research **at a glance**

The series 'Research at a glance' is produced by the National Centre for Vocational Education Research to disseminate, in an easily accessible format, the findings and outcomes of research in vocational education and training (VET). It identifies the policy implications of the research and how those findings might be applied in the VET sector. It is hoped it will be an aid to both policy-makers and practitioners, providing information to improve the VET sector.

Australian apprenticeships: facts, fiction and future

'Research at a glance' provides a summary of the most comprehensive research ever undertaken into Australia's apprenticeship system and which is published by NCVER in two volumes.

The first volume, *Australian apprenticeships: Facts, fiction and future*, provides a comprehensive analysis of the development of apprenticeships in Australia (including the introduction of traineeships and new apprenticeships). The rapid growth and transformation of the system over the past decade is examined in detail and proposals for the future of apprenticeships in Australia are explored.

The second is *Australian apprenticeships: Research readings*, which reports the findings of 11 new research studies into various aspects of apprenticeships, traineeships and new apprenticeships.

Text for both volumes and the underpinning research reports can be accessed easily by visiting www.ncver.edu.au/apprentices.htm.

key issues emerging from the research

- Apprenticeships in Australia are more popular than ever, with numbers having grown rapidly in the last five years to reach 275 000 in June 2000[a]. Numbers have continued to increase reaching around 295 000 in December 2000.
- The rapid expansion of the system beyond the traditional trades, far from being a problem, means that new apprenticeships now reflect the structure of the Australian labour market better than ever before.
- The opening up of the system to people of all ages has not meant a reduction of opportunities for young people. It means Australia's apprenticeship system is adjusting to global changes in the nature of work and the rapid ageing of the population better than the apprenticeship systems in any other countries at present.
- The employment retention outcomes from apprenticeships, traineeships and new apprenticeships are very good. Over 90% of new apprentices are employed three months after completion of their apprenticeship. This compares very favourably against the employment outcomes of TAFE and university graduates, which are nevertheless also very good.
- The long-term labour market prospects of apprentices at the equivalent of Certificate III level or higher are second only to university graduates in terms of the higher rates of employment and the lowest rates of unemployment. Qualified apprentices have the highest rates of full-time employment and self-employment in Australia. The employment outcomes of people who have done a shorter traineeship at Certificate I or II level are not as good but are better than those of people who have no post-school qualifications.
- The analysis suggests there is potential for the size of the system to grow to over 400 000 apprentices. National action to target growth in the apprenticeship system to higher skill areas of the labour market, particularly in the associate professional and technician occupations, is proposed.

(a) This was the figure published for June 2000. It has since been revised to around 280 000.

AUSTRALIAN apprenticeships

research at a glance

NCVER

Australian apprenticeships

fiction	facts
Apprenticeship and traineeship places for young people have declined dramatically in recent years.	Not true. Prior to 1992 all apprenticeship places went to young people. Apprenticeships have been open to adults since 1992. Of course as a consequence the share of apprenticeship places for young people has fallen. But the numbers going to young people have grown strongly. The number of apprenticeships and traineeships for teenagers rose from just under 73 000 in 1995 to 101 200 in 2000. The number for young people aged 20–24 years rose from 53 200 in 1995 to over 86 000 in 2000. Nearly half of all teenage full-time employees in Australia today are in a new apprenticeship.
You cannot get into a new apprenticeship these days without Year 12 or a tertiary qualification.	Not true. The biggest group of people in new apprenticeships are those who have completed Years 10 or 11 (45%). Some 35% have done Year 12 and 7% have done Year 9 or lower. Only 11% have a tertiary qualification. Surprisingly the proportions with Years 10, 11 or 12 have been falling in recent years. The proportions with a tertiary qualification or only Year 9 or lower have been rising modestly.
The record numbers of new apprenticeships are all very well. What has really been happening is that traditional apprenticeships are falling away. All the growth is in shorter traineeships.	Not true. Total numbers are at record levels, having reached 275 000 in June 2000. However, the growth has been in what were traditional apprenticeships and traineeships and in new areas of Certificate III or higher training. It is true that the fastest growth has been in occupations other than the skilled trades. Yet skilled trades apprenticeships are now at around 140 000. Only in 1980–81 and 1988–92 have these numbers ever been higher. There are now 216 000 new apprenticeships at Certificate III level or higher, by far the highest number ever in the system.
New apprenticeships are usually in dead-end jobs with low pay. It's better to go to TAFE or university.	New apprenticeships are now available across a whole range of occupations in the labour market that have different levels of skill and rates of pay. New apprentices' starting salaries averaged $512 per week in 2000 (or some $470 per week if they are in their first full-time job), and are higher than those of TAFE graduates in general. Moreover new apprentices' starting salaries are much higher for Certificate III, IV or diploma graduates than if they did a new apprenticeship at Certificate II level. It's true that the starting salaries for university graduates in their first full-time job are higher again at some $635 per week. The majority of university graduates are employed in the professions which are the highest paying jobs in the labour market.
Completing a new apprenticeship is no guarantee of a job.	Nothing can guarantee people a job. Completing a new apprenticeship is an excellent pathway to a job because the training has already occurred in the employment context. Some 90% of completing new apprentices are retained by the employer they did their apprenticeship with or easily move into another job. The immediate employment outcomes for university and other TAFE graduates are also good but not as high as new apprenticeships. Some 73% of TAFE graduates (excluding new apprentices) and 67% of university graduates move into employment in the immediate period after graduation. Of course some also go on to further study.
The long-term employment and earnings prospects are not good for new apprentices.	Not true. Gaining any kind of post-secondary qualification considerably improves people's employment outcomes, career prospects and long-term earnings. University qualification at the degree level or higher leads to the highest employment rates and earnings levels in the labour market. The next best employment outcomes are achieved by those who have an apprenticeship or other skilled vocational qualification (at the Certificate III or IV level). For this group the probability of having a job is over 83%. Moreover their average full-time earnings exceed $43 000 per year. People with apprenticeship or other skilled vocational qualifications are more than twice as likely as anyone else to be self-employed and have the highest rates of full-time employment of any group in the labour market, university graduates included.

AUSTRALIAN apprenticeships

what are apprenticeships?

apprenticeships are a longstanding system of combining training and employment so that people entering an occupation can receive instruction in the specific skills needed while working in that particular occupation. Apprentices benefit from having guaranteed employment while undertaking training. They have the opportunity to learn skills from experienced, skilled and qualified persons in their chosen occupation. Employers have the benefit of having an employee who can be trained in the particular skills their enterprise requires and who becomes increasingly productive as time passes. Apprentices can be paid a lower rate than a fully qualified worker during the training period.

Apprenticeship training occurs within a contract of training that reflects various requirements, conditions and obligations governing apprenticeships around the nation.

Apprenticeships were introduced to Australia in the early years of the development of Australia's colonies, having been inherited from the British system of apprenticeship. Originally they involved employment and on-the-job instruction only, and were generally for periods of up to seven years. After World War II apprenticeship terms were set to a maximum of four years and attendance at off-the-job training courses became universal. This was typically for one day per week for three years (or its equivalent). Since 1994 the requirements for formal off-the-job training in apprenticeships have been relaxed and other flexibilities have been introduced to expand the ways in which apprenticeship training can be offered. This facilitated the introduction of part-time apprenticeships and school-based apprenticeships (i.e. apprenticeships undertaken by students who are also still at school).

Apprenticeships in Australia have mainly been confined to the skilled trades occupations, such as the metal and engineering trades, the automotive trades, the electrical and electronics trades, the building and construction trades and food trades. They have also been applied in some specific and related skilled occupations, hairdressing being the most notable. These jobs make up some 14% of all jobs in Australia.

traineeships were introduced in 1985 to complement traditional apprenticeships by extending the coverage of 'apprenticeship-type' training and employment to a much wider range of jobs across the whole labour market. Most of this training occurred within contracts of training of one year's duration combining both employment and off-the-job formal training (although more recently longer contract periods for traineeships have been applied).

new apprenticeships were introduced in 1998 to establish a single integrated system of employment and training that incorporated what were formerly separate apprenticeship and traineeship systems. New apprenticeships cover all occupations where a contract of training applies, and can be applied to varying training periods (usually from one to four years) and various vocational qualification levels (from Certificate I to diploma).

Apprenticeship is also a *generic* term frequently used to describe traditional apprenticeships, traineeships and new apprenticeships. *Contracts of training* is another generic term used to describe the arrangements under which apprenticeships, traineeships and new apprenticeships operate.



the massive **growth** of **apprenticeships**

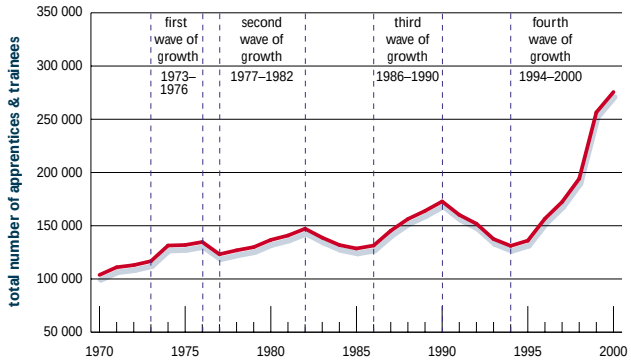
Apprenticeship numbers grew gradually in Australia throughout the 19th and 20th centuries to reach 100 000 at the end of the 1960s.

the first wave of growth, 1973–1976

The first wave of growth in apprenticeships in the modern era was in the 1973 to 1976 period. Apprenticeship numbers grew rapidly from just over 116 000 in 1973 to almost 135 000 in 1976 (figure 1). Despite the global impact of rising oil prices on the Australian economy at the time, apprenticeship numbers jumped 12% between 1973 and 1974 to reach a new record number in response to the introduction in 1973 of the first national scheme providing subsidies for employers to take on apprentices—the National Apprentice Assistance Scheme (NAAS).

Apprenticeship numbers then fell by over 11 000 between 1976 and 1977 in line with the mid-1970s economic downturn.

figure 1: periods of growth in apprenticeships, traineeships and new apprenticeships, 1970–2000



sources: DEIR (1986); DEYA (1980); NCVER (1998); NCVER (2000a); NCVER (2000b) and unpublished data

the second wave of growth, 1977–1982

The second wave of growth in the modern era occurred between 1977 and 1982 (figure 1). Apprentice numbers grew strongly over this five-year period from just over 123 000 in 1977 to reach almost 150 000 by 1982. This was a new record in Australian apprenticeship numbers. Again there was a positive response by employers to the introduction of an enhanced comprehensive national employer incentive scheme in 1977, called the Commonwealth Rebate for Apprentice Full-time Training (CRAFT) scheme.

A recession in the early 1980s saw apprenticeship numbers again fall significantly from just under 148 000 in 1982 to under 129 000 in 1985 (table 1 and figure 1).

table 1: trends in apprenticeships, traineeships and new apprenticeships, 1970–2000

year	no. of apprentices ('000)	no. of trainees ('000)	total no. of contracts of training ('000)	total no. in training as a proportion of population aged 15–64 years (%)
1970	103.8	–	103.8	1.32
1971	111.0	–	111.0	1.35
1972	113.0	–	113.0	1.35
1973	116.7	–	116.7	1.37
1974	131.4	–	131.4	1.51
1975	131.9	–	131.9	1.49
1976	134.7	–	134.7	1.50
1977	123.2	–	123.2	1.35
1978	126.9	–	126.9	1.37
1979	129.9	–	129.9	1.38
1980	136.7	–	136.7	1.43
1981	140.8	–	140.8	1.45
1982	147.2	–	147.2	1.47
1983	138.8	–	138.8	1.37
1984	131.9	–	131.9	1.29
1985	128.6	0.0	128.6	1.23
1986	130.4	1.0	131.4	1.24
1987	138.9	6.4	145.3	1.34
1988	147.1	9.2	156.3	1.32
1989	151.7	12.2	163.9	1.36
1990	161.0	11.8	172.8	1.51
1991	151.0	9.2	160.2	1.39
1992	142.9	9.0	151.9	1.30
1993	122.7	14.9	137.5	1.17
1994	123.3	7.8	131.1	1.10
1995	123.8	12.1	135.9	1.13
1996	126.3	30.2	156.5	1.28
1997	123.8	48.1	171.9	1.39
1998	–	–	193.6	1.55
1999	–	–	254.8	2.01
2000	–	–	275.6	2.14

note: number in training at 30 June each year.
sources: DEIR (1986); DEYA (1980); NCVER (1998); NCVER (2000a); NCVER (2000b) and NCVER (2000c)

the apprenticeship boom of the late 1980s and early 1990s

Increasing concern in the early 1980s about persisting unemployment and the stagnation in apprenticeships at around 130 000 led the government to establish a national inquiry into labour market programs in 1984. Its central proposal was to establish traineeships to complement the apprenticeship system by providing new structured training pathways for youth across a much wider range of occupations that were not covered by apprenticeships. Traineeships were established in 1985. However, the implementation of traineeships was relatively slow, although numbers did grow steadily to reach around 12 000 by 1990 (table 1).

The early 1990s recession in the Australian economy had an enormous impact on apprenticeship numbers. They crashed from 161 000 in 1990 to just over 120 000 three years later.

It was apprenticeships that took off in the mid- to late-1980s in response to the rapidly improving Australian economy at the time. Apprenticeship numbers grew from under 130 000 in 1985 to reach an all-time Australian record number of 161 000 in 1990—a number which has not been exceeded since (figure 1 and table 1).

The early 1990s recession in the Australian economy had an enormous impact on apprenticeship numbers. They crashed from 161 000 in 1990 to just over 120 000 three years later. Apprenticeships remained at these historically low levels for some years through the mid-1990s. In the early 1990s traineeships also remained low, being fewer than 10 000 in most years in the early- to mid-1990s (table 1).

the recent boom in apprenticeships, traineeships and new apprenticeships

The fourth wave of growth in apprenticeship and traineeship numbers began in the mid-1990s and has been the biggest period of growth ever witnessed in the history of the system in Australia. Total numbers have grown from just over 131 000 in 1994 to over 275 000 in 2000, a doubling of numbers in only six years (figure 1 and table 1).

The fourth wave of growth in apprenticeship and traineeship numbers began in the mid-1990s and has been the biggest period of growth ever witnessed in the history of the system in Australia.

Much of this growth has been fuelled by the rapid expansion of traineeships. For instance traineeship numbers grew sixfold in three years, from just under 8000 in 1994 to 48 000 in 1997 (table 1), while apprenticeship numbers remained low during that period.

With the introduction of an integrated new apprenticeship system in 1998, apprenticeship numbers were no longer recorded in the NCVER's official national statistics. Yet new apprenticeship numbers in the skilled trades have recovered substantially to reach around 140 000 by 2000. This means that traditional apprenticeships recovered very strongly in the late 1990s to reach 140 000—the third highest level in Australia's history—by 2000. (This number is consistent with the apprenticeship numbers collected by the Australian Bureau of Statistics)

Australia is a world leader in terms of its coverage of adult apprentices. The dual systems of Switzerland, Germany and Austria all focus only on young people.

Australian apprenticeships in **an international context**

The growth of apprenticeships, traineeships and new apprenticeships has been so rapid in the past five years that today some 2.1% of Australia's working-age population are now employed in a new apprenticeship.

Australia now rates fourth in the world, just behind Switzerland, Germany and Austria in terms of coverage of the workforce by the apprenticeship system. Australia ranks well ahead of countries like Finland, Norway, the Netherlands, Denmark, France, the United Kingdom and the United States of America (table 2).

table 2: an international comparison of apprenticeship coverage

country	per cent of working-age population (15–64 years) in apprenticeships	country	per cent of working-age population (15–64 years) in apprenticeships
Switzerland	3.4	Netherlands	1.1
Germany	3.0	Denmark	0.9
Austria	2.2	France	0.8
Australia	2.1	United Kingdom	0.6
Finland	1.1	United States of America	0.2
Norway	1.1		

sources: CIA; CEDEFOP; US Department of Labor

Australia is a world leader in terms of its coverage of adult apprentices. The dual systems of Switzerland, Germany and Austria all focus only on young people.

Contrary to popular belief, diversification has not been achieved at the expense of apprenticeship opportunities in the skilled trades.

the **changing structure** of Australian apprenticeships

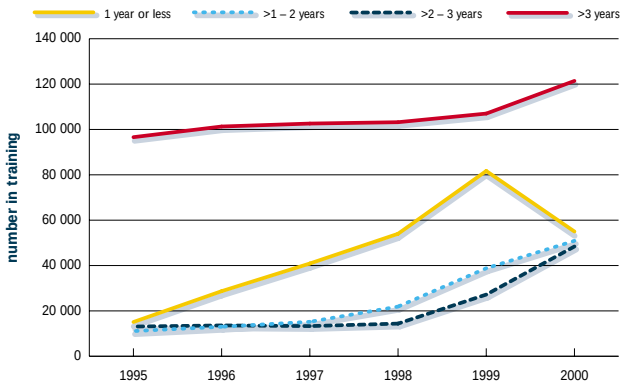
the duration of apprenticeships, traineeships and new apprenticeships

The introduction of traineeships saw the introduction of contracts of training of 1–2 years' duration. Prior to that apprenticeships had been mostly of 3–4 years' duration. Flexible arrangements introduced over the past decade mean there is now a fairly even spread of new apprenticeships of different durations. In 2000:

- 19.9% were one year or less in duration
- 18.5% were over one year and up to two years
- 17.6% were over two years and up to three years
- 44.0% were of three years or more in duration

The number of apprenticeships and traineeships of all durations have grown very strongly since 1995 (figure 2). All are continuing to grow strongly except new apprenticeships of one year's duration or less, which have declined sharply since 1999.

figure 2: the duration of apprenticeships and traineeships and new apprenticeships, 1995–2000



source: NCVER (2000c)

changes in the level of qualifications of apprenticeships, traineeships and new apprenticeships

Traditionally the apprenticeship system was focussed wholly on trade certificate or equivalent qualifications (i.e. Certificate III or equivalent level). Traineeships initially introduced the equivalent of Australian Qualifications Framework (AQF) Certificate I and IIs to the system, with an extension of the system to the equivalent of AQF Certificate IVs and diplomas in the early 1990s.

Clearly the extension of the apprenticeship system to cover all levels of vocational qualifications means by definition that Certificate IIIs are no longer 100% of the system. However, 75% of all new apprenticeships are in Certificate IIIs (table 3). The numbers in Certificate III contracts of training grew by over 90 000 places since 1995 to reach an all-time record of 208 000 new apprentices in Certificate III programs in 2000 (figure 3).

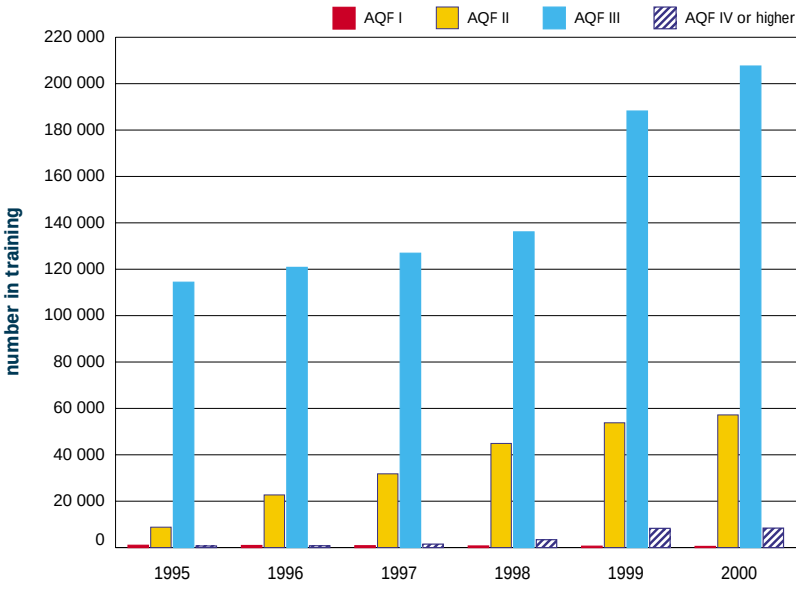
Almost 21% of new apprentices were in new apprenticeships at Certificate II level (table 3). There was a sixfold increase in contracts of training at the Certificate II level from 1995 to 2000, with the number increasing from 9000 to nearly 58 000 (figure 3).

table 3: the AQF qualifications being sought by new apprentices, 2000

AQF qualification	no. in training ('000)	proportion of total (%)
certificate I	0.1	0.1
certificate II	57.2	20.7
certificate III	207.6	75.3
certificate IV/diploma/ advanced diploma	8.4	3.1
not known	2.3	0.8
total	275.6	100.0

source: NCVER (2000c)

figure 3: the qualification levels of apprenticeships and traineeships and new apprenticeships, 1995–2000



source: NCVER (2000c)

There has been strong growth from a low base in new apprenticeships at the Certificate IV or diploma level to reach 8400 in 2000. Certificate Is are insignificant and have almost disappeared from the apprenticeship system in recent years (figure 3).

the growth of part-time apprenticeships

Part-time apprenticeships have grown rapidly since 1995, growing from only 2700 in 1995 to over 45 000 in 2000. Part-time new apprenticeships now make up 16.5% of all new apprenticeships.

the growth of school-based apprenticeships

New apprenticeships undertaken by students who are still at school have also grown very rapidly from just over 100 in 1995 to over 6000 in 2000. This represents 2.2% of all new apprenticeships. Over half of all school-based new apprenticeships in Australia are in Queensland.

the **broadening occupational base** of Australian apprenticeships

Apprenticeships were traditionally focussed on the skilled trades and related occupations which make up only 14% of all jobs in Australia. As shown in table 4 all apprenticeships used to be in the trades. By 1990 some 93% of all apprenticeships and traineeships were still in the trades, with traineeships in the clerical and sales occupations just starting to make an impact in the system.

Traineeships were introduced in 1985 with the specific objective of broadening the coverage of contracts of training beyond the trades to the whole labour market. Yet even by 1995 the trades still dominated with 88.3% of all apprenticeships and traineeships (table 4). Clerical, sales and services traineeships made up most of the remainder in 1995.

The impact of a broadening of the occupational base really began to be felt by 1997 prior to the introduction of new apprenticeships. The trades had dropped to 72.8% of the total. Clerical, sales and service traineeships had grown rapidly and reached 16.5% of the total. Significant numbers of apprenticeships and traineeships had started to appear in the labourer and associate professional areas of the labour market (table 4).

The true impact of traineeships on the system has really been felt in the past three years, well over a decade after they were first introduced. Only half of all new apprenticeships are now in the skilled trades, and some 30% are in clerical, sales and service occupations (table 4). Approximately 11% are in labourer and related occupations, 4.3% are in intermediate production and transport occupations, 2.7% are in associate professional occupations and 1.6% are in managerial and professional occupations.

table 4: the occupational mix of apprenticeships and traineeships and new apprenticeships, 1985–2000

occupational group	proportion of all apprenticeships, traineeships and new apprenticeships				
	1985[a]	1990[a]	1995	1997	2000
managers & administrators	0.0	0.1	1.2	1.6	1.0
professionals	0.0	0.0	0.1	0.2	0.6
associate professionals	0.0	0.1	1.0	2.8	2.7
trades & related occupations					
mechanical & fabrication engineering tradespersons	34.6	17.2	14.7	12.3	6.9
automotive tradespersons	4.7	15.6	15.4	13.9	8.7
electrical & electronics tradespersons	14.2	13.5	11.2	9.7	7.0
construction tradespersons	17.0	18.9	19.6	14.3	11.4
food tradespersons	8.6	8.2	10.9	9.8	7.5
hairdressing	9.6	7.6	7.2	5.5	3.9
other trades	11.3	12.0	9.3	7.1	5.3
total trades & related	100.0	93.0	88.3	72.8	50.7
clerical, sales & services occupations	0.0	6.0	7.5	16.5	29.6
intermediate production & transport occupations	0.0	0.3	0.5	1.2	4.3
labourers & related occupations	0.0	0.5	1.5	5.0	11.1
total	100.0	100.0	100.0	100.0	100.0

note: [a]figures for 1985 and 1990 have been derived from an approximate mapping of occupational codes to an older version of ASCO.
source: NCVER (2000c)

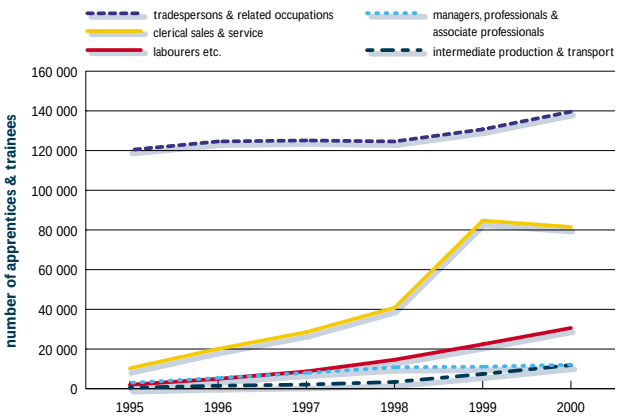
Contrary to popular belief, diversification has not been achieved at the expense of apprenticeship opportunities in the skilled trades. Apprenticeships and traineeships across all occupational groups have grown strongly since the mid-1990s, some off a relatively low base. Skilled trades apprenticeships have grown from 120 000 in 1995 to almost 140 000 in 2000 (figure 4). The number of new apprenticeships in the trades is the third highest level on record. Clerical, sales and service traineeships have grown the most since 1995, but new apprenticeship numbers in these occupations have fallen slightly since 1999.

The broadening of the occupational base of new apprenticeships has been both desirable and necessary. New apprenticeships are more in line with the structure of the labour market than ever before.

Far from being a problem as is often supposed, the broadening of the occupational base of new apprenticeships has been both desirable and necessary. New apprenticeships are more in line with the structure of the labour market than ever before. Yet the take-up of new apprenticeships is still not evenly spread across the Australian labour market. For instance:

- the skilled trades and related occupations still cover half of all new apprenticeships but represent only 14% of all jobs in Australia
- clerical, sales and service occupations cover nearly 32% of all jobs in Australia and 30% of new apprenticeships are in these occupations
- new apprenticeships in labourer and related occupations have reached 11% of all new apprenticeships, and these occupations account for 10% of all jobs in Australia
- managerial and administrative occupations make up 7% of all jobs but account for only 1% of all new apprenticeships
- professional occupations account for less than 1% of all new apprenticeships, but make up nearly 20% of all jobs
- intermediate production and transport occupations account for 9% of all jobs but only 4% of new apprenticeships

figure 4: growth in apprenticeships and traineeships and new apprenticeships in each occupational group, 1995–2000



source: NCVER (2000c)

opening up apprenticeships to **people of all ages**

The biggest myth about recent changes to the apprenticeship system in Australia is that opportunities for young people are diminishing. This is not the case.

The biggest myth about recent changes to the apprenticeship system in Australia is that opportunities for young people are diminishing. This is not the case. Until the decision to remove all age restrictions to apprenticeships and traineeships was taken in 1992, all places went to young people. By definition, the removal of age restrictions means that the proportion of young people in the system will fall. By 1995, 7% of all apprenticeships and traineeships were taken up by people aged 25 years or more. Today almost one-third of new apprentices are aged 25 years and over.

But this does not mean young people are missing out. As shown in figure 5, apprenticeship and traineeship and new apprenticeship opportunities are growing strongly for all age groups. The number of teenagers in the system rose from 72 800 in 1995 to 101 200 in 2000, by far the highest number of teenagers ever seen in the Australian apprenticeship system. The number of 20 to 24-year-olds rose even faster, from 53 200 in 1995 to 86 400—again a record number.

The numbers of older people in new apprenticeships are now also significant. There were 55 100 new apprentices aged 25–39 years in 2000, and 33 000 new apprentices aged 40 years and over.

The impact of these has seen an increase, not a decrease, in the proportions of all young people (and older people) who are participating in apprenticeships, traineeships and new apprenticeships (table 5).

table 5: age-related participation rates in apprenticeships and traineeships and new apprenticeships, 1995–2000 (per cent)

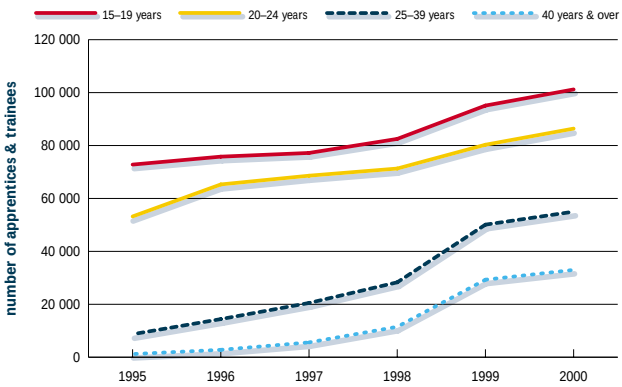
age group	1995	1996	1997	1998	1999	2000
15–19 years[a]	5.7	5.9	6.0	6.3	7.1	7.5
20–24 years	3.7	4.5	5.0	5.3	5.9	6.3
25–39 years	0.2	0.3	0.5	0.6	1.1	1.3
40 years & over	0.0	0.1	0.1	0.2	0.5	0.6

note: (a) includes a small number of persons aged less than 15 years
source: NCVER (2000c)

Opening up the system to older people is crucial. The effect of the rapidly ageing population means that the young can no longer be considered the sole source of entry-level skills to new occupations in the labour market. The rapidly changing nature of work means that people now need to change careers several times over a working lifetime. Australia's apprenticeship system is starting to reflect these changes and it leads the world on this issue, as other apprenticeship systems remain principally focussed on school leavers and young adults.



figure 5: growth in the number of apprentices and trainees and new apprentices in each age group, 1995–2000



source: NCVER (2000c)

Opening up the system to older people is crucial. The effect of the rapidly ageing population means that the young can no longer be considered the sole source of entry-level skills to new occupations in the labour market.

the **changing characteristics** of apprentices

the growth of female apprentices and trainees and new apprentices

It took nearly 200 years for female participation in the apprenticeship system in Australia to exceed 10%. In 1995 the proportion of females reached 16.5%, following the beginnings of the rollout of traineeships beyond the traditional trades. There has been a rapid rise in female participation since then, with female participation reaching 31% in 2000. There are now over 85 000 female new apprentices. Further improvement is still needed as females make up nearly 45% of the employed workforce in Australia.

the growth in Indigenous apprentices and trainees and new apprentices

There has been a fivefold increase in the number of Indigenous apprentices and trainees in Australia since the mid-1990s:

- the number has risen from 1100 in 1995 to 5100 in 2000
- the number of Indigenous apprentices and trainees as a proportion of the total number has grown from 0.8% in 1995 to 1.9% in 2000

Indigenous participation in new apprenticeships is now commensurate with that of the rest of the Australian population, as Indigenous peoples also make up 1.9% of Australia's working-age population. However, Indigenous peoples are still not gaining access to all areas of the higher skilled new apprenticeships.

Indigenous peoples are still not gaining access to all areas of the higher skilled new apprenticeships.

the growth of people of non-English-speaking backgrounds in apprenticeships and traineeships and new apprenticeships

Some 7% of all new apprentices in 2000 reported that they were of non-English-speaking background. The numbers have risen threefold since 1995, from 5600 to 19 000 in 2000.

Yet despite this progress there are far fewer people of non-English-speaking background in the apprenticeship system than there should be, as over 14% of the working-age population in Australia are of non-English-speaking background.

the improving situation for people with disabilities

There has also been a fivefold increase in the number of people with disabilities in the apprenticeship system in the past five years:

- the number has risen from 1000 in 1995 to 5600 in 2000
- this means the proportion of all apprentices and trainees who have reported a disability has risen from 0.8% in 1995 to 2.0% in 2000.

Some 2.3% of the Australian population have a disability that does not involve restrictions in core functions (such as communication difficulties, mobility difficulties or difficulties requiring home care) or in undertaking education or employment. New apprenticeships are now approaching full coverage of this group. The system does not, however, provide coverage for the further 14% of the population who have disabilities involving greater restrictions.



where do apprentices **live**?

New apprenticeships are not evenly spread across Australia in proportion to the spread of the working-age population in each State and Territory. New South Wales, Western Australia and the Northern Territory have proportionately fewer new apprentices than their population shares would suggest (table 6). However, New South Wales and the Northern Territory, along with Victoria, have experienced the highest rates of growth in the past year.

table 6: new apprentices in each State and Territory, 2000

State/Territory	new apprentices		
	no. in training ('000)	proportion of total (%)	share of working age population[a] (%)
New South Wales	77.4	28.1	33.5
Victoria	80.0	29.0	24.9
Queensland	51.3	18.6	18.7
Western Australia	20.2	7.3	10.0
South Australia	28.4	10.3	7.7
Tasmania	10.8	3.9	2.4
Australian Capital Territory	5.0	1.8	1.1
Northern Territory	2.5	0.9	1.7
Australia	275.6	100.0	100.0

note: (a) population aged 15–64 years.
source: NCVER (2000c); data supplied by the Australian Bureau of Statistics

Rural and remote Australia is comparatively well served by the apprenticeship system as shown in table 7. People living in rural and remote areas account for 32% of all new apprentices yet the share of the working-age population in these areas is only 27%. People in metropolitan areas other than capital cities are also doing well. However, while some two-thirds of the working-age population live in capital cities, only 59% of new apprentices are in capital cities.

Rural and remote Australia is comparatively well served by the apprenticeship system.

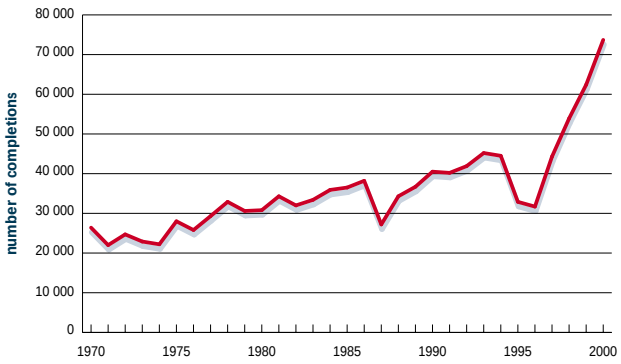
table 7: new apprentices in each geographic region of Australia, 2000

geographic region	new apprentices		
	no. in training ('000)	proportion of total (%)	share of working age population[a] (%)
capital city	163.7	59.4	65.5
other metropolitan	21.5	7.8	7.5
rural	79.4	28.8	24.2
remote	7.9	2.9	2.8
interstate	2.5	0.9	0.0
region not stated	0.5	0.2	0.0
total	275.6	100.0	100.0

note: (a) population aged 15–64 years in June 1999.
source: NCVER (2000c); data supplied by the Australian Bureau of Statistics



figure 6: the number of apprenticeship and traineeship and new apprenticeship completions, 1970–2000



sources: DEIR (1986); DEYA (1980); NCVER unpublished data

completions and **attrition**

The issue of non-completions and attrition in apprenticeships and traineeships is the most misunderstood aspect of the whole system.

The prevailing view is that attrition is relatively high and getting worse. However, this is not the case.

growth in the absolute number of completions

The growth in the absolute number of recorded completions has reached unprecedented levels in recent years (figure 6). Completion numbers have more than doubled since 1995, rising from 32 900 in 1995 to 73 700 in 2000.

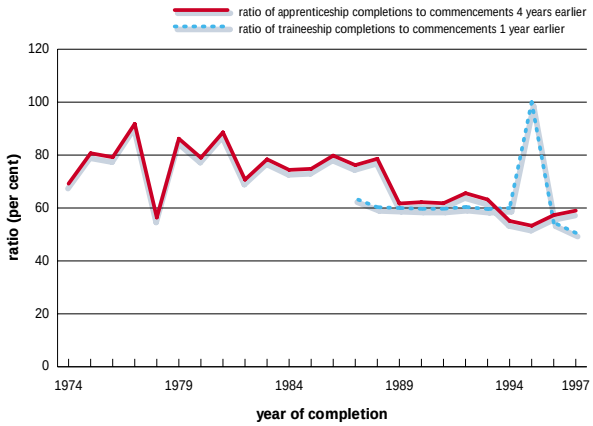
the incorrect use of crude proxies to measure completion rates

Observers have frequently inferred a worsening situation in apprenticeship and traineeship completions over the past 30 years from examining trends in the ratios of completions to commencements. Trends in the ratio of apprenticeship completions to commencements four years earlier and of traineeships completions to commencements one year earlier are shown in figure 7.

The pattern of long-term decline is clear. Little wonder then that most observers have concluded that attrition has been increasing at an alarming rate.

However, this yields a misleading picture. During periods of growth when completions lag behind commencement rises the ratio will always fall. The only valid way to measure completion rates is track each individual's progress through the training contract, rather than to use aggregate administrative statistics.

figure 7: the ratios of completions to commencements in apprenticeships and traineeships and new apprenticeships, 1974–1997



sources: DEIR (1986); DEYA (1980); NCVER unpublished data

the real story about apprenticeship and traineeship completions

The results of various research studies using valid methodologies give an indication of the real completion rates.

Traineeship attrition rates have grown since the mid-1990s, but only marginally. Only 55% of all trainees complete their traineeships. This is much lower than for apprenticeships or other forms of education and training. However, available evidence suggests that traineeship attrition rates are similar to employment attrition rates in the labour market as a whole for persons in the first year of a new job (table 8).

Apprenticeship attrition rates are only increasing very slightly if at all. Apprenticeship completion rates are high compared to other kinds of education and training (table 8).

table 8: estimates of completion and attrition rates

type of education or training	completion rate (per cent)	attrition rate (per cent)
traineeships		
1985–1993	61.0	39.0
1995	57.3	42.7
1996	56.5	43.5
1997	55.1	44.9
apprenticeships		
various years	76.0	24.0
1994–1995	73–77	23–27
1995–1996	70–74	26–30
technical & further education (TAFE)		
TAFE courses[a]	27.0	73.0
completion of all modules enrolled in[a]	49.0	51.0
module completion (pass) rate	82.6	17.4
university		
undergraduate bachelor degree completions	66.0	34.0

note: (a) 76% either complete a full course (27%) or successfully complete all modules they commence (49%)
sources: DETYA (1999); Grey et al. (1999); Lamb et al. (1998); NCVER (2000d); OECD (2000); Ray et al. (2000)

Apprenticeship completion rates are high compared to other kinds of education and training.

the outcomes from apprenticeships, traineeships and new apprenticeships

immediate employment outcomes and starting salaries

The employment retention outcomes after completion of an apprenticeship, traineeship or new apprenticeship are excellent. For instance, over 90% of apprentices had unsubsidised employment three months after completion of their contract of training. Most were retained with the employer with whom they did their apprenticeship, although some would have found a new job. The corresponding employment outcome from traineeships was 93%. Taking apprenticeships and traineeships together, the employment retention outcome in unsubsidised employment three months after completion of a new apprenticeship is 93% overall (table 9).

The employment retention outcomes after completion of an apprenticeship, traineeship or new apprenticeship are excellent.

The starting salaries of graduates from different types of post-secondary education and training exceeded $460 per week in all cases as shown in table 10. University graduates in their first full-time job have the highest starting salaries at $635 per week. This is because university graduates tend to enter professional jobs which are the highest paying jobs in the labour market.

Apprentices and trainees take up jobs across the labour market. Their starting salaries in their first full-time job average $473 per week, slightly higher than for other TAFE graduates.

table 9: employment retention rates/outcomes from post-secondary education and training

type of education & training	measure	employment outcome (per cent)
apprenticeships	Employment in an unsubsidised job three months after completing an apprenticeship during 1999–2000	90.5
	Employment status at end May 2000 of all persons who gained a qualification from TAFE during 1999 who were in an apprenticeship while doing the course	95.7
traineeships	Employment in an unsubsidised job three months after completing a traineeship during 1999–2000	93.2
	Employment status at end May 2000 of all persons who gained a qualification from TAFE during 1999 who were in a traineeship while doing the course	86.2
new apprenticeships	Employment in an unsubsidised job three months after completing any apprenticeship, traineeship or new apprenticeship during 1999–2000	93.1
	Employment status at end May 2000 of all persons who gained a qualification from TAFE during 1999 who were in any apprenticeship, traineeship or new apprenticeship while doing the course	93.6
other TAFE graduate	Employment status at the end May 2000 of all persons who gained a qualification from TAFE during 1999 other than those who were in an apprenticeship, traineeship or new apprenticeship	73.4
university graduate	Employment status in April 2000 after graduation from a bachelor degree or undergraduate diploma during the second half of 1999 or employment status in October 1999 after graduation from a bachelor degree or diploma in the first half of 1999	67.0

sources: unpublished data from DETYA, DEWRSB, GCCA, NCVER & NCVER (2000d)

long-term employment and earnings prospects of apprentices

We can gauge the long-term employment and earning prospects of apprentices by looking at what happens to people who have completed an apprenticeship at some time in the past. This can be done by looking at the employment and earning levels for people who have a skilled vocational qualification. Most of these were gained through an apprenticeship.

The long-term prospects of those having completed a traineeship cannot be gauged in the same way. Although people who have gained a vocational qualification through a traineeship are in the category of people with a basic vocational qualification, most of the people in that category gained their qualification in other ways such as through a TAFE course. Hence the long-term outcomes of traineeships cannot be ascertained in this way, and there are no other data currently available to track the long-term outcomes of traineeships.

Looking at the fortunes of those already in the workforce who have an apprenticeship qualification or another skilled vocational qualification, we can see that the long-term employment prospects of apprentices are very good.

table 10: average weekly earnings of first full-time job holders, 1999

apprentices & trainees who graduate from TAFE	$473
all TAFE graduates	$462
university graduates	$635

source: NCVER (2000d) and unpublished data

Those with the best employment prospects in the Australian labour market are those who have a university higher degree (doctorate or masters degree) or post-graduate diploma (87% are employed) followed by those with a bachelor degree (85%). Only marginally lower are those with an apprenticeship or equivalent qualification who have an 83% chance of being employed in the long run (table 11).

People with an apprenticeship and other skilled vocational qualifications have a much higher probability of having a job than do people with other post-school qualifications. For instance, those with a basic vocational qualification, (broadly equivalent to AQF certificates I and II) enjoy only a

75% chance of having a job. People with diploma or associate diploma qualifications (broadly equivalent to an AQF diploma or advanced diploma) have a 78% probability of employment. Those who hold a diploma may have gained it through a university (undergraduate diploma) or through a TAFE or other vocational education and training provider (table 11).

The probability of employment is only 63.6% for those people who have no post-school qualifications (table 11).

Conversely, those who have university degrees or apprenticeship/skilled vocational qualifications experience the lowest levels of unemployment of any group in the community (table 11).

Apprenticeships are an excellent pathway to full-time employment or self-employment. Almost 90% of employed persons who have an apprenticeship or other skilled vocational qualification have a full-time job. Over 20% of those with an apprenticeship or other skilled vocational qualification are self-employed. People with an apprenticeship or another skilled vocational qualification have by far the highest rates of full-time employment and self-employment in the Australian workforce, university graduates included (table 11).

Estimates of average annual full-time earnings for different groups show that people with an apprenticeship or other skilled vocational qualification have an average earning if employed full-time of around $43 500 (table 11). This represents a premium of around 15% over the average earnings of those with no post-school qualifications.

Those who have university degrees or apprenticeship/skilled vocational qualifications experience the lowest levels of unemployment of any group in the community.

University graduates and holders of associate diplomas enjoy higher average earnings than those with apprenticeship or other skilled vocational qualifications (table 11). Those with basic vocational qualifications earn an average of $36 500 per year (table 11).

Apprentices have employment prospects and earnings outcomes that, although not as good as those for university graduates, clearly outrank the outcomes gained by those with basic vocational qualifications or no qualifications in the Australian labour market. Apprenticeships are the best pathway of all to full-time employment or self-employment.

table 11: employment and average full-time earnings outcomes for people with different types of qualifications, 2000

measure	highest level of post-school qualification held						
	higher degree & post-graduate diploma	bachelor degree	diploma & associate diploma	apprentice & other skilled vocational qualification	basic vocational qualification	no post-school qualification	total working-age population 15–64 years
probability of having a job (%)	86.9	85.3	78.2	83.1	73.7	63.6	69.8
proportion of employed who are:							
employed full time (%)	82.5	81.0	74.0	89.0	70.0	68.0	73.9
self-employed (%)	8.7	9.0	10.0	20.9	11.6	12.9	12.9
unemployment rate (%)	2.9	3.0	5.0	4.1	7.2	8.6	6.8
average annual earnings ($ per year)	$70 000	58 500	$50 000	$43 500	$36 500	$37 500	$45 000

sources: ABS (2000) and unpublished data from the ABS survey of income and housing costs 1997–98

Although we cannot isolate traineeship outcomes from those of all other basic vocational qualification holders, the information here suggests that qualifications from shorter traineeships (at Certificate I and II level) lead to better employment prospects (i.e. 10 percentage points higher). However, the incomes of this group are similar to those without post-school qualifications.

From this we can expect new apprenticeships at the Certificate III or higher level to produce similar outcomes to those seen to date with apprenticeships. New apprenticeships at the Certificate I or II levels can be expected to produce outcomes around the levels seen for basic vocational qualifications holders until now.

Over 20% of those with an apprenticeship or other skilled vocational qualification are self-employed.

There is potential to expand the system to at least 400 000 new apprenticeships in the medium to long term.

future directions: **expanding** new apprenticeships

The findings from the report *Australian apprentices: Facts, fiction and future* suggest a number of ways in which the Australian new apprenticeship system might be expanded in the future. The main findings are as follows:

- The analysis suggests that there is potential to expand the system to at least 400 000 new apprenticeships in the medium to long term.
- The continuing central role of the skilled trades in the new apprenticeship system is recognised. Some 12% of all skilled trades jobs are held by new apprentices and the skilled trades account for 14% of all jobs in Australia. Despite this very high coverage of new apprenticeships in skilled trades employment in Australia, there are some skilled trades occupations with relatively low proportions of new apprenticeships. Some 25 skilled trades are listed in the report (chapter 9, box 7) as having considerable growth potential.
- Associate professional occupations are identified as having the most potential for expansion of new apprenticeships. Like the skilled trades, these occupations involve higher level skills which are suitable for apprenticeships at the Certificate III or higher levels. There are over one million associate professional jobs (which include technicians) in Australia, some 11% of all jobs in the nation (nearly as many as in the skilled trades). Despite this they constitute less than 3% of new apprenticeships, and new apprentices are currently only 0.7% of the associate professional workforce. If new apprenticeship coverage was raised to some 10% of the associate professional workforce, then there would be over 100 000 associate professional new apprenticeships (not the 7500 we see today). The feasibility of these suggestions will need to be tested by government and industry. A systematic national approach to expand associate professional new apprenticeships involving Commonwealth and State/Territory training authorities and industry is proposed.
- Managerial and administrative occupations, currently with 1% of new apprenticeships and 7% of all jobs are identified in the report as having potential only for modest growth in new apprenticeships.
- Professional occupations make up less than 1% of new apprenticeships but nearly 20% of Australia's jobs. These are also the best paying jobs. However, there is no potential for expansion of new apprenticeships here. Most of the qualified workforce in these jobs are university graduates.
- Clerical, sales and service occupations cover nearly 32% of all jobs in Australia, and the massive expansion of traineeships and new apprenticeships into these areas in recent years means some 30% of new apprenticeships are now in these occupations. Yet this is an area where potential for more expansion exists. Some 16 clerical, sales and service occupations are listed in the report (chapter 9, box 8) as ones that already have new apprenticeships in place that could be expanded.
- Intermediate production and transport occupations which currently account for 4% of new apprenticeships and 9% of all jobs, and labourer and related occupations which account for 11% of new apprenticeships and 10% of all jobs are identified as areas of the labour market where major expansions of new apprenticeships should not be encouraged.
- Future strategies for the rollout of new apprenticeships need to recognise that there are almost half a million young people aged 15 to 24 years in Australia today who are combining work with study outside of the new apprenticeship system by working and studying full-time at a school or a tertiary education institution. Two decades ago young people left school to go to work or stayed on to study full-time. Today combining work with study is the norm. It involves more young Australians than the full-time study with no job pathway. Because of this, future strategies aimed at expanding new apprenticeships in those areas of the labour market with high rates of casual employment will have limited success with young people because they are already involved in high numbers in other arrangements combining work with study.
- Despite the major improvement in female participation in recent years, it is unacceptable that females comprise 45% of the employed workforce yet they represent only 31% of new apprenticeships. Policies to raise female participation in trades apprenticeships have failed.

Associate professional occupations are identified as having the most potential for expansion of new apprenticeships.

Clerical, sales and service occupations cover nearly 32% of all jobs in Australia … this is an area where potential for more expansion exists.

Future strategies need to focus on more new apprenticeships in those areas of the labour market where females are employed.

- New strategies will be required if equitable access to new apprenticeships is to be extended to people from non-English-speaking backgrounds. Coverage is now much better for Indigenous people. People with disabilities that do not prevent their participation in education and/or employment have much better access, but more needs to be done to get them into new apprenticeships beyond Certificate II level.
- People from rural and regional Australia have more than proportionate access to the new apprenticeship system. Surprisingly some focus on raising participation in new apprenticeships in capital cities is now needed, particularly for those who live in the lower socio-economic suburbs of our cities.

Raising participation in new apprenticeships in capital cities is now needed, particularly for those who live in the lower socio-economic suburbs of our cities.

future directions: **rethinking** the apprenticeship **concept** for the **new century**

A number of conclusions are drawn in the report *Australian apprentices: Facts, fiction and future* concerning the way forward for Australian apprenticeships. These include:

- The need clearly to define apprenticeships as an entry-level training system for people entering a new occupation, irrespective of their age. The rapidly changing skill requirements in the workplace (meaning people are changing occupations more frequently over their working lifetimes) and the impact of the ageing of the population mean that focussing apprenticeships only on the young is no longer appropriate. Apprenticeships now need to be widely recognised as an entry-level training system not a school-to-work transition system. The increasing number of adults in apprenticeships and traineeships in recent years means this process has already started, but adult apprenticeships are still considered as being 'illegitimate' by some.
- The need unambiguously to restrict apprenticeships to entry-level training. Reskilling and skills upgrading of existing workers in their jobs is crucial but should be handled through different training arrangements. Apprenticeships are inappropriate for continuous skilling.
- Apprenticeships should not be restricted to any specific occupational groups such as the skilled trades, but they should not be applied to situations where little or no training is required to carry out jobs requiring very low skill levels. Certificate I programs should be eliminated from the apprenticeship system. Apprenticeships should apply at the Certificate II, III, IV, diploma and advanced diploma levels with a focus on growth in apprenticeships at the Certificate III level or higher.
- More attention needs to be paid to theory and underpinning vocational knowledge in many new apprenticeships that are in jobs that require higher-order skills if the system is to expand to cover more of the higher skilled and better paying jobs in the labour market, such as the associate professional occupations. The recent ANTA evaluation recognises this and improvements are currently being implemented.
- To ensure that apprenticeships are more relevant to contemporary workplace requirements considerably more emphasis will be required on the generic or employability skills in apprenticeship training, for which so many employers are now calling. Skills such as good analytical and problem-solving skills, organisational skills, innovative expertise, business organisational skills, excellent human relations and customer service skills etc. are becoming just as important in the workplace as the technical and para-professional skills people hold. Industry groups and government are co-operating to consider this issue.
- Continuing with an integrated apprenticeship system that covers a wide range of occupational areas and leads to vocational qualifications at various levels is important. The traditional distinction between apprenticeships and traineeships makes less sense than it used to. The traineeship term should be put to 'rest', and possibly the term 'apprenticeship' rather than 'new apprenticeships' should now be used across the country to describe all contracts of training.
- Overall the level of satisfaction of employers and new apprentices with the system is very high. Nevertheless, some recent reviews of traineeships in particular jurisdictions have identified some instances of problems such as inadequate training or lack of training plans. These issues need to be addressed.

More attention needs to be paid to theory and underpinning vocational knowledge in many new apprenticeships that are in jobs that require higher-order skills.

Considerably more emphasis will be required on the generic or employability skills in apprenticeship training.

milestones in the **development** of **Australian** apprenticeships

1800s	Apprenticeships are introduced to Australia from Britain. Apprenticeships spread through Australia's colonies across various skilled trades occupations.
1894	The first legislation governing apprenticeships anywhere in the Australian colonies and differing from British law is enacted in NSW.
1901	The Commonwealth of Australia is formed. Responsibilities for apprenticeships remain with State jurisdictions. However, apprentices under federal awards come under the jurisdiction of the new Commonwealth government.
1901	The *NSW Apprentices Act 1901* is enacted and sets new regulatory arrangements that are followed in other States of the newly created Australian federation. These include raising the minimum age for apprentices from 12 to 14 years, introducing a model form of indenture, setting the maximum term of an apprenticeship to seven years, requiring apprenticeships to expire when an apprentice turns 21 years of age and setting a limit for apprentices' work (except for farm workers and domestic servants) to 48 hours per week.
1901–39	Various State government legislation is enacted that entrenches apprenticeships in the industrial awards system, setting out rates of pay and hours and conditions of work. Various trade or apprenticeship commissions, boards or committees made up of employer and union representatives are established under these Acts to administer apprenticeships. Various off-the-job technical education courses for apprentices and day release arrangements for apprentices to attend these courses are established.
1939–45	'Dilutees' are introduced to industry during World War II to make up for the loss of skilled tradesmen who are serving in the armed services—'dilutees' have limited or no previous technical experience and most are women.
1946	The *Tradesmans Rights Regulation Act 1946* is passed to protect the rights of pre-war tradesmen who have returned from service in World War II from 'dilutees' and unqualified migrants beginning to arrive in Australia. The Commonwealth Reconstruction and Training Scheme (CRTS) is established to quickly retrain returning servicemen.
1952	Mr Justice Wright carries out the first national inquiry into apprenticeships in Australia. Following the recommendations of the inquiry, apprenticeship periods are reduced to four years and block release arrangements to allow apprentices to attend off-the-job training courses are extended. Off-the-job training (typically for one day per week for three years) subsequently becomes universal in Australian apprenticeships and fully on-the-job apprenticeships disappear.
1954	National apprenticeship numbers reach 65 000 to 70 000.
1957	The first national apprenticeship body—the Australian Apprenticeship Advisory Committee (AAAC)—is established. It is made up of Commonwealth and State training authorities.
1963	The Commonwealth government establishes the first national scheme for the financial support of apprenticeships—the Country Apprenticeship Scheme. The scheme involves a subsidy to employers during the first year of an apprenticeship for the employment of apprentices from country areas and the provision of living-away-from-home allowances.



Late 1960s	National apprenticeship numbers reach 100 000 for the first time.
1973	The Commonwealth government establishes the first national employer subsidy scheme—the National Apprentice Assistance Scheme (NAAS). Apprentice numbers increase by 12% in the first year of NAAS.
1977	The Commonwealth government establishes a more comprehensive national subsidy scheme to support apprenticeships—the Commonwealth Rebate for Apprentice Full-time Training (CRAFT). A Commonwealth and State/Territories Apprenticeships Committee (COSTAC) is established with a more comprehensive role to develop a national approach to apprenticeships, replacing the AAAC committee established in 1957.
1984	The Committee of Inquiry into Labour Market Programs, chaired by Peter Kirby, is established to review apprenticeships and other employment and training programs. Youth traineeships are recommended to complement the apprenticeship system by providing a wide range of new training opportunities (combining on- and off-the-job training) in areas other than the skilled trades occupations across the whole labour market and for all groups of young people (not just young males).
1985	The Australian Traineeship System (ATS) is established.
1990	Apprenticeship numbers surge to reach an all-time record in Australia of over 160 000. Traineeships take off slowly but reach just under 12 000 by 1990.
1992	Age restrictions in apprenticeships are removed.
1994–95	The National Employment and Training Taskforce (NETTFORCE) is established to encourage employers to take on more trainees in traineeships. Initiatives include relaxation of requirements to attend off-the-job training at TAFE, accreditation of training that is assessed fully on-the-job, extension of traineeships beyond basic certificate levels to higher certificate and diploma levels and the introduction of the national training wage to encourage employers to take on more trainees.
1995	The Australian Qualifications Framework (AQF) is established as a single integrated national system incorporating all qualifications from senior secondary schooling, vocational education and training and university. Apprenticeship and traineeship qualifications are incorporated into the AQF, enabling contracts of training to be offered at all levels of vocational qualifications.
1998	The New Apprenticeship System is set up, combining apprenticeships and traineeships into a single integrated system. User choice is introduced to enable a choice of registered training provider.
2001	New apprenticeship numbers (incorporating apprenticeships and traineeships) expand rapidly to reach 275 000 by June 2000.



further research on apprenticeships and traineeships

To support research on the apprenticeship and traineeship system in Australia, the National Research and Evaluation Committee (NREC) funded a number of studies of aspects of the system in 1999–2000. NCVER also carried out two projects. *Australian apprenticeships: Research readings* summarises 11 of these studies with an introduction by Nigel Smart and an invited chapter from Kaye Schofield. Full text of this book is available from the web at www.ncver.edu.au/apprentices.htm. The research reported in the book is briefly summarised below.

'Apprenticeship in Australia—a concise history' by John Ray. Ray's chapter describes the development of apprenticeships from their early European history through the modern development of the apprenticeship and traineeship system in contemporary Australia. Ray traces the development of the system in detail from its growth after the Second World War through to the introduction of traineeships with the Kirby Report in 1985. Ray concludes that the 1990s saw radical changes in the nature of work and that apprenticeships and traineeships will need to continue to evolve if they are to remain relevant.

'Issues and directions from the Australian apprenticeship and traineeship literature' by Stephen Saunders. This chapter summarises two reports by Saunders. In the first report he reviews the literature since 1985 on apprenticeships and traineeships. The review is structured around a set of themes that emerge from the literature including supply and demand, training policy and system, the public training market, private training investment, measuring training market outputs, training intermediaries, pathways and innovations and training quality and performance. In the second report Saunders goes on to suggest a number of directions in which the apprenticeship and traineeship system might evolve particularly changes to the training market and the development of intermediaries to create new pathways for skill formation.



'Determinants of apprentice training by small and medium-sized enterprises' by Katrina Ball and Brett Freeland. Ball and Freeland seek to identify the key determinants of apprentice and trainee employment in Australian small and medium-sized enterprises. Their investigation is based on data collected in the ABS Business Longitudinal Survey over the period 1994–95 to 1997–98. The study concludes that there is no evidence of a single business characteristic acting as a trigger for small and medium-size enterprises to provide apprentice and trainee training, although there are a number of characteristics which affect an enterprise's propensity to undertake apprentice and trainee training, including the number of employees and the rate of expansion of the enterprise.

'Locational issues in new apprenticeships' by Tom Dumbrell, Wendy Finnegan and Rowena de Montfort. Dumbrell and his colleagues investigate the factors influencing apprenticeship and traineeship take-up from the perspective of the local supply and demand for labour. They find that there is no consistent approach to apprenticeship and traineeship creation on a broad geographical basis, with the ratio of apprenticeship and traineeship commencements to total jobs varying from 1:29 to 1:78 in the major metropolitan areas of Australia and from 1:18 to 1:50 in non-metropolitan areas. Moreover the ratio of apprentice and trainee commencements to total employment within the major metropolitan areas varies significantly, showing that the availability of jobs does not mean that apprenticeship and traineeship openings will also be available.

'Unlocking the barriers—a regional perspective of apprenticeships and traineeships' by John Martino and Sue Holden. Martino and Holden also look at locational issues but concentrate on one specific area—the western region of Melbourne. The focus of this research is on identifying the barriers to the uptake of apprenticeships and traineeships in this region, especially amongst young people. The findings of the research are based on information obtained from interviews, focus groups and surveys undertaken specifically for the project. The information was obtained from a range of interested parties including students, teachers, employers, training organisations, organisations co-ordinating the employment of apprentices and trainees and advisers to government agencies. Martino and Holden found that there were a number of barriers to the take up of apprenticeships and traineeships. In schools, cultures were often focussed on academic achievement and staff and students viewed apprenticeships and traineeships as a fall-back option and students suffered from a lack of effective career guidance. Employers often did not understand the new apprenticeship system and were reluctant to take on apprentices and trainees in areas of low economic growth. Other issues involved the co-ordination of policy at the local level and the structure of local economies locked into declining industries.

'Apprentices' and trainees' English language and literacy skills in workplace training and performance: Employer and employee opinion' by Shirley O'Neill and Annabelle Gish. O'Neill and Gish examine the impact of English language and literacy (ELL) skills of apprentices and trainees on their learning and performance in the workplace in Queensland, NSW and Victoria. The research shows that employers value ELL skills very highly, but in conjunction with a range of other 'generic skills' such as organisational skills, knowledge of business operations and attitudinal skills.

Employers and apprentices and trainees all identified a need for improvement in the areas of interpreting graphical information, writing legibly, spelling and punctuation and using computers. Employers were also of the opinion that ELL skill demands were increasing in importance and broadening to incorporate information and technology demands. ELL skill demands appear to vary between jobs and industries. The research found that there may be a mismatch between the ELL skills required on the job and the ELL skills required to learn, particularly for jobs which have low level literacy demands.

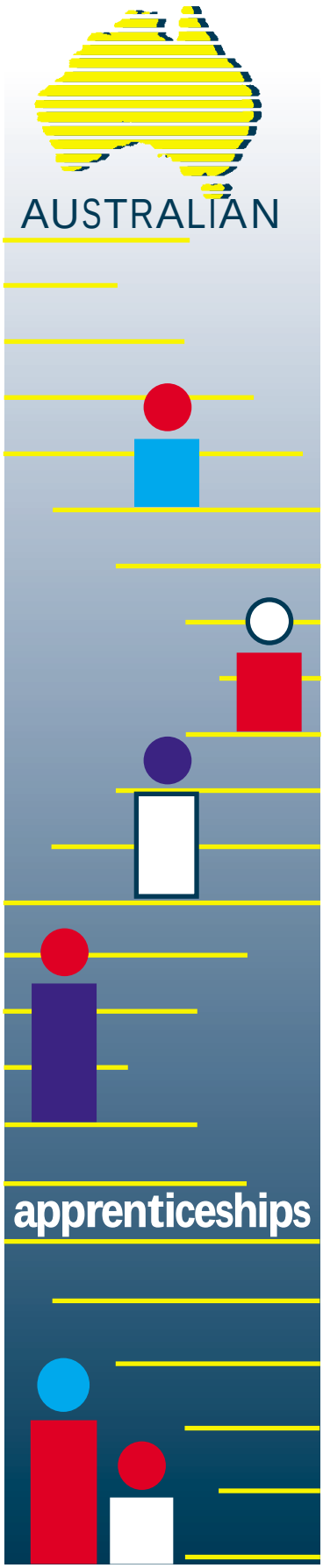
'The value of on-the-job traineeships' by Josie Misko, Jan Patterson and Rosemary Markotic. Misko and her colleagues investigated the value of fully on-the-job traineeships. The research is based on information obtained from surveys of trainees, registered training organisations (RTOs), mentors and employers in South Australia in office administration and small business traineeships This research shows that employers, trainees and RTOs are very positive in their views of fully on-the-job traineeships and that they can provide relevant and appropriate skills training and experience and job opportunities for trainees. Trainees and employers strongly supported the value of the traineeships in building both work and life skills and for developing increased job opportunities. Seventy per cent of trainees and 85% of employers indicated that they would recommend fully on-the-job traineeships to others. The area identified as most needing improvement was assistance during training, with 30% of trainees reporting difficulty in finding time to do their studies.

'Training for the skilled trades in Australia, 1980 to 2000' by Elizabeth Webster et al. Webster and her colleagues investigated career paths from apprenticeship and attrition within apprenticeships in the traditional skilled trades. The study also examined the job satisfaction of skilled trades workers in order to gauge the attractiveness of working in these trades. The research examined trends in occupational mismatch in the metals, building, vehicle and electrical trades and whether the process of award restructuring in the 1980s and early 1990s had created incentives for unqualified blue collar workers to pursue careers in the trades. It uses data from existing sources together with surveys conducted specifically for the project.

The research raises a number of questions about the role of apprenticeship training in the trade areas showing that many existing tradesmen learned their work skills informally on the job. The analysis finds that in 1996 about one in five trade qualified workers were employed in lesser skilled occupations and about one in three working tradespersons did not possess trade qualifications. Webster shows that people who undertake trade qualifications may achieve lower economic returns than non-qualified or lesser-qualified workers. The research finds that employers do not appear to value highly many existing trade skills. It also shows that training pathways for semi and unskilled adults appear to have become more prevalent since the introduction of award re-structuring.

'On- and off-job approaches to learning and assessment in apprenticeships and traineeships' by Andrew Strickland et al. Strickland and his colleagues focussed on the evaluation of on- and off-the-job approaches to the learning and assessment of apprentices and trainees to identify examples of good practice. The research involved a survey of 600 apprentices and trainees as well as interviews and case studies. The research found that apprentices and trainees report a high level of satisfaction with their learning and assessment processes but that there is a need for improvement in workplace practice, particularly the quality of on-site trainers and the limited range of work provided in some workplaces.

The researchers note that in a high proportion of workplaces there is no-one selected especially to help apprentices and trainees. The research results reinforce the importance of off-site learning experiences, especially in relation to the time to learn and practice skills not taught in the workplace and opportunities to have competence formally tested.



The researchers compare two training models—a workplace-only model and an integrated model and find a number of important differences. They conclude that in the workplace-only model apprentices and trainees perceive a gap between what is needed to make this model work and what actually happens in practice. Achieving quality learning and assessment systems appears to depend on monitoring the balance of the competing tensions between the needs of the enterprise and the learning needs of the apprentice or trainee, and establishing effective partnerships between the apprentice/trainee, the employer and the training provider.

'Factors that contribute to retention and completion in apprenticeships and traineeships' by Roger Harris et al. Harris and his team identify and describe the factors that promote the process of retention. It included those factors that are most amenable to change and examined possible interventions to enhance retention and increase completions of apprentices and trainees. The project used a primarily qualitative approach.

The researchers identify many factors which influence the process of retention and conclude that it is usually a combination of factors rather than any single factor that leads to withdrawal or termination. They also find that the combination is idiosyncratic so it may not be possible to establish a profile of factors which when occurring together indicate high risk. The major factors include a strong sense of self-worth and motivation on the part of the individuals taking up the contract of training, a support network for the individual, an initial placement that is suitable and offers conditions conducive to establishing the necessary support to deal with the demands of the contract of training and a supportive workplace culture.

'Quality in context—Reflections on factors impacting on the quality of apprenticeship and traineeship training' by Kaye Schofield. Drawing on lessons from her reviews of traineeships within three States, Schofield focusses on the factors that influence the quality of learning in apprenticeships within the workplace. She emphasises the importance of structuring the on-the-job element of training so that the work is varied and challenging and provides opportunities for experienced workers to act as mentors. Schofield goes on to discuss the responsibilities of employers and training providers to ensure the quality of learning so that it meets the expectations of apprentices and trainees.

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This publication was produced by the National Centre for Vocational Education Research Ltd
ABN 87 007 967 311

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ISBN 0 87397 685 1
TD/TNC 65.05

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Printed by Finsbury Press, Adelaide

AUSTRALIAN apprenticeships