direct evidence that completion of a pre-apprenticeship improves completion rates in apprenticeships, the study did show that pre-apprenticeship courses address many of the factors that have been shown to contribute towards separation from apprenticeship.

What do pre-apprentices think of their courses?

There was a very high level of support among both current pre-apprentices and among apprentices who had done a pre-apprenticeship course. Overall, they responded that they learnt a lot in their pre-apprenticeship course and that they had enjoyed the course. Of the apprentices surveyed who had done a pre-apprenticeship course, only two out of 104 responding to the question did not agree that they had learnt a lot in the course. Some current pre-apprenticeship students would like to have had more practical, hands-on content in their courses, although others felt that the current curriculum should not be changed. Some complained of disruptive students in the class causing problems, some wanted an improvement in the quality of equipment, while some wanted better-quality teachers. Many believed these courses should include some form of financial support.

How did they come to choose the course and what are their perceptions of the availability of advice on choosing a VET course and entering a trade?

Those who had done a pre-apprenticeship course had usually learnt about it from friends or relatives and to a somewhat lesser extent from their school. Many expressed the view that the pre-apprenticeship prepared them well for their apprenticeship. Most chose the course because they wanted to do an apprenticeship.

# Policy implications

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One of the important themes to emerge from this study is the lack of clarity over the purpose of pre-apprenticeships—in essence, whether they are principally designed to provide industry-related skills or whether they are quasi-labour market programs targeted at individuals disadvantaged in their capacity to secure an apprenticeship. This study has found evidence for both roles. While the two purposes are not necessarily incompatible, the marketing and the design of these courses and the quality of curriculum should be driven by a clearly stated objective.

Just as there are differences over the role of pre-apprenticeships, there were also clear differences between some of the industry sectors examined. The role of pre-apprenticeships in electro-technology seems to be strongly established as the preferred method of entry into apprenticeship, and it also seems to be the case that pre-apprenticeships are used in this industry as a means of improving the supply of apprentices, which in turn is seen as improving the output of qualified tradespeople. It follows that there might well be good policy reasons to encourage such diverse approaches on an industry basis, rather than to impose a ‘one size fits all’ model onto pre-apprenticeships. On the other hand, there might be good reasons to avoid using pre-apprenticeships as a de facto entry requirement into any apprenticeship. There are clearly many apprentices who do not require a pre-apprenticeship for satisfactory performance in their trade course.

Possibly, the only policy guidelines needed, if the primary purpose of pre-apprenticeships is to address industry-related skills shortages, would be concerned with ensuring:

- ✧ that the number of students admitted to pre-apprenticeship courses within an industry sector was a fair reflection of the likely demand for apprentices
- ✧ that completion of a pre-apprenticeship ensured appropriate credit towards completion of the related apprenticeship consistent with competency-based principles
- ✧ that the pre-apprenticeship curriculum was sufficiently flexible to enable a balance between industry-specific skills and more general work-readiness skills, depending upon student needs. Consistent application of recognition of prior learning principles would be a valuable policy focus in this context.

If, however, the primary purpose of pre-apprenticeships is to act as a quasi-labour market program, then their focus should be first upon specific target groups and upon imparting generalised work-readiness skills. Given that there appears to be an increasing number of early school leavers undertaking pre-apprenticeship courses, there is clearly a role for such a program. Whether there is a need to separate such courses from pre-apprenticeships that attract Year 12 leavers is an issue requiring further examination. It could be that the growing availability of school-based apprenticeships or other forms of VET in Schools might reduce the incidence of this group of early leavers, allowing existing pre-apprenticeships to be more industry-focused.

Finally, the future analysis of pre-apprenticeships would be facilitated by the clearer delineation of such courses in the statistical collection. This of course would require national agreement on what pre-apprenticeships are and how they would be identified in the national data collection.

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# Support document details

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Additional information relating to this research is available in *Pre-apprenticeships in three key trades: Support document*. It can be accessed from NCVER's website <<http://www.ncver.edu.au/publications/1781.html>> and contains:

- ✧ Appendix 1: Reference group membership
- ✧ Appendix 2: Details of stages 2 and 3 interviews
- ✧ Appendix 3: Pre-apprenticeship project survey for apprentices
- ✧ Appendix 4: Pre-apprenticeship survey
- ✧ Appendix 5: Details of pre-apprenticeship enrolments
- ✧ Appendix 6: Data from apprentice survey
- ✧ Appendix 7: Stage 5 protocols and responses
- ✧ Appendix 8: Stage 5 case studies



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