

in vocational education  
training resourcing  
education training  
vocational education  
and training  
education resourcing  
training Australia

# Resourcing vocational education and training in Australia

*Tom Dumbrell*

© Australian National Training Authority, 2004

This work has been produced by the National Centre for Vocational Education Research (NCVER) with the assistance of funding provided by the Australian National Training Authority (ANTA). It is published by NCVER under licence from ANTA. Apart from any use permitted under the Copyright Act 1968, no part of this publication may be reported by any process without the written permission of NCVER Ltd. Requests should be made in writing to NCVER Ltd.

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 National Training Authority.

ISBN 1 920895 25 6 print edition

ISBN 1 920895 26 4 web edition

TD/TNC 76.10

Published by NCVER

ABN 87 007 967 311

Level 11, 33 King William Street, Adelaide SA 5000

PO Box 8288, Station Arcade SA 5000, Australia

<<http://www.ncver.edu.au>>

# Contents

---

Tables and figures	4
Executive summary	5
The policy environment leading to the ANTA Agreement	7
Background	7
The ANTA Agreement	10
The VET policy environment ten years on	12
The decade of change	12
Changing industry structure during the nineties	14
Changing occupational structure during the nineties	15
Changing social philosophies	15
VET in Schools	18
VET funding	20
Funding and growth in VET and TAFE—1989–90 to 1999	20
Funding approaches in Australia	22
Training the existing labour force	27
Training for the unemployed	29
Industry-funded training	32
Introduction	32
Data from employer-based surveys	33
Data from the household-based survey	34
Reliability of industry training expenditure data	36
Training funded by individuals	39
Funding of education in Australia—sectoral comparisons	41
Overseas funding models	45
Conclusion	50
References	53
Appendix	56

# Tables and figures

---

## Tables

1	National Year 12 retention rate rates, Australia	10
2	Apparent retention rates, Australia, 1991 and 1999, by percentage	13
3	Change in employment by industry division, Australia, 1990 to 1999, percentages	14
4	Change in employment by occupational group, 1992–93 to 2000–01	15
5	Expansion of national contestable VET funding 1998–2000	17
6	Proportion of persons aged 25 to 44 participating in education and training (1994–95), percentages	23
7	ANTA national allocations by training area, 1999 and 2001	26
8	Training courses and employment by major industry division, Australia, 1997	26
9	Employed persons undertaking some form of training in the previous 12 months, percentages	27
10	Outcomes from employment assistance programs	30
11	Differences in training provision by employers by ANZSIC* industry division	33
12	Average hours of training per employee by industry division, annualised estimates, household- and employer-based surveys, Australia	36
13	Summary expenditure on training by individuals	39
14	Expenditure by individuals on training, summary by industry, percentages	39
15	Average individual annual expenditure on own purpose training by industry	40
16	Types of initial VET by funding sources and country	45
17	Employment and employment share by industry division, Australia, August 2001	56

## Figures

1	Total government expenditure on education 1999–2000	20
2	Annual training courses per employed person by occupational group	28
3	Participation in training courses in 12-month period, by industry division	34
4	Educational attainment and unemployment rate, May 2000	42
5	Employment growth by industry, Australia, 1987–2000 (as at November each year)	57

# Executive summary

---

This report provides an overview of funding arrangements implemented as a result of the 1992 Australian National Training Authority (ANTA) Agreement. It describes the vocational education and training (VET) policy environment leading to the Agreement and the prevailing policy environment 10 years on. It discusses the outcomes of government, industry and individual investment in training, and includes examples of overseas funding models.

The report begins by outlining the major developments between 1970 and 1999—from the Kangan report (1975) through to the Finn report (1991) and the establishment of ANTA. The opening chapter highlights the situation of young people and their participation in the labour market. During the 1980s, 100 000 young people who left school undertook no further preparation for employment, which was a cause for some concern. Initiatives implemented by the Kirby Committee (Kirby 1985), such as the Australian Traineeship System, sought to improve this situation. However, these were not as effective as hoped. In 1991 the Finn report (1991) reviewed young people's participation in post-compulsory education and set target school retention rates for 2001. While these targets were not met by 2001, they did help contribute to the momentum leading to the ANTA Agreement in July 1992.

In 1992 the heads of government entered into the ANTA Agreement which sought to establish a unified national system of vocational education and training with joint Commonwealth, state and territory responsibility for funding. At this stage, funding for training-based labour market programs was not included in the scope of the ANTA Agreement. The change in social philosophy during the 1990s caused governments to change the nature of their training and labour market interventions. In the VET context this philosophy was reflected in the development of training markets with a wide choice of training providers and an industry-led training system.

This report discusses the allocation of ANTA funds by training area and observes that some industries rely largely on public funding for their training needs (for example, construction, tourism and hospitality), while some do not (for example, retail, finance and insurance). The discussion focuses on which industries spend the most on training and how much individuals contribute to their own training. In 1998 ANTA estimated that expenditure on VET was \$8.5 billion: 45% contributed by enterprises; 44% contributed by government; and 11% contributed by individuals.

The challenge for the funding of VET over the next few years is to improve the level of integration between public and private VET expenditure, and to address the inequities resulting from these funding anomalies. Adopting a more holistic approach to the provision and funding of VET is vital for both economic efficiency reasons and equity.

However, better integration in funding is just one issue. Australia's public commitment to post-school funding is lower than comparable Organisation for Economic Cooperation and Development (OECD) countries and young Australians continue to be excluded from the education and training system. Increased VET participation among young people who drop out of all education should be a policy priority.

Future debate on VET funding should embrace the needs of the unemployed or those facing redundancy. Making individuals responsible for their own VET funding has the potential to increase social inequity. Comparing overseas funding models like levy schemes, and approaches which aim to increase demand for training, such as tax incentives, vouchers, loans and learning accounts, may be useful in helping Australia achieve greater educational equity.

# The policy environment leading to the ANTA Agreement

---

## Background

Until the 1970s the Commonwealth Government had largely left the vocational education and training (VET) area as the preserve of the states and territories. Since the establishment of the Commonwealth Employment Service in 1945, the Commonwealth had, however, an ongoing interest in skills formation and retraining, especially in the 'resettlement' of ex-services personnel. In 1973 the Commonwealth's involvement in vocational education and training became much more significant following the establishment of the Kangan Committee and the Commonwealth Technical and Further Education Committee (CTEC).

Myer Kangan delivered his first report to the Commonwealth Government in 1974. The Kangan report (1975) was not only significant in establishing a basis for Commonwealth funding of technical and further education (TAFE) but it in fact created the acronym 'TAFE'. Kangan sought to broaden the role of technical education to embrace a wider social and educational role than had previously been attached to technical education. Kangan also recommended that a research role be developed for TAFE, a recommendation that eventually led to the establishment of the TAFE National Centre for Research and Development, the predecessor of the National Centre for Vocational Education Research (NCVER). In the words of Dr Clive Chappell:

Kangan constructed TAFE as an institution as much concerned with intellectual, social and personal development as it was with vocational training. TAFE became an educational institution with aims and purposes that were in many ways similar to those pursued by schools, the premise being that intellectual and personal development could be achieved equally well through a vocational curriculum as it could through a general education curriculum. (Chappell 2001)

Despite the Commonwealth's heightened involvement in TAFE since 1974 through the Commonwealth Technical and Further Education Committee, the Employment and Skills Formation Council (ESFC) found that: 'while capital funding had remained fairly constant in real terms, there had been great variability in Commonwealth recurrent support, within a long-term pattern of decline. The Employment and Skills Formation Council found that the Commonwealth's contribution had fallen 'in real terms by 30 per cent between 1974 and 1989, with a 15 per cent fall in the three years 1986 to 1989' (Taylor 1996, p.23). During the 1980s, the reduction in Commonwealth TAFE funding was more than made up by increased expenditure by the states. Taylor (1996) reported that this enabled TAFE student load to increase between 1981 and 1988 by 32.7%.

Apart from the 1982–83 recession, Australia enjoyed rapid growth in employment during the decade of the 1980s. As a consequence, skill shortages became more apparent; at the same time the recession of the early 1980s had revealed the structural weaknesses of the Australian economy. Improving the competitiveness of the Australian economy was seen as an urgent priority. The then Commonwealth Government recognised that increased competitiveness would not simply require improved relative costs but would also depend on 'non-price factors, including quality, innovation, skills and technology' (Dawkins & Holding 1987, p.3). These ministers saw improving education

and training as playing a 'vital role in productivity performance, directly conditioning the quality, depth and flexibility of our labour force skills' (Dawkins & Holding 1987, p.4).

Chappell notes that the impact of international economic developments on vocational education engendered two important new themes in Australian VET, 'vocationalism' and 'the clever country'.

These reports [referring to Organisation for Economic Co-operation and Development reports] suggested that education and training systems needed to be reformed so that they fully contributed to the economic adaptations required in these new economic times. Labelled the policies of 'new vocationalism' many OECD [Organisation for Economic Co-operation and Development] member states embarked on rapid reforms to their education and training systems. This was the period when, in Australia, the 'clever country' became the catch cry of government's education and training policies. And these policies were designed to increase the quality, quantity and relevance of vocational training in the Australian workforce.

(Chappell 2001)

Demographic and, more importantly, labour market factors were also significant in shaping education and training policy at this time. The youth population aged 16 to 20 peaked in 1989 (Dawkins & Holding 1987) and the proportion of 'youth at risk' (that is, neither in full-time employment nor full-time education) rose sharply between 1989 and 1991 (Curtain 1999). The level of young unemployed seeking full-time employment fell noticeably towards the end of the 1980s. In January 1987 there were about 154 000 persons aged 15 to 19 seeking full-time work. By January 1990 this number had shrunk to around 107 000. At this time the overall unemployment rate was 6.7%. The labour market then deteriorated rapidly, and by January 1991 had risen to 9.1%, with unemployed 15 to 19-year-olds then numbering nearly 134 000. (Australian Bureau of Statistics 1996).

Throughout 1991, overall (all ages) unemployment rates remained in the 9% to 10% range. The labour market remained weak during 1992 and early 1993. The unemployment rate did not return to single figures until May 1994, by which time the ANTA Agreement was well established.

Other commentators (for example, see Christinson 2000) have also noted that, following the broader agenda established post-Kangan, during the mid-1980s industry became increasingly critical of TAFE for drifting away from delivering training of direct relevance to industry. Many of these criticisms were consolidated in the Deveson report (Deveson 1990). One of the most important outcomes of the Deveson report was the adoption by Australian governments of an agreed set of national objectives for VET, including the development of a training market.

In summary, the period covering the mid-1980s to the early 1990s saw a flurry of intense activity in the area of education and training policy review, spurred largely by growing concerns over both Australia's deteriorating competitive position and growing youth unemployment.

One outcome of the prevailing concern over Australia's international competitiveness was a preparedness on the part of Australian governments to review and reform public administration. In October 1990, the Special Premiers' Conference agreed on a review of all areas of government in Australia where duplication and overlap of services might exist. The main aim was to achieve a more integrated and effective delivery of government programs and services to all Australians. Training was identified as one area of government activity to be addressed in this review.

Subsequently, the then Ministerial Council on Vocational Education, Employment and Training (MOVEET) directed its bureaucratic advisory body, the Vocational Education, Employment and Training Advisory Council (VEETAC), to examine a range of issues affecting the funding of training and labour market programs in Australia. The Vocational Education, Employment and Training Advisory Council provided the Ministerial Council with a range of funding options largely covering intergovernmental funding issues, and identified the ways in which interests of the Commonwealth Government and state/territory governments could be reconciled in agreed



national objectives and priorities for TAFE (Vocational Education, Employment and Training Advisory Council 1991).

An important factor contributing to the momentum leading to the ANTA Agreement was the set of targets established by the Ministerial Council relating to participation by young people in post-compulsory education, known as the Finn targets (Finn 1991), after the chair of the committee which produced the report, Brian Finn. The working party headed by Finn was given the brief to review young people's participation in post-compulsory education, especially the links between schools and TAFE. To some extent, the focus of the Finn committee on the transition from school to post-school activity reflected the predominant view that initiatives of the Kirby committee (Kirby 1985), especially the Australian Traineeship System, had not succeeded in 'mopping up' the youth unemployment problem.

Along with this underlying concern over youth unemployment, there was an associated concern over the relatively poor levels of school retention rates in Australia (Finn 1991). The Finn targets set for 2001 anticipated 95% of 19-year-olds either participating in or having completed Year 12 or a VET equivalent. Moreover, these targets envisaged 60% of 22-year-olds either achieving level III VET qualifications or above, or participating in higher education.

According to ANTA, neither target had been met by the target year of 2001:

Despite significant increases in the number of young people participating in post-school education and training, and achieving qualifications through such training, neither target was achieved by the end of 2001 ... In 2001, 82% of 19-year-olds were participating towards, or had attained, year 12 or a post-school education and training qualification, 13 percentage points short of the target. This represents an increase of 11 percentage points since 1990. In terms of the other target, 55% of 22-year-olds were participating in, or had attained a Certificate III level qualification or higher by the end of 2001, which was five percentage points short of the target. This represents an increase of 13 percentage points since 1990. The base levels established in 1990 were 71% of 19-year-olds and 42% of 22-year-olds.

(ANTA 2001a)

The Finn targets were not the first expression of national concern over young people's participation in education and training. In 1987 Dawkins and Holding (1987) had commented on Australia's poor secondary school retention rate: in 1986 the Year 12 retention rate had been 48.5%. The Commonwealth Government at the time established a target of 65% to be achieved by the early 1990s. Dawkins and Holding particularly noted their concerns over the large number ('up to 100 000') of young people leaving school and undertaking no further 'substantial vocational preparation'. They noted continuing resistance to traineeships, which at that time had been in place for only two years, following their creation as a result of the recommendations of the Kirby Inquiry (Kirby 1985).

A further factor, the report of the Training Costs Review Committee (chaired by Ivan Deveson) and entitled *Training costs of award restructuring* contributed substantially to the background debate leading to the ANTA Agreement. Various papers prepared for that committee addressed a wide range of issues that remain current today, including equity issues, fees in TAFE, and industry funding of training. However, one of the Deveson report's most important features was the creation of a public awareness of a 'VET' sector, of which TAFE was but a part. Without this paradigm shift, the later debates over training markets and other system reforms would have been less informed and likely to have been delayed.

The concerns over international competitiveness noted by Dawkins and Holding (1987) were linked to concerns that neither publicly nor industry-funded training was delivering the quantity or mix of training necessary for industry restructuring (Deveson 1990, vol.2, submission by Papas Carter Evans Koop).

In 1990 Australia was experiencing a steadily rising rate of Year 12 retention that peaked in 1992. In such an environment, declining full-time employment would not be a major concern. However, since 1992 Year 12 retention rates in Australia, unlike most OECD countries, have actually fallen. Between 1992 and 1999 the rate fell from 77% to 72%; for males the Year 12 retention rate had fallen to 66% in 1999. While some would argue that the high rate reached in 1992 reflected the lack of alternative options because of the recession, it is still clear, as shown in table 1, that there has been no significant resumption of the growth in retention experienced during the late 1980s and early 1990s.

**Table 1: National Year 12 retention rate rates, Australia**

Year	1996	1997	1998	1999
Retention rate	71.3	71.8	71.6	72.3

Source: Ministerial Council on Vocational Education, Employment, Training and Youth Affairs (1999).

Another response, which was partially related to the failure of the Australian Traineeship System to reach the initial (and probably unrealistic) targets, was the report prepared by the Employment and Skills Formation Council under the direction of Laurie Carmichael—the Carmichael report (Carmichael 1992). This report sought to amalgamate apprenticeships, traineeships and other training, including fully on-the-job training, into an integrated Australian Vocational (Certificate) Training System. The ‘certificate’ was dropped to create a slightly more manageable name.

Towards the end of 1991, the Commonwealth Government launched a takeover bid for the TAFE system, offering \$720 million over three years to expand the system (Taylor 1996). While a Commonwealth takeover was only one of several options floated by the Commonwealth, it was clear to the writer (who represented New South Wales on the Vocational Education, Employment and Training Advisory Council Working Party on Training and Labour Market Programs) that this was the Commonwealth’s strongly preferred option. Most states and territories refused to consider an outright takeover. The subsequent lengthy and intense negotiations culminated in the drafting of the National Vocational Education and Training System Agreement, which established the Australian National Training Authority (ANTA).

## The ANTA Agreement

Heads of Government (as the Prime Minister and Premiers were then called) entered into the ANTA Agreement in July 1992 as a way of ensuring that cumulative Commonwealth growth funds of \$70 million annually would flow to the states and territories in 1993, 1994 and 1995. In return, the states and territories agreed at least to maintain their then current levels of expenditure on VET. These amounts were additional to the \$100 million which the Commonwealth had allocated for recurrent expenditure on TAFE under the ‘One Nation’ statement in 1991. The Commonwealth later extended its growth funding to 1997 (Taylor 1996). A subsequent ANTA Agreement which began in 2001 re-introduced growth funding following a period in which expansion had been funded by a range of cost-saving measures.

The original ANTA Agreement sought to establish a unified, national system for vocational education and training, with joint Commonwealth and state/territory responsibility for funding. It also sought to allocate policy and planning powers in a joint arrangement, using the ANTA Board as a source of advice extending beyond government departments. At the state/territory level, the ANTA Agreement attempted to initiate a ‘funder–provider’ split in bureaucratic structures, by the establishment by legislation of state/territory training agencies. While this split already existed in some jurisdictions, it was not a universal arrangement. One result of this decision was the creation of small, theoretically powerful state/territory training agencies supposedly directing the course mix of large and long established TAFE providers.

In New South Wales a body initially named the Vocational Education and Training Authority (VETA), later established under legislation as the Board of Vocational Education and Training (BVET), became the state training agency whose role it was to liaise with ANTA. Its small size in relation to the size and historical role and influence of New South Wales TAFE hindered its operation as a genuine funding agency with significant influence over the dominant provider, New South Wales TAFE. However, other states and territories did not necessarily experience the same degree of difficulty in developing bureaucratic separation between ‘purchaser’ and ‘provider’.

Another feature of the ANTA Agreement that caused inconsistencies and sub-optimal national coordination of training provision was the failure of the Commonwealth Government to include the funding of its own training-based labour market programs within the scope of the ANTA Agreement. At the time, the Commonwealth was spending about \$880 million per annum on purchasing training for various categories of unemployed persons under its array of labour market programs, probably around half the amount of the total being spent on recurrent expenditure through the nation’s TAFE systems. In 1989–90, total Commonwealth and state/territory funding for TAFE amounted to approximately \$1.38 billion (Vocational Education, Employment and Training Advisory Council 1991).

The size of the Commonwealth’s training-based labour market program expenditure at this time is one of the most overlooked policy issues in the debate over the establishment of ANTA. This issue was addressed perfunctorily in the Taylor review of ANTA, with unemployment dismissed as a Commonwealth responsibility. According to Taylor: ‘The Review has not recommended that the needs of young and unemployed people be included as a specific target group as there are a range of policy and programs in place. Many of these are administered by the Commonwealth’ (Taylor 1996, p.150).

The importance at the time of the Commonwealth’s labour market program expenditure, both for TAFE providers and in developing a more broadly based training market among private providers, has largely been ignored. The failure to include this expenditure within the overall ‘maintenance of effort’ calculations is likely to have allowed the Commonwealth more latitude in its subsequent expenditure on training than the states and territories. Defining its involvement in training as narrowly as possible also allowed the then Commonwealth Department of Employment, Education and Training to minimise the level of staffing resources transferred from it to ANTA.

While the ANTA Agreement achieved a greater degree of integration between the Commonwealth and the states and territories, other areas where integration is lacking are still apparent. These areas include expenditure on VET-level training by other areas of government not part of the VET planning framework (such as in the areas of health and transport). In addition, there appear to be inadequate planning linkages, and hence sub-optimal capacity to plan the use of public funds, in the apparent lack of connections between VET and the immigration program, and between VET and the industrial relations system and workplace regulatory administrations.

# The VET policy environment ten years on

---

## The decade of change

Australia has moved more rapidly over the past decade towards a market-oriented, demand-led VET sector than have most Organisation for Economic Co-operation and Development (OECD) countries. It is especially noteworthy that these substantial structural changes, and the adoption of a national framework for VET, have occurred within a federal political system in which the prime constitutional responsibility for education lies with the States and Territories that make up the federation, and not the federal (Commonwealth) government.

(Selby Smith et al. 2001, p.3)

During the nineties, the nature of the Australian labour market also changed significantly. Many of these changes appear to have had a more substantial impact on the youth labour market than on other sectors. Some of the main changes include:

- ✧ the growth in 'non-standard' modes of employment, such as casual, contract and part-time, to the extent that full-time permanent employment no longer constitutes the majority of employment
- ✧ the breakdown of the centralised industrial relations model and its replacement with a mixed system, including remnants of the centralised system, enterprise and certified agreements and individual contracts
- ✧ a changed industry structure, with very strong growth in the business services sub-division, combined with declines in the traditional, male, full-time employment sectors of manufacturing, the utilities and wholesale trade.

In line with the changes in industry composition, most of the growth in demand for labour since the early nineties (at least) has been for persons with tertiary educational qualifications and growth has been much stronger for skilled occupations than for unskilled occupations (Vickery 1999). However, the changes are not nearly as simple as Vickery implies, and it is difficult to draw conclusions about the funding of education and training from an analysis based on 'skilled' and 'unskilled' jobs growth. This issue is examined in more detail below.

During the decade of the nineties, the unemployment rate trended downwards for almost all of the decade, from a high of 10.7% in late 1992 to its low point of 6.1% in September 2000. Since that time, the overall unemployment rate has more or less plateaued within the 6% to 7% range.

The number of teenagers employed full time declined dramatically between July 1990 and July 2000. In July 1990 there were 712 000 persons aged 15 to 19 employed in Australia, of whom 60% or nearly 428 000, were employed full time. By July 2000 the total number of employed had fallen to 685 000 of which only about 37%, or 253 000, were full-time workers. Part-time employment for teenagers rose strongly over this period, from 284 500 in 1990 to 432 200 in 2000.

Most of the fall in teenage full-time employment occurred in the early part of the decade; for most of the decade full-time employment levels for teenagers in Australia have remained relatively flat (Australian Bureau of Statistics 1996, 2000a). The implications of this strong rise in part-time teenage employment do not appear to have influenced the VET policy environment as yet, other

than in the so far limited, provision of part-time New Apprenticeships. The growth of the VET in Schools program is discussed later in this section; however, in this context it is noted that VET in Schools has not aimed to intersect with the external youth labour market but rather has developed separately from it.

Several observations need to be made about these data. Over the period 1990–2000, the population of persons aged 15 to 19 in Australia declined by about 42 000, or almost 3%. By comparison, the population aged over 35 grew by about 25% at this time. Males aged 15 to 19 suffered a 5% fall in employment, while the decline for female jobs in this age group was a little over 2.5%. Over the period the proportion of male teenagers in jobs (full- and part-time) declined only marginally from 51.8% to 50.5%. The proportion of teenage females in full- or part-time employment actually rose slightly from 50.6% to 51% over the same period. In 1990 full-time employment was the dominant mode of employment for both male and female teenagers, but by 2000, part-time employment dominated both sexes. However, the 15 to 19 population is once again growing, and was estimated at about 1.35 million in 2000 (Australian Bureau of Statistics 2000c). Despite the deterioration in full-time employment for teenagers, school retention rates did not attain the Finn-targeted levels. At the start of the 1990s, the Year 12 retention rates were rising, and at the time, many attributed this rapid rise partly to declining full-time employment opportunities for teenagers. However, in the period 1991–1999, school retention rates have hardly changed, despite the decline in full-time teenage employment. As well, the introduction of VET in Schools programs across Australia was also intended to increase retention rates, and despite the rapid growth in enrolments in such courses, there has been no discernible impact on overall retention. (VET in Schools is discussed in more detail later in this report.) Table 2 summarises apparent Year 12 retention rates over this period.

**Table 2: Apparent retention rates, Australia, 1991 and 1999, by percentage**

	1991			1999		
	Males	Females	Persons	Males	Females	Persons
All schools	66.1	76.7	71.3	66.4	78.5	72.3

Source: Ministerial Council on Employment, Education, Training and Youth Affairs (1999).

The failure to meet the Finn targets for 19-year-olds has effectively resulted in a continuing body of young people without post-school qualifications, neither participating in education or training, nor able to find full-time employment. In May 2000, out of the cohort of 267 500 19-year-olds in Australia, 21 300 were unemployed. Of these, 16 700 had no post-school qualifications and 9300 were not undertaking formal study (Australian Bureau of Statistics 2000b). There were a further 81 000 19-year-olds who were working part time. Of this group, 17 100 did not have post-school qualifications and were not undertaking formal study. In addition, there were 64 400 19-year-olds 'not in the labour force'. While some of this group, about 48 000, were attending a tertiary institution, 14 100 were not studying. In May 2000 therefore, there were more than 40 000 19-year-olds neither in full-time employment nor undertaking study and who did not possess post-school qualifications.

Between 1990 and 1997, the overall participation rates of young people in VET hardly changed. On the other hand, their participation in school and university increased noticeably. For the age group 15 to 19, school participation rates increased from 44% to 50%, while participation in university for the 20 to 24 age group rose from 11% to 15%. Over the same period, the participation of 20 to 24-year-olds in VET increased only marginally from 14% to 15% while the participation of 15 to 19-year-olds in VET fell from 20% to 18% (Department of Education, Training and Youth Affairs 1999).

## Changing industry structure during the nineties

An important contributing factor to the growing difficulty for teenagers in finding full-time employment during the 1990s was the marked change that occurred in the structure of employment by industry division. Table 3 shows the percentage change in employment by industry division between November 1990 and November 1999.

**Table 3: Change in employment by industry division, Australia, 1990–1999, percentages**

Industry division	Nov. 1990 (’000)	Nov. 1999 (’000)	Percentage change
Agriculture, forestry and fishing	445.5	432.3	-2.96
Mining	95.1	78.8	-17.14
Manufacturing	1164.5	1091.1	-6.30
Electricity, gas and water	104.5	64.9	-37.89
Construction	587.5	704.7	19.95
Wholesale trade	506	526.9	4.13
Retail	1114.6	1327.1	19.07
Accommodation, cafés and restaurants	320	440.6	37.69
Transport and storage	378.2	398.2	5.29
Communication services	155.2	166.3	7.15
Finance and insurance	352.7	321.6	-8.82
Property and business services	605.5	978.5	61.60
Government administration and defence	362.8	345.6	-4.74
Education	525.8	621.8	18.26
Health and community services	679.8	826.6	21.59
Cultural and recreational services	147	214.7	46.25
Personal and other services	272.2	353.3	29.79
<b>Total</b>	<b>7816.7</b>	<b>8893.0</b>	<b>13.77</b>

Source: Australian Bureau of Statistics (1990–1999).

Strong growth occurred in sectors traditionally associated with part-time and casual employment (retailing and accommodation, cafés and restaurants) or in sectors often demanding professional or other post-school qualifications (for example, health, education, business services). Traditional employers of large numbers of school leavers in the 1960s and 1970s, including banks (finance), government and manufacturing, suffered declines in total employment.

The most striking feature, however, of the changed industry composition of the Australian labour market was the growth in the property and business services industry division. During the nineties it accounted for almost 35% of total employment growth across Australia, despite accounting for just 11% of total employment in 1999. Most of this growth occurred in the business services sub-division, which grew by more than 67% during this period. Other major growth areas in percentage terms were cultural and recreational services, and accommodation, cafés and restaurants.

This pattern of change in industry structure reflects the enormous task facing the VET sector in ensuring its continuing relevance to the labour market. It is doubtful that the changes in the mix of VET delivery through the public system have matched the changes in the labour market. It is also important to note in this context that these changes in industry structure had an impact on industry expenditure on training. In general, the industry sectors that showed the most growth were not areas in which there was a history of involvement in VET or a broader training culture. On the other hand, the industries that lost ground, such as manufacturing and the previously government-dominated utilities, were sectors where training, and especially apprenticeship training, was an

entrenched feature. Such changes undoubtedly had an impact on the overall level of industry-funded training, an issue that will be addressed in more detail later in this report.

## Changing occupational structure during the nineties

These changes in the industry structure of the Australian labour market were matched by significant changes in the occupational structure; in particular, there was strong employment growth in professional occupations and in intermediate clerical and sales occupations. Table 4 illustrates the percentage change in the mix of the major occupational groups from the early 1990s to 2000–01.

**Table 4: Change in employment by occupational group, 1992–93 to 2000–01**

Occupational group	1992–3 (’000)	2000–1 (’000)	Percentage change
Managers	580.5	648.9	11.8
Professionals	1259.2	1658.9	31.7
Associate professionals	857.9	1039.4	21.2
Trades	1072.1	1180.8	10.1
Advanced clerical/sales/service	370.8	406.9	9.7
Intermediate clerical/sales/service	1236.6	1578.8	27.7
Intermediate production/transport	708.5	778.0	9.8
Elementary clerical/sales/service	761.0	904.1	18.8
Labourers and related	749.7	871.1	16.2
<b>Total</b>	<b>7596.2</b>	<b>9067.2</b>	<b>19.4</b>

Source: Australian Bureau of Statistics (1990–1999).

While all occupational groups have shown growth during the nineties, the professional group has shown the strongest growth rate. It is also clear from table 4 that occupational changes cannot simply be characterised as showing ‘unskilled’ jobs declining in the face of ever-increasing demand for a more skilled labour force. Growth among labouring and related occupations, for example, has been stronger than growth in the management group. Growth for elementary and intermediate-level clerical, sales and service occupations has been stronger than for advanced clerical and sales workers.

As well, the data do not clearly indicate whether funding allocations between universities and VET have been consistent with the changes in the occupational composition of the labour force.

When examined at a more detailed level, there are marked shifts within these groups that tend to reflect specific industry or technological factors. These include the decline of employment in textiles, clothing and footwear manufacture resulting from reduced protection, and the decline in the number of secretaries and personal assistants, probably reflecting the increased use of personal computers. Much of the growth in professional occupations is attributable to computer professionals.

## Changing social philosophies

With the growth in globalisation and the decline in protectionism over the last 20 years, there has been a parallel growth in the belief of ‘smaller’ government. In Australia this view has been manifested in the withdrawal of government from some areas of direct service provision and its replacement by contractual arrangements with providers of what were formerly government services. This appears to have been accompanied by a declining belief in the worth or capacity of government intervention to achieve social goals. These free market philosophies have influenced policy in the employment and training sector over the last decade.

For example, the nature of the debate over youth unemployment and unemployment in general has changed over the decade from one of providing specific labour market programs, to stressing greater individual responsibility for 'self-improvement'. In line with broader changes in social philosophies, there is now greater emphasis on the notion of mutual obligation, as expressed by 'work for the dole', and apparently less regard for factors contributing to unemployment, such as demand deficiency and regional imbalances in the labour market. As a consequence, training-based labour market programs have been largely abandoned and other locally based labour market interventions have been wound down. Hence, one important method of funding training, that is, through individually targeted programs for the unemployed, has largely disappeared in Australia.

Underlying these policies appears to be a belief that unemployment is attributable either to shortcomings in the skills and attitudes of individuals, or in the competitiveness of Australian industry. Individuals, or their employers, however, are increasingly being expected to make decisions about the nature of training that will best address these objectives. There appears to be, as an aspect of this philosophy, a belief in the efficacy of market forces to guide the direction of the VET sector and to ensure the best outcomes for individuals.

As Selby Smith et al. note in summarising the recent focus of VET policy in Australia:

The focus of VET policy in Australia, as exemplified in *A Bridge to the Future*, has been squarely on the market economy—in strengthening enterprises' competitiveness in the goods and services market and people's competitiveness in the labour market (ANTA 1998). Such a focus has been viewed as consistent with Australia's macro-economic and equity objectives. However, given that work extends beyond the market economy to include both the informal and the voluntary sectors, should the policy focus be expanded to include work in the broader context?

(Selby Smith et al. 2001, section 2, p.9)

In examining this social theory and using the term 'advanced liberalism', Barry, Osborne and Rose (1996) characterise one of the basic elements of this philosophy as the client as customer. In the employment context (as in other areas), individuals seek to 'enterprise themselves' in order to 'maximise their quality of life through acts of choice'. Barry, Osborne and Rose (1996, p.144) describe this political philosophy as 'not a politics of economic abstentionism—on the contrary it is the politics of economic activism'.

In other words, they see governments intervening in markets to create the organisational conditions for entrepreneurship in the expectation that most individuals will seek to expand their life choices (or at least find a job). Governments operating under this philosophy do not, as is often perceived, seek to withdraw from markets but seek to create conditions under which individuals might pursue their individual goals.

An expression of this philosophy in the Australian VET context has been the emphasis on the development of training markets and a reduction in the degree to which detailed centralised planning is practised, to be replaced by the notion of an industry-led training system and a wider range of choices among training providers. Debate continues over whether this industry-led approach adequately addresses the longer term needs of the workforce and concentrates too much on the immediate needs of industry. As Marginson points out:

Those with general education need to 'top up' their vocationally specific skills from time to time, but less so than general education itself, which has a longer half-life. At the same time those with general education also have an underlying advantage in the capacity to acquire general skills—though whether this is due to the human capital they have acquired or other factors such as social status, is not revealed by the data.

(Marginson 1999a, p.20)

In another expression of 'advanced liberalism' the Commonwealth Government has, over the last five years, substantially reduced retraining programs as an option for reducing unemployment. The Commonwealth has redirected much of the funds previously allocated to those programs into the New Apprenticeship program (or has redirected those individuals into the Work for the Dole



Program.) Funding for New Apprenticeships has generally been allocated under the user choice approach, aiming to extend the range of training options and to drive down the unit costs of training.

User choice and other areas of ‘contestable funding’ in VET grew rapidly during the mid-to-late 1990s. Table 5 summarises growth in contestable funding nationally between 1998 and 2000, according to ANTA. These data from ANTA appear to be presented as current prices. Using NCVER VET financial data (NCVER 2001), in current prices the rise between 1999 and 2000 appears to represent roughly half a percentage point rise in the level of contestable funding (from 10.1% to 10.6% of total recurrent expenditure).

**Table 5: Expansion of national contestable VET funding 1998–2000**

Year	1998	1999	2000
Contestable funding	\$339.3 million	\$396.3million	\$440.9 million

Source: ANTA (1999b, p.4).

In the broader VET area this same ‘advanced liberalism’ philosophy has stimulated debate over the sources of funding for VET, and, in particular, how the costs of training should be distributed between governments, employers and individuals. Governments have never been the sole funders of VET in Australia and are not the largest single source of broadly defined VET funding. Although historical data on other sources of funding are scarce, individuals and employers have played important roles in VET, especially in sectors such as clerical and office skills, which traditionally were dominated by non-government providers.

According to ANTA:

Total expenditure on VET by governments, employers and individuals was an estimated \$8.5 billion in 1998, equivalent to approximately 1.5 per cent of gross domestic product. Enterprises contributed 45 per cent of funding, with governments and individuals contributing 44 per cent and 11 per cent respectively. (ANTA 1999a, p.83)

It is clear however, that policies pursued through ANTA are not based on any one social philosophy; rather, current ANTA arrangements generally reflect a mixed, federalist approach. Maglen and Hopkins asserts that the ANTA Agreement is not solely responsible for the level of national cooperation that exists in VET in Australia.

It would probably be a mistake to assume that it is solely the structure of ANTA that has allowed the national strategy (*A bridge to the future: Australia’s national strategy for vocational education and training 1998–2003 ...*) to come about. A voluntary, federalist and less structured approach was entrenched in decision making for vocational education and training before ANTA’s establishment. ANTA built on established practice. (Maglen & Hopkins 1999, p.4)

Stressing the mixed model of social philosophies enshrined in this ANTA document Maglen and Hopkins go on to say:

The strategy appears to maintain a tradition in the sector of clearly enunciated commitment to both economic order and sociocultural order. For instance, Objective 3, *achieving equitable outcomes in vocational education and training*, is concerned with sociocultural order:

People with these needs [English language, literacy or numeracy skills] are most vulnerable to economic change, finding it particularly difficult to develop new skills and change their occupation and industry as the economy restructures ... The potential for education and training to improve people’s life chances, and to give them security and satisfaction both in work and in life, has consequences for society as well as, importantly, for the individual ...

Other sections are unequivocally concerned with economic order: people develop the specific skills needed by enterprises and industries ... development and enhancement of the national skills pool. At an operational level there is increased reliance on markets.

(Maglen & Hopkins, 1999, p.4)

## VET in Schools

The rapid expansion of university places in Australia following the Dawkins and Holding (1987) reforms of the late 1980s combined with rising Year 12 retention rates in schools saw an increasing proportion of school students aiming for a university place rather than a VET option. Many employers believe that, at the same time, school curricula and community attitudes worked against increasing interest in VET. In interviews with the author in relation to other research projects, many employers still lament the demise of secondary technical schools as the major cause of the loss of interest in post-school VET options. The inappropriateness and narrowness of the largely academic curriculum that predominated in schools began to be recognised as inequitable. It would however, be wrong to assume a uniform national consistency existed across Australia towards VET in Schools. As Malley et al. point out:

Because the presence of vocational education within secondary schools since Federation predates the 1976 birth of the national post-school system of VET, many of the values enshrined within each system differ markedly, a situation which was to impact significantly upon the 1990s developments in vocational education and training in secondary schools.

(Malley et al. 2001, part 1, p.7)

Keating provides a useful example of this diversity in the following terms:

Into the 20th century State governments began to increase their involvement in the funding and administration of the disparate range of institutions that formed technical education in Australia. Junior or secondary technical schools were established in all States. As recently as the mid-1960s there were 28 technical high schools and 9 trade schools in South Australia, and 86 junior technical schools in Victoria. In NSW almost 22,000 students sat for technical School Certificate exams at year 10 in 1966. In some States, such as Victoria and Queensland, technical education formed the main element of the government secondary school system until after the end of the Second World War.

(Keating 1998, p.7)

Malley sees the new era of VET in Schools as having emerged over the last decade. He says:

The development of vocational education policy in Australian secondary schools over the last ten years has been subject to growing but disjointed policy influences from national and State governments as they responded to global economic and social pressures present in many post-industrial economies. Consequently, a variety of vocational programs and practices has been developed by State agencies and schools as they responded to central policy initiatives and the needs of local youth and communities. Within a broad federalist framework there has been an increasing level of convergence of these policies and activities, often occurring under national ministerial agreements and national qualification and training frameworks.

(Malley et al. 2001)

In 1999 the Ministerial Council on Education, Employment, Training and Youth Affairs developed a national policy position on VET in schools—the ‘Adelaide Declaration’ (Ministerial Council on Education, Employment, Training and Youth Affairs 1999). From this policy position the Ministerial Council’s Taskforce on VET in Schools developed the policy directions document, *New framework for vocational education in school* (Ministerial Council on Education, Employment, Training and Youth Affairs 2001):

Schooling should develop fully the talents and capacities of all students. In particular, when students leave school they should:

have employment related skills and an understanding of the work environment, career options and pathways as a foundation for, and positive attitudes towards, VET, further education, employment and lifelong learning.

(Ministerial Council on Education, Employment, Training and Youth Affairs 2001, p.7)

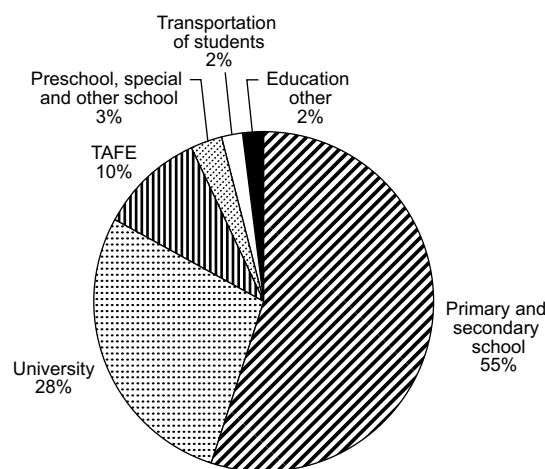
The 2002 Australian Council for Educational Research (ACER) briefing paper (Fullarton 2002) shows that enrolments in school VET programs rose strongly over the period 1996–1999 from around 60 000 to over 120 000. More recent data are elusive. The same paper shows that, of students who completed Year 12 in 1998, almost a quarter had undertaken a VET subject in either Year 11 or 12, although only around 1% had undertaken a school-based New Apprenticeship or traineeship.

The Australian Council for Educational Research (Fullarton 2002) also shows that students who undertake VET in Schools courses are somewhat more likely to progress to a TAFE course after school (25% compared with 19%) but substantially less likely (18% compared with 47%) to enter university. Of concern is the finding that 8% of those who undertook VET in Schools were either unemployed or not in the labour force in the first year after completing Year 12, compared with 5% of those who undertook no VET in Schools courses. Post-school VET is however, an important option for those not completing Year 12. The Australian Council for Educational Research quotes a finding from Ball and Lamb that 37% of Year 12 non-completers did undertake some post-school VET in the year after leaving school. This organisation notes that there is need for further research into the links between VET in Schools participation and post-school outcomes. It seems that there is a need to specify clearly what post-school outcomes are sought and to report on these, based on regular monitoring. Such an approach should lead to the development of more specific regional approaches to VET in Schools and pathways programs; for example, what interventions might be appropriate for governments to address the relatively low take-up of VET in Schools in regions of poor employment opportunities? (Fullarton 2002, p.4).

# VET funding

As a proportion of total government spending on education in Australia, the VET sector represents only around 10%, as shown in figure 1 taken from the Productivity Commission's *Report on government services* (2002).

**Figure 1: Total government expenditure on education 1999–2000**



Source: Productivity Commission (2002, Education preface, p.47).

Following the introduction of the initial ANTA Agreement in 1993, VET funding in Australia has undergone a radical change. Prior to the agreement VET funding was largely sourced from state and territory governments with the Commonwealth's main involvement being through capital funding. With the establishment of the ANTA Agreement, public VET funding in Australia became a joint responsibility of both levels of government. By 1998 however, about 70% of VET funding had become once again, the responsibility of state and territory governments.

## Funding and growth in VET and TAFE—1989–90 to 1999

In 1989–90 Commonwealth and state/territory funding for TAFE (recurrent and capital) amounted to approximately \$1.38 billion (Vocational Education, Employment and Training Advisory Council 1991) with the Commonwealth contributing 24.5% of this total. Approximately a further \$893 million was spent on apprenticeships and traineeships by both levels of government, with the Commonwealth contributing less than 20% of this total. In addition, the Commonwealth spent more than \$142 million that year on short-term training programs for the unemployed and other disadvantaged job seekers. By the year 2000, estimated operating expenditure for the national VET system amounted to \$3.61 billion (in 2000 prices).

It was estimated in 1989–90 (Vocational Education, Employment and Training Advisory Council 1991) that 40% of the state or territory expenditure on apprenticeships/traineeships was allocated

directly to TAFE for the provision of off-the-job training. This adds a further \$292.44 million to the total in 1989–90 spent on TAFE. The Commonwealth also spent an additional \$162.1 million that year on apprenticeship and traineeship programs; however, none of this amount is believed to have gone directly to TAFE for direct provision. In all probability, most of this Commonwealth funding was spent on employer rebates and subsidies to employers and disadvantaged apprentices.

There was an estimated equivalent of 949 589 students for the financial year 1989–90 (derived as an arithmetic mean of calendar years 1989 and 1990). Therefore, per capita expenditure on TAFE students in 1989–90 is estimated to have been \$1676.34 million divided by 949 589 which equals \$1765.33.

In the early years of the ANTA Agreement expenditure grew rapidly. The Productivity Commission estimated that between 1989 and 1994, government VET expenditure rose in real terms by about 25% to \$2.55 billion (Productivity Commission 1995, p.294). By 1999 total expenditure (accrual based) had risen to approximately \$3.45 billion, of which the Commonwealth's contribution was estimated at about 25.6%. Burke (2001) estimates that the Commonwealth's contribution to VET revenue rose from 21% in 1993 to 25% in 1997. With the suspension of growth funding, Burke estimates that this share fell to 23% in 1999. Over the same period, the states' shares fell between 1993 and 1997 from 63% to 56%, but rose to 59% in 1999. Fee-for-service costs and student fees rose only slightly, from 12% to 13% over the period 1993 to 1999.

While funding of the VET system has grown, this has been matched by a substantial expansion in enrolments, clients and annual hours curriculum. NCVER statistics show that the number of VET clients grew between 1990 and 1996 by more than 40% and by more than 70% between 1990 and 1999. While these data are from a series that suffers several breaks, the data are still indicative of the enormous expansion that has occurred in the system since the ANTA Agreement was introduced. Because of gradual refinements in the measurement of these dimensions, especially annual hours curriculum, it is difficult to produce a consistent series showing the growth in the size of the system. Nevertheless, it is clear that recent years have seen substantial increases in productivity.

During the nineties however, the share of gross domestic product (GDP) allocated to education has fallen. Burke (2001) shows that, between 1992–3 and 1998–9, total government outlays on education in Australia as a proportion of gross domestic product fell from 5.8% to 5.6%. During this period total private final expenditure on education grew strongly from \$5.5 billion to \$9 billion. Burke (2001, p.2) notes that the: 'fastest growing element of government (educational) outlays was transfers to private institutions, notably private schools and private VET institutions for the delivery of education and training'.

Burke (1999) showed that, in the mid-nineties, TAFE received about 12% of total education outlays by governments, compared to about 24% received by universities and 60% received by schools and pre-schools. By 1997–98 Burke (2001) estimated that TAFE received about 10.8% of total government education outlays. Burke (2001) notes that 'considerable courage' is required to make comparisons of VET government expenditure over time because of changes in the definition of the VET sector and changes in statistical collections. However, using NCVER operating revenue data, Burke concludes that, between 1997 and 1999, VET expenditure per hour declined by 10%, from \$14.00 per hour in 1997 to \$12.60 in 1999. He also notes major variations between the states and territories on this measure of expenditure.

In his 2001 analysis Burke also compares government expenditure on education in a range of OECD countries for 1997. He shows that Australia's direct public expenditure on educational institutions amounted to about 4.3% of nominal gross domestic product, well below the weighted total mean of 4.8% for the 28 countries included in the comparison. In that year Australia also recorded one of the lowest levels of total government outlays, 32.3% (for all purposes including education, health and social services), as a proportion of gross domestic product. Again the total weighted mean of all OECD countries' total expenditure was 37.8% of gross domestic product.

## Funding approaches in Australia

As noted earlier, Maglen and Hopkins (1999) point out that the current VET policy and planning environment is a mixture of interventionist and non-interventionist approaches. Mirroring this diversity in policy and planning, Australia has in place a varied range of funding mechanisms for VET broadly defined. While a large proportion of provision continues to be funded as it was 10 years ago; that is, through direct government transfers to publicly owned providers, an increasing amount has been allocated on a contestable basis through several models. In addition to these contestable models (or more correctly a variation of them) is the user choice model in place for New Apprenticeships.

In part, the diversity in the Australian VET sector is a reflection of the continuing hybrid nature of government responsibilities for funding. This point was acknowledged by ANTA, which stated in part:

... there are no 'right and wrong' answers for how a particular market should operate ... indeed the options ... are not mutually exclusive. That is, different arrangements can be put in place for different circumstances within one market.

(ANTA 1996, p.33, Technical attachment)

ANTA goes on to note:

In examining options for market structure, consideration must be given to who is making the purchasing decision and the degree of contestability of the market. (ANTA 1996, p.33)

In that same paper ANTA proposes a range of eight models of market structures. These range between a purely 'public service' model of VET delivery, in which the government purchases training from public providers using public funds and where the provider is under direct supervision of the government, through various mixed models, to a purely private model under which individuals purchase training from privately owned providers. Surprisingly, this matrix does not show any models under which employers are the purchasers of training.

In 1990 Deveson presented a much simpler funding model, distinguishing between government and industry-funded training. Quoting the Allen Consulting Group, Selby Smith et al. (2001) show their use of a slightly more complex funding taxonomy, reflecting some initial experiments in developing competitive tendering.

The Allen Consulting Group (1994) identified three market sectors by funding mode:

- ✧ Quasi-market in which (primarily TAFE) institutions are funded directly by government, but in which some market-like processes exist and at least implicit competition occurs
- ✧ Funding market in which government training funds are open to competitive tendering rather than channelled directly to institution
- ✧ Open or commercial training market in which the users of training directly purchase training products from providers under free market conditions.

(Selby Smith et al. 2001, p.115)

Selby Smith et al. (2001, p.115) also note that Anderson has proposed a similar taxonomy:

Anderson (1994, 1996a) identified three major market sectors on the basis of existing financial and regulatory arrangements as follows:

- ✧ A regulated or closed-market sector in which access to government funds was restricted to public (primarily TAFE) institutions, and in which resource allocation and training delivery were subject to relatively high levels of government planning and regulation
- ✧ A partially regulated or quasi-market sector in which government funds were allocated to public and private providers via simulated market processes such as competitive tendering and funding submissions, and in which training delivery was subject to partial government

regulation (i.e. provider registration and course accreditation, performance agreements and contracts)

- ✧ A deregulated or open-market sector in which training providers (public and private) engaged in direct competition for clients and resources (e.g. overseas students, industry training contracts) and delivered training relatively free of government regulation.

(Selby Smith et al. 2001, p.115)

Selby Smith et al. (2001) examine in detail a range of variations of funding mechanisms, including fee-for-service, preferred supplier arrangements, vouchers, competitive tendering, user choice and the use of intermediaries. These authors identify New Apprenticeship Centres (NACs) as the only significant intermediaries in Australia and do not appear to regard group training companies as fulfilling this role, considering them as labour market rather than training market intermediaries (see Selby Smith et al. 2001, p.54). An ANTA evaluation of user choice (ANTA 2000) found that 'NACs have not emerged as a significant brokering or information source at this stage ...' (that is, as at September 1999).

Some VET commentators in Australia question the involvement of government in training markets, and note that: 'hard economic evidence of the externalities of VET is scarce. The contribution of education to improved productivity, for instance, has not yet been clearly established' (Maglen in Selby Smith et al. 2001, p.114).

This ignores the broader role of VET in providing access to the labour market for the unemployed. It also ignores the potential social benefit of providing a more occupationally mobile labour force. Many commentators appear to have ignored the lessons of the mid-1970s which saw the initial wave of structural adjustment after the oil price shock and tariff cuts. Large numbers of workers displaced from manufacturing employment lacked basic skills that hindered retraining.

Selby Smith et al. (2001) show that relatively few unemployed, prime-age Australians participate in training by comparison with a range of other countries, whereas a substantially higher proportion of employed Australians participate in training. Table 6 summarises some of the data presented by Selby Smith et al. (2001, p.67)

**Table 6: Proportion of persons aged 25 to 44 participating in education and training (1994–95), percentages**

	<b>All aged 25 to 44</b>	<b>Employed aged 25 to 44</b>	<b>Unemployed aged 25 to 44</b>
Sweden	54	62	47
New Zealand	46	57	37
United Kingdom	45	62	34
United States	42	50	33
Canada	37	46	36
Netherlands	36	47	51
Australia	36	46	27

Source: Selby Smith et al. (2001, p.67).

Table 6 suggests that Australian policies in regard to labour market programs and VET have provided fewer opportunities for access to education and training than policies operating in some other OECD countries. Since the mid-1990s labour market programs targeted at the unemployed have been reduced in Australia in favour of 'work-for-the-dole' and New Apprenticeship programs.

User choice was introduced following recommendations of the Allen Consulting Group to ANTA (Allen Consulting Group 1994). User choice was initially trialled for several years after the Allen Consulting Group's report and became part of mainstream VET policy in 1996.

In a democracy the approach to funding should be driven by the agreed views of government and citizens on these issues. The issues of equity and social cohesion resulting from labour force participation are valid issues for government consideration. There are very many funding models possible and actually in use. Any such models need to be tested on the grounds of both economic efficiency—as with all government expenditure. However, these models also need to be tested on the basis of whether they materially contribute to a more efficient or equitable provision of VET for all stakeholders.

## VET funding literature

In reviewing the literature on VET funding, one of the questions that arises is ‘What is the real nature of the debate?’ Most of the discussion deals with introducing more competition into provision with the aim of reducing government costs and improving efficiency. Much of the debate also appears to be driven by different political philosophies revolving around the desirable level of government intervention. These issues appear to have replaced debate over longer-term educational and economic goals.

In attempting to place the debate in a wider context, Chapman, Doughney and Watson (2000) and Chapman, Watson and Wheelahan (2001) have argued for a revised educational funding system that would remove the barriers between university and VET funding, in order, they argue, to improve access to lifelong learning. They argue that, with increasing movement of students in both directions between university and VET, there is no longer a justification for unrelated funding arrangements. They also argue, as do many others who propose reform to educational funding, that: ‘Regardless of a country’s economic development, education delivers substantial returns to individuals in terms of relative earnings’ (Chapman, Doughney & Watson 2000, p.4). They also note the findings of McKenzie and Long (1995) that those with higher educational qualifications are most likely to undertake further education and workplace training (McKenzie & Long 1995).

Chapman, Doughney and Watson do not however, quote another finding of Long, Mackenzie and Sturman (1996, p.44 quoted in Chapman, Doughney & Watson 2000) that ‘completion of a vocational education qualification is associated with somewhat higher earnings for males and a little difference in earnings for females’. In this paper, Long, Mackenzie and Sturman analyse in detail, longitudinal data on earnings for a range of TAFE graduates. They find that, for some groups of TAFE graduates, earnings do not rise significantly, and the value of a TAFE qualification in terms of improved earnings is much less than a university qualification.

Long, McKenzie and Sturman (1996) concluded that:

Increases in fees, the extension of the Higher Education Contribution Scheme to TAFE and the reduction of the level or scope of student assistance schemes have all been suggested at one time or another. All would act as disincentives for students to undertake vocational education, possibly without the incentive of commensurately high earnings.

(Long, McKenzie & Sturman 1996, p.44)

Chapman, Doughney and Watson (2000) propose the extension of arrangements similar to the Higher Education Contribution Scheme (HECS) to at least higher level VET courses. They seem to be arguing that the availability of the Higher Education Contribution Scheme in universities, and the requirement for fee payments in VET disadvantages VET students, although they do not acknowledge the high proportion of TAFE students who are exempt from fees. They also argue that a seamless funding system would make the provision of a wider range of courses by institutions more practicable. They summarise the advantages of a VET Higher Education Contribution Scheme as follows:

The HECS arrangements for Australian higher education could be applied to courses in TAFE, particularly for the higher level VET courses that articulate with university awards. The advantages of such a scheme would be the removal of up-front charges, the provision of



default protection for students, and the relatively low administrative cost of collection. Issues requiring further research include the extent to which HECS could be applied to the TAFE system under the existing funding arrangements or whether it could only be introduced in the context of a new cross-sectoral funding model for TAFE and higher education. A further issue for consideration is the potential application of HECS to private providers in both VET and higher education. (Chapman, Doughney & Watson 2000, p.16)

As Selby Smith et al. note:

They [Chapman, Doughney & Watson] emphasise the need for further research to find methods that improve the efficiency of education and training across the higher education and VET systems and increase fairness in the distribution of the total resources provided for post-school education and training in Australia. (Selby Smith et al. 2000, p.111)

This position begs several questions, including how efficiency is measured in education and training. Over the last decade within the VET sector, efficiency considerations have largely revolved around the delivery costs per curriculum hour. To date, no compelling longer term measures, including measures that recognise the broader social role of education and training, have emerged in the debate. The very real political difficulty of achieving more cohesion between an almost exclusively Commonwealth-funded university sector and a VET sector funded under a complex joint Commonwealth/state/territory arrangement is also an issue that cannot be dismissed as readily as is done by Chapman, Doughney and Watson (2000).

## The allocation of ANTA funds

Allocation of funds under the ANTA Agreement is not done on an industry division basis but rather by 'training area', a classification that reflects the structures of industry training advisory bodies rather than the Australian Bureau of Statistics industry classifications. Table 7, derived from ANTA's *Directions and resource allocations for 1999* and the same title for 2001 (ANTA 1999b, 2001b) shows the percentage distribution of public VET system activity for 1999 and 2001 according to 'training area', together with the shifts in funding that occurred over that period.

Given the differences in definitions between the industry classification and the 'training areas' in table 7 only several tentative observations can be made in relation to the equity of industry access to public VET funds. While government funding of 'training areas', which equates more or less to industry sectors, might be equitable, when industries' own training expenditure (examined in a later section of this report), is taken into account through measuring their expenditure on training courses, inequities arise.

Table 8, using data from the Australian Bureau of Statistics survey of education and training experience, 1997 (Australian Bureau of Statistics 1997a) shows the performance of industry training provision in relation to the distribution of employment. The issue of industry training expenditure is examined in more detail later in this report; however, the data in table 8 are presented here in order to provide a contrast with ANTA funding allocations.

**Table 7: ANTA national allocations by training area, 1999 and 2001**

Training area	1999		2001		Change in % share 1999–2001
	AHC ('000)	% share	AHC ('000)	% share	
Arts etc.	13 670	5.5	15 790	5.9	0.4
Automotive	8 210	3.3	7 607	2.8	-0.5
Construction	15 064	6.1	16 649	6.2	0.1
Community services/health	23 794	9.6	26 906	10.0	0.4
Finance etc.	3 456	1.4	5 368	2.0	0.6
Food processing	3 785	1.5	6 390	2.4	0.9
Textiles, clothing, footwear	5 159	2.1	5 247	2.0	-0.1
Communications	2 219	0.9	2 509	0.9	0.0
Engineering/mining	16 990	6.8	15 506	5.8	-1.0
Primary industry	13 608	5.5	13 803	5.1	-0.4
Process manufacturing	462	0.2	772	0.3	0.1
Sales and personal service	9 114	3.7	10 730	4.0	0.3
Tourism/hospitality	19 606	7.9	20 077	7.5	-0.4
Transport/storage	1 939	0.8	2 929	1.1	0.3
Utilities	9 503	3.8	8 685	3.2	-0.6
Business and clerical	37 993	15.3	39 215	14.6	-0.7
Computing	15 485	6.2	19 915	7.4	1.2
Science/technical	6 667	2.7	8 210	3.1	0.4
General education	38 919	15.7	40 800	15.2	-0.5
Unallocated	2 676	1.1	968	0.4	-0.7
<b>Total</b>	<b>248 319</b>	<b>100</b>	<b>268 076</b>	<b>100.0</b>	<b>0.0</b>

Source: ANTA (1999b, 2001b)

**Table 8: Training courses and employment by major industry division, Australia, 1997**

Industry	Number of training courses, ('000)	Employment Nov. 1997 ('000)	Courses per employee
Agriculture	85.2	457.9	0.2
Mining	137.5	83.2	1.7
Manufacturing	751.2	1137.6	0.7
Electricity, gas, water	100.9	64.8	1.6
Construction	157.6	597.1	0.3
Wholesale	328.5	492.1	0.7
Retail	672.9	1277.5	0.5
Accommodation, cafés and restaurants	170.9	402.7	0.4
Transport and storage	306.3	389.0	0.8
Communication services	209.0	148.8	1.4
Finance and insurance	490.5	307.5	1.6
Property and business services	604.4	873.1	0.7
Government administration	684.0	351.5	1.9
Education	1068.6	586.8	1.8
Health and community services	1095.0	798.5	1.4
Cultural and recreational services	129.8	210.3	0.6
Personal and other services	324.4	343.1	0.9
<b>Total</b>	<b>7316.6</b>	<b>8521.5</b>	<b>0.9</b>

Source: Australian Bureau of Statistics (1997a)

From tables 7 and 8 it appears that the public sector is bearing the majority of the load for training in the construction sector. While providing only 0.3 training courses per employee in 1997, the construction industry nevertheless achieved a share of funding (6.1% of the total) which nearly matched its share of total employment (7.4%). Tourism and hospitality appears also to be well treated by public provision, receiving 7.9% of publicly funded hours but the closely matching industry division (accommodation, cafés and restaurants, which accounts for about 5% of total employment) provided only 0.4 training courses per employee.

Retailing was also a low provider of training courses, at 0.5 courses per employee, but, on the other hand, it does not appear to be as well treated by the public purse. It received, through the closely matching sales and personal service training area, only 3.7% of funded hours, despite accounting for about 15% of total employment. It might of course be the case that some industries have a much lower need for training than others and that the differences have some legitimacy.

On the other hand, the finance and insurance industry provides 1.4 courses per employee per year, yet appears to receive only a small share of public VET system funding (1.4% of the total), while accounting for about 3.9% of total employment.

While it is difficult to make accurate comparisons between funding under the ANTA arrangements and 'training course' funding, it appears likely that some industries rely largely on public funding for their training needs. Nevertheless, some other industries that do not receive high levels of public funding provide higher levels of training for their industry.

## Training the existing labour force

Although the VET system expanded during the nineties, the benefits of this expansion were not evident in the impact on the training activity of the existing labour force, at least up to 1997. Various Australian Bureau of Statistics surveys indicate that the proportion of wage and salary earners who undertook training in the 12 months preceding the Australian Bureau of Statistics survey hardly changed between 1989 and 1997. The likely effect of the training guarantee on the 1993 figures is apparent.

**Table 9: Employed persons undertaking some form of training in the previous 12 months, percentages**

	1989	1993	1997
With post-school qualifications	84.8	89.2	85.4
Without post-school qualifications	75.0	79.2	74.0

Sources: Australian Bureau of Statistics (1989, 1993, 1997a).

The VET system is not confined to that which is funded by government nor to that part of the system that awards qualifications. In 1997 the Australian Bureau of Statistics undertook a wide-ranging survey of education and training experience in Australia. The survey distinguished between persons enrolled in formal educational qualifications and those undertaking training courses, most of whom were already employed. This survey sought information on the participation of Australians in *training*, including *training courses*. Those students enrolled in any formal TAFE qualification (or a similar private provider course) are regarded as in *education* and not in a *training course*.

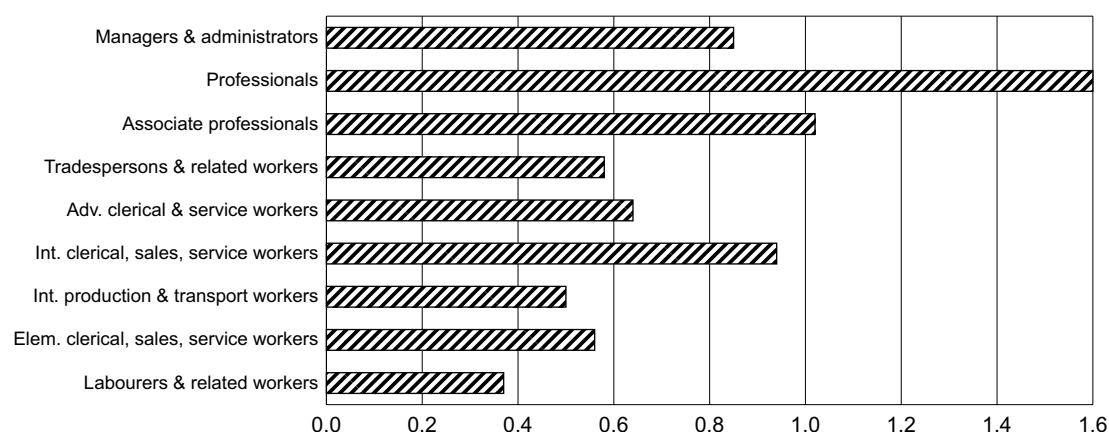
The Australian Bureau of Statistics has specific definitions of these terms that need to be understood to appreciate the findings of this survey. *Training courses*, as defined by the Australian Bureau of Statistics, must have a structured format and can be a combination of on- and off-the-job instruction or supervised learning, in the form of workshops, tutorials, seminars, audiovisual presentations or self-paced learning sessions. Specific information was gathered in relation to the four most recent training courses undertaken in the previous 12 months. The comments on these data relate to those

who completed a training course in the survey period. The term *training* is used in the report to refer to any education or training undertaken, including any on-the-job training, distinguishing it from *training courses*, which require a structured format and are vocational in nature.

Over 60% of the population surveyed by the Australian Bureau of Statistics had undertaken some on-the-job training during the previous 12 months, while over 70% had undertaken some form of training (including enrolment in formal education qualifications). The total number of hours in training courses, almost 214 million contact hours in 1997,<sup>1</sup> compares with about 300 million ‘annual hours curriculum’ (AHC) recorded in the formal VET context. While contact hours are not strictly comparable with annual hours curriculum, any variation between the two measures is likely to narrow the gap between the two areas. Hence, according to these figures, structured vocational learning beyond the formal VET system is at least 71% of the size of the formal VET system as measured by contact hours.

Any debate about the distribution of the costs of funding VET needs to recognise the size of this sector. Such debate also needs to recognise that this ‘non-formal’ or ‘non-award’ part of VET incorporates a range of inequities. Individuals who already hold qualifications, especially a university qualification, or those in high-status jobs, are much more likely to participate in training courses than those lacking qualifications or in lower status jobs. It also needs to be recognised that this largely industry-funded sector sees markedly different levels of training provision between different industry sectors. For a more detailed examination of these issues see Dumbrell (2000). Figure 2 shows the participation of persons in training courses according to their occupational group from the survey of education and training experience.

**Figure 2: Annual training courses per employed person by occupational group**



Source: Australian Bureau of Statistics (1997a).

This uneven distribution of training is not purely an Australian phenomenon. Quoting Jorn-Steffen Piske, Marginson (1999b) notes that ‘training incidence rises with schooling, occupational position, white-collar or public servant status, firm size ... Basically no continuous training is received by those with few initial skills’.

During the first half of the nineties the rapid expansion of government expenditure on VET appears to have coincided with a 3% reduction in employer training provision, as measured by the average number of hours of training undertaken per employee between 1993 and 1996 (Australian Bureau

<sup>1</sup> This figure is derived by the author from the Australian Bureau of Statistics data.

of Statistics 1997b). Average training hours per employee also declined over that period by about 11.5%, with in-house training suffering the greatest percentage decline.

In February 1997 the Australian Bureau of Statistics survey of employer training practices (Australian Bureau of Statistics 1998) revealed that only around one-third of employers in Australia were providing structured training, although this finding is distorted by the variations between employers by size. Ninety-three per cent of large employers (>100 employees) and 70% of medium-size employers (those with more than 20 employees and fewer than 100) provided structured training. The survey shows fewer employers providing structured training to lower status workers (labourers and production and transport workers) than to associate professionals and professionals. This survey also found marked variations between industry sectors in the provision of structured training, although to some extent these variations appear to be influenced by the distribution of large and small employers by industry sector. These variations appear to be a necessary consideration in the development of any policies aimed at increasing employer and employee responsibilities for funding their training needs.

## Training for the unemployed

As noted earlier in this report, the last five years have seen major changes in the provision of assistance to the unemployed. One feature of these changes has been the replacement of much of the training previously provided for the unemployed, with alternative approaches, such as the Work for the Dole Program and market incentives for placement agencies to secure job placement for the unemployed. According to the Australian Council of Social Service (ACOSS) (2001), the Commonwealth cuts to employment assistance programs overall in 1997 amounted to about \$1 billion. These programs comprised both wage subsidy programs (which might have included some on-the-job training component) and training programs conducted by TAFE and other providers.

During the 1980s and the first half of the 1990s, training-based labour market programs were a significant component of training provision. As noted earlier, the total spent by the Commonwealth on training-based labour market programs in 1989–90 (about \$880 million) amounted to roughly half the total recurrent spending by governments on TAFE systems across Australia. Much of this training was undertaken through TAFE colleges, representing at the time, a significant source of funding for TAFE and private training providers. Nevertheless, it should be acknowledged that TAFE colleges in particular, still represent an important source of training for unemployed persons, and some subsidies are still extended to the unemployed via the waiver of various fees. Whether the level of unemployed persons using TAFE colleges has increased as Commonwealth-funded labour market training programs have contracted, has not been investigated in this study. If this has occurred, it would represent a hidden cost transfer from the Commonwealth to the state/territories.

According to the Australian Council of Social Service:

... when record jobs growth failed to seriously dent welfare rolls in the United States, policy makers there concluded that long-term joblessness was a *behavioural* problem. That is, most people on welfare benefits either lacked the motivation or the financial incentive to move from benefits to work. This was the basis for a tough welfare regime of time limits on payments and strict work requirements for sole parents, announced in 1996.

(Australian Council of Social Service 2001, p.12)

This notion that high levels of joblessness are caused by 'welfare dependency' gained currency in Australia in the late 1990s and triggered a major review of the welfare system. The central thrust of that review's report (the McClure Report) is that paying social security benefits is not enough to reduce poverty and social exclusion and welfare recipients should be encouraged to participate more fully in the economic and social life of the community. The report steered clear of 'welfare dependency' arguments but did not pin down the main causes of long-term joblessness.

(Australian Council of Social Service 2001, p.12)

Long-term unemployment, as measured by the number of long-term recipients of unemployment benefits, in Australia has not fallen below 350 000 since the early 1990s, despite strong economic growth and generally declining overall rates of unemployment. However, Australian Bureau of Statistics labour force data present a different picture, showing, for example, long-term unemployment falling to below 200 000 in mid-1999. The reasons for these differences are complex and not appropriately explored in this paper. Nevertheless, it is apparent that the Australian unemployment rate remains unacceptably high and that regional differences in unemployment rates are marked, indicating that welfare dependency is not an adequate explanation for the persistence of unemployment, especially long-term unemployment.

The Australian Council of Social Service goes on to state that:

No convincing evidence has been presented to show that 'welfare dependency' is a major cause of long-term joblessness here ... Financial incentives to work are also stronger here than in most other OECD countries. Although social security income tests do act to discourage employment (especially part-time and casual employment), full-time minimum wages are relatively high here and benefits are relatively low. This means, for example, that a single adult on unemployment allowances will double his or her disposable income by undertaking full-time work at the minimum wage. (Australian Council of Social Service 2001, p.12)

Quoting a recent OECD report (2001), the Australian Council for Social Service attributes long-term unemployment more to a skills mismatch than to welfare dependency. The OECD quote is:

Open vacancies suitable for long-term unemployed people are in short supply.

Australian Bureau of Statistics data (2001) not quoted by the Australian Council of Social Service reveal that a lack of skills appears to be a much more significant problem for males than for females. Those data show that about 25% of unemployed males cited a lack of skills as their main difficulty in finding work, compared with about 17% of females. The Australian Council for Social Service (2001, p.15) presents data comparing the employment outcomes of the former wage subsidy and training programs that operated in the mid-1990s with outcomes for the current employment assistance programs. The outcome measure is the percentage of program participants employed three months after completing the program. Table 10 is extracted from the Australian Council for Social Service report which draws in reports from the Commonwealth Departments of Employment, Education, Training and Youth Affairs, and Employment, Workplace Relations and Small Business.

**Table 10: Outcomes from employment assistance programs**

Program	Outcomes of employment programs	
	Employment outcomes (% employed 3 months afterwards)	Client profile (% of clients unemployed long term)
Jobstart (1994–95)	59	83
Jobskills (1994–95)	41	93
Intensive Assistance (2000)	36	65
Work for the Dole (2000)	27	75

Source: Australian Council of Social Service (2001, p.15).

It is clear that outcomes from current programs are inferior to those obtained from some of the main labour market programs operating in the mid-1990s. Of particular note for the purposes of this report is the 41% employment outcome from the Jobskills Program, the clients of which were almost entirely long-term unemployed. In effect, this *training* program found jobs for more than 40% of mainly long-term unemployed people. In practice, this is a superior outcome than either of the current programs, especially as the client profiles of those more recent programs are less likely to comprise long-term unemployed persons.

The Australian Council of Social Service concludes that:

Another, more fundamental, reason is that a 'dual labour market' operates in Australia. The labour market for unskilled jobs is separate and distinct from that for skilled jobs, with limited movement upwards from low-skilled to highly-skilled occupations. Traditional career pathways between low-skilled and higher-skilled work within organisations are breaking down, as employers rely increasingly on external education and training to prepare people for skilled jobs. These trends raise barriers to entry into secure adequately paid employment, especially for young unemployed people, mothers returning to the workforce after providing full-time care, and mature-age manual workers.

Under these conditions, better work incentives and job search skills alone will not get the most disadvantaged job-seekers into 'secure' jobs, especially those with limited recent workforce experience. A logical policy response to this problem is to invest in vocational and other skills training for jobless people ... (Australian Council of Social Service 2001, p.33)

The Australian Council of Social Service continues with a discussion on the relative success of wage subsidy and training programs, concluding that wage subsidy programs achieved better outcomes than training programs. These results are based both on departmental post-program monitoring and evaluation studies, together with independent evaluations. One factor not discussed in relation to the relatively poor outcomes achieved by labour market training programs is the fact that the planning of these programs was never integrated with broader planning processes in VET. As a result, courses provided under labour market program funding were often what could be provided when other commitments had been met.

One statistic that has remained consistent over many years is that persons with post-school qualifications suffer unemployment rates around half of those without post-school qualifications (Australian Bureau of Statistics 2000b). Those with such qualifications also enjoy higher rates of labour force participation. The implication is clearly that providing the unemployed with genuine, recognised qualifications should improve their chances of finding employment.

Should training-based labour market programs be considered in the future, it is suggested that outcomes could be improved by ensuring better integration with other VET provision.

# Industry-funded training

---

## Introduction

The debate over the appropriate mix of responsibility for the funding of VET between government, industry and individuals has persisted in Australia for many years. International comparisons on the relative level of public and private expenditure on VET are extremely difficult to make because of variations in the definition of VET and other systemic differences, such as the role of secondary education systems in vocational preparation.

Making international comparisons of total education and training expenditure between governments and the private sector are, however, less problematic. Overall, Australia appears to have a relatively high level of private sector expenditure on education and training. Burke (2000, p.12) for example, finds that: 'Korea, Japan and the United States, small government nations and Greece, are the only OECD countries where the proportion of expenditures that are private are larger than in Australia'.

NCVER financial data (2001) show that more than \$4.16 billion was spent on operating expenses in the public VET system in 2000. Using data for the year 1998, ANTA (1999a) estimated that overall VET spending in Australia was divided almost evenly between governments (44%) and enterprises (45%), with individuals providing the remaining 11%.

One major distinction between the public VET system and the remainder is the level of planning attached to each area. The former is subject to detailed planning at the institute, state/territory and the national levels. Much of this planning aims to ensure that the training system addresses the changing skill needs of the national and local labour market, while also addressing other social objectives, such as equity. At none of these levels, however, is there evidence of coordination between the public system and industry-funded provision.

The private training sector is dominated by shorter duration courses. However in total, the quantum of training provided through employment or undertaken independently by individuals outside the public VET system is very substantial. Dumbrell (2000) has examined this issue in some detail, using the Australian Bureau of Statistics survey of education and training experience. To quote from that paper:

The total number of hours in training courses [i.e. courses conducted outside the public VET system], almost 214 million contact hours in 1997, compares with about 300 million 'Annual Hours Curriculum' (AHC) recorded in the formal VET context. While contact hours are not strictly comparable with AHC, any variation between the two measures is likely to narrow the gap between the two areas. (AHC is the product of the nominal duration in hours of all government-funded VET courses multiplied by the number of enrolments for each course.) Hence, according to these figures, structured vocational learning beyond the formal VET system is at least 71% of the size of the formal VET system as measured by contact hours.

(Dumbrell 200, p.5)

As noted earlier, the public VET system is subject to detailed planning arrangements, incorporating national, state/territory and regional level considerations. Such planning seeks to ensure that future skill needs will be met by the VET system and that equity objectives will also be addressed. Privately



funded training is based on the perceived needs of employers and individuals. The planned, public VET system appears not to take account, in any formal structured way, of the activity in the privately funded sector in its allocation of resources.

Selby Smith et al. (2001) estimate that Australia's government spending on education amounted to about 4.4% of gross domestic product (in 1997–98) by comparison with the average of 10 selected OECD countries of 5.2% in 1995. These authors also estimated the total private expenditure on education for the same periods and found that Australia's total of 0.8% of gross domestic product was closer to the OECD average of 0.9% than was public expenditure. Only that small proportion of employer training expenditure spent on TAFE or higher education is included in the official private education expenditure statistics. Moreover, there was an apparent decline in employer expenditure on training (spent with all types of providers) which occurred between the late 1980s and 1996 (Australian Bureau of Statistics 1997b).

Data on the private training sector are not as comprehensive as those which relate to the public VET system. The major data sources on non-publicly funded VET are the series of employer-based surveys conducted by the Australian Bureau of Statistics including *Employer training expenditure Australia* and *Employer training practices Australia* (Australian Bureau of Statistics 1997b, 1998a respectively) and the household-based survey *Education and training experience Australia 1997* (Australian Bureau of Statistics 1997a). These sources measure private training effort in different ways. The employer training expenditure data report on structured training provided to employees by employers in the September quarter 1996 and also provide comparisons with a similar survey in 1993. The employer training practices data provide details of both structured and unstructured training in the 12 months ending February 1997. However, both surveys used the same sample of employers.

The Australian Bureau of Statistics has not published any employer-based surveys of training expenditure since these 1996 and 1997 surveys, although it appears that a new survey of employer training expenditure is planned by the Australian Bureau of Statistics. As a consequence, data on private training expenditure are now more than five years old and therefore fail to reflect the impact of policy initiatives, such as the New Apprenticeships program, established since that time.

## Data from employer-based surveys

In the employer-based surveys, large employers were found to be much more likely to provide both structured and unstructured training than small employers. There were also marked differences on an industry basis in the level of training provision, especially in relation to structured training. These differences occurred in three ways: as measured by hours of training provided per employee; dollars spent on training per employee; and the proportion of employers in each industry sector providing training. Table 11 summarises some of these findings on an industry basis. In this survey, data were not gathered in the agriculture industry area.

It is apparent from table 11 that there were, in 1996, substantial variations between industries in the average amount spent on training per employee. The data from the training practices survey conducted in 1997 shows that typically just over one-third of employers in most industry sectors were providing structured training. There were, however, some sectors, mainly government or public utilities where a small number of large employers predominate, where the proportion was much higher.

Four industry divisions stand out in table 11 as relatively low providers of training. These are retail, accommodation, cafés and restaurants, construction and personal and other services.

**Table 11: Differences in training provision by employers by ANZSIC\* industry division**

Industry division	% of employers providing structured training <sup>(1)</sup>	Expenditure on training per employee \$ <sup>(2)</sup> Sept. quarter 1996	Average hours of training per employee <sup>(2)</sup> Sept. quarter 1996
Mining	37	896	17.12
Manufacturing	35	194	5.42
Electricity, gas and water	83	481	10.38
Construction	29	100	4.21
Wholesale trade	40	173	3.49
Retail	29	88	3.39
Accommodation, cafés and restaurants	24	55	2.40
Transport and storage	31	251	6.12
Communication services	37	318	6.34
Finance and insurance	47	282	6.17
Property and business services	36	191	4.07
Government administration and defence	99	264	6.02
Education	52	222	5.87
Health and community services	42	130	4.05
Cultural and recreational services	29	103	2.77
Personal and other services	36	299	9.67
<b>Total</b>	<b>35</b>	<b>185</b>	<b>4.91</b>

Note: \*Australian and New Zealand Standard Industrial Classification.

Sources: 1 Australian Bureau of Statistics (1998); 2 Australian Bureau of Statistics (1997b).

## Data from the household-based survey

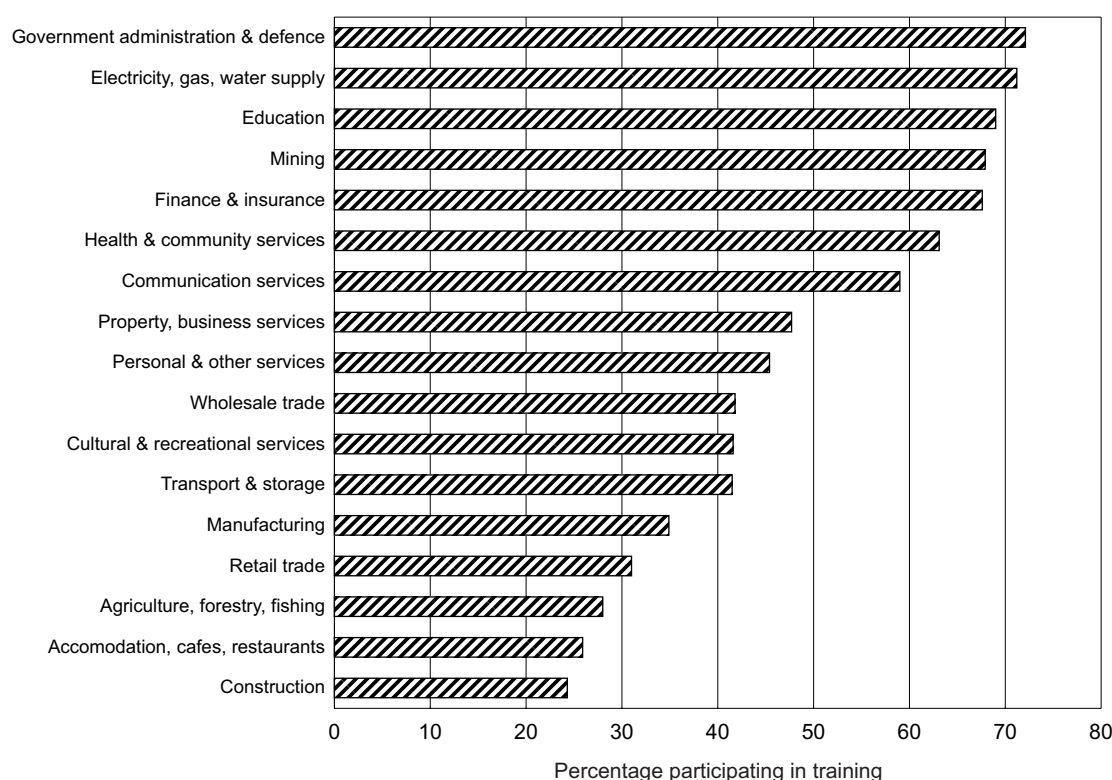
The other source of detailed data on access to non-government-funded training (as well as to government-funded training) is the household-based survey of education and training experience survey (Australian Bureau of Statistics 1997a). This was a large-scale sample survey of approximately 13 800 dwellings across Australia, resulting in about 22 700 interviews. In any such survey, the coding of individuals to industries depends on the interviewee's description, rather than on the more assured coding inherent in employer-based surveys. Thus, strictly speaking, comparisons between the two surveys on an industry-of-employment basis are not using the same method of classification. Similar surveys were undertaken by the Australian Bureau of Statistics in 1989 and 1993.

The education and training experience survey is a valuable source of data as it allows an examination of training support provided by employers and also data on costs incurred by individuals in funding their own training, classified by their main industry of employment.

The data on financial support provided to individuals by employers provide a breakdown between those individuals who undertook one training course in the survey year and those who undertook two or more courses. These data show that, of the estimated 1.7 million individuals who received some employer financial support for training, two-thirds undertook only one training course, while one-third undertook two or more courses.

These data show wide differences between industries. The health industry stood out as more likely than others to provide two or more courses to its employees, with that sector accounting for 20% of all workers who undertook two or more courses, although this industry accounted for less than 9.5% of total employment.

**Figure 3: Participation in training courses in 12-month period, by industry division**



Source: Australian Bureau of Statistics (1997a).

The education and training experience survey distinguishes between persons enrolled in formal educational qualifications and those undertaking *training courses*. In other words, those students enrolled in any formal TAFE or similar qualification are regarded as in ‘education’ and not in a ‘training course’. As a consequence, those industries employing significant numbers of apprentices and trainees might not count these individuals as in ‘training courses’, as their off-the-job training would be classified by the Australian Bureau of Statistics as education courses.

The data from the education and training experience survey also allow a determination of the average hours of training undertaken per employee, according to individuals. These data differ fundamentally from those collected in the employer-based survey, in that they include only up to the last four training courses undertaken by individuals over the survey period, not merely those provided or supported by their employer. The survey does, however, allow the matching of total hours of training for individuals by their main industry of employment.

These data show significant differences from the employer-based survey data. Table 12 summarises the average hours of training for individuals undertaken over the survey year. It is apparent from table 12 that the number of hours of training undertaken by individuals according to the education and training experience survey varied markedly according to industry of employment.

Industry classification is an important determinant of entry-level training provision (for example, see Ball & Freeland 2001) and it is known that the provision of such training does involve enterprises in training costs, especially in the early years of apprenticeships.

Training courses included in the Australian Bureau of Statistics survey must have a structured format and can be a combination of on- and off-the-job instruction or supervised learning in the form of workshops, tutorials, seminars, audiovisual presentations or self-paced learning sessions. Data from this household-based survey appear to confirm the findings of the employer-based surveys. Expenditure on industry ‘own-purpose training’ varies substantially between the different

industry divisions, introducing significant imbalances in access to training for workers, depending on their industry of employment. Construction, retail and accommodation, cafés and restaurants all appear from this household-based survey to be providing relatively low levels of training to their employees. Figure 3 shows the degree of variation that exists between the industry divisions in the access to training courses available to workers in those industries.

It also appears, although the data are not assembled on the same basis, that some of the industry sectors spending relatively small amounts on their own-purpose training receive relatively high levels of funding for their training needs via the public VET system.

The extent of training participation varied markedly between industry divisions, with fewer than 30% of employees in agriculture, construction and accommodation, cafés and restaurants participating in training courses compared with more than 70% participation for those employed in government administration and the utilities.

## Reliability of industry training expenditure data

It is perhaps unfortunate that the most recent Australian Bureau of Statistics employer-based survey of training expenditure is over five years old. More recent surveys by industry bodies have questioned the Australian Bureau of Statistics estimates of the level of training expenditure by enterprises. For example, the Australian Industry Group recently published a report entitled *Engineering skill shortages* (2001), based on a survey of 372 firms in the 'engineering' industry across Australia. It reports on a survey of 400 employers conducted in New South Wales by *Australian Business* in September 1999 that revealed 93% of those firms were investing in some type of staff training. The report notes the contrast with the Australian Bureau of Statistics finding of only 68% of manufacturing firms investing in training in the 1997 Australian Bureau of Statistics survey.

Another way to test the reliability of the Australian Bureau of Statistics data is to compare the industry data obtained from the employer training expenditure survey (employer-based survey) and the survey of education and training experience (household-based survey). It would appear that this comparison has not previously been made.

Table 12 compares the annualised estimates of the average hours of training provided to employees by their main industry of employment using both the household-based survey of education and training experience and the employer-based employer training expenditure survey. While the means for both samples are similar—25 hours for the household-based survey and 19.6 hours for the employer-based survey—the variance was much greater for the employer-based survey than for the household-based survey (89 compared with 218).

There are several important qualifications that should be considered in using these data. First, the quarterly data for the employer-based survey have been annualised by the author by simply multiplying by four. This process might ignore variations between industries by which seasonal factors varied provision of training between quarters. Second, the different methodologies used by the Australian Bureau of Statistics in collecting the data might have led to differences in the level of reliability of the industry coding. Data collected from employers can be more reliably coded to an Australian and New Zealand Standard Industrial Classification than data collected via household surveys. In addition to these reservations, there are of course, the normal range of sampling errors attached to both surveys. Nevertheless, the comparison reveals some interesting inconsistencies that are not easy to explain, even given the qualifications outlined.

The fact that the overall estimate of total hours for the household-based survey exceeds the employer-based survey should not be surprising. Some of this training could be training undertaken outside working hours and unrelated to the individual's current employment.

**Table 12: Average hours of training per employee by industry division, annualised estimates, household- and employer-based surveys, Australia**

Industry division	SET* household-based	TES** employer-based
	Estimated annual hours training per employee	
Government administration and defence	40.7	24.1
Personal and other services	39.1	38.7
Mining	37.3	68.5
Electricity, gas and water	34.6	41.5
Education	29.9	23.5
Health and community services	28.8	16.2
Finance and insurance	26.5	24.7
Communication services	25.3	25.4
Transport and storage	23.2	24.5
Cultural and recreational services	22.3	11.1
Manufacturing	18.2	21.7
Wholesale	18.1	14.0
Accommodation, cafés and restaurants	17.2	9.6
Property and business services	16.9	16.3
Retail	14.2	13.6
Construction	9.0	16.8

Note: \*SET = Survey of education and training experience.

\*\*TES = Employer training expenditure survey.

Source: Australian Bureau of Statistics (1997a, 1997b).

Part of the difference between individual industries could be explained by part-time workers with jobs in several industry divisions receiving training in their minor industry of employment. (The survey of education and training data recorded the details for the last four training courses undertaken. For part-timers, one of these courses might have been provided by an employer in a different industry from their main part-time job.) This might, for example, explain the large discrepancy between the two columns for the accommodation, cafés and restaurants industry, with employers in this sector apparently providing much less training than reported by individuals who nominated this as their main industry of employment. It is well known that this is an industry with high levels of casual and part-time employment often undertaken by students.

Another feature of table 12 is the relatively close (defined as 30% difference) outcomes in the two surveys for ten of the 16 industry divisions. This leaves six 'outlier' industries with a greater than 30% discrepancy between the average hours of training recorded in the two surveys. In four of these industries (government administration and defence, health and community services, cultural and recreational services and accommodation, cafés and restaurants), the expected pattern was followed, in which hours recorded in the household survey exceeded the hours reported through the employer-based survey. Apart from government administration and defence, these industries are among the top five in terms of providing 'non-traditional' employment conditions; that is, having a high proportion of their workforce not in permanent, full-time employment. This indicates that employees in these industries might be undertaking part-time or casual work to facilitate their access to study.

The apparently high level of training undertaken by public servants might be a reflection of the relatively generous study leave conditions which applied at that time in the Commonwealth Government and in state/territory and local governments. While some of this would have been recorded as employer-provided under the employer-based survey, some could have been undertaken independently.

The two industries that do not fit this pattern, mining and construction, are more difficult to explain. The comparison of the two data sources indicates that employers in both these industries claimed to have provided much more training than was reported by their employees. In both cases, the average hours of training recorded in the employer-based survey were almost double those reported by employees in those industries via the household-based survey. The employer training expenditure survey (Australian Bureau of Statistics 1997b) also showed that the mining sector claimed by far the highest per employee training expenditure (see table 11).

While the qualification discussed earlier in this section in relation to the annualisation of the employer-based data could be expected to have some impact on the construction sector which is subject to marked seasonal fluctuations, this is unlikely to be the case in the mining sector. In other words, for seasonal reasons, construction industry employers might have provided much more training in the September quarter than in other quarters. The other factor that could be influencing the data for construction is the high level of apprenticeships in that industry. While employers might regard time spent in the supervision of apprentices on the job to be training provision, apprentices might regard such time as employment. Some apprentices in this industry might have only identified their off-the-job training in the household-based survey. In this regard, it is noted that employers in manufacturing, another significant employer of apprentices, also recorded more training provision than did respondents employed in this sector. The discrepancy in manufacturing was not, however, of the magnitude of that in construction.

# Training funded by individuals

The education and training experience survey provides details of the amount individuals spent on their own training according to their main industry of employment. The survey estimates that just over 750 000 individuals incurred personal expenses paying for their own training during the period examined. Table 13 shows spending on training by individuals within specific expenditure ranges.

**Table 13: Summary expenditure on training by individuals**

<b>Expenditure on personal training</b>	<b>Under \$250</b>	<b>\$250 to \$499</b>	<b>\$500 to \$999</b>	<b>\$1000 to \$1999</b>	<b>\$2000 to \$4999</b>	<b>\$5000 and over</b>	<b>Total</b>
Number spending within this range	448 891	129 453	82 339	43 907	18 219	29 213	752 022
Percentage	59.7	17.2	10.9	5.8	2.4	3.9	100.0

Source: Australian Bureau of Statistics (1997a).

Most individuals, almost 60%, spent less than \$250 on their own training, and more than 75% spent less than \$500. At the other end of the spectrum, only 6.3% spent more than \$2000 on training.

When personal training expenditure is examined on an industry-by-industry basis, some different patterns emerge. One of the most striking features of this analysis is that those who were not assigned to an industry ('not applicable'); that is, those unemployed, marginally attached to the labour force or studying (and not working) when surveyed, were most likely to have spent more than \$5000 on their own training. About 13.5% of those not classified to an industry spent over \$5000 on their own training needs. Table 14 shows own-purpose training expenditure according to the main industry of employment.

From table 14, and the more detailed breakdown in the appendix, it can be seen that at least two of the industry sectors with high levels of employer-supported training—government administration and electricity, gas and water—recorded low levels of individually funded training. On the other hand, the decline in government-funded labour market training programs could partly explain the relatively high level of self-funded training by the unemployed and others in the 'not applicable' group.

Those employed in wholesale, communications, and property and business services also recorded relatively high levels of own-purpose training expenditure. More than 7% of those in the wholesale sector spent more than \$5000, the highest level for any industry. These industries were in the middle range of employer-funded training expenditure (see figure 3). This suggests that these sectors might have relatively high levels of demand for new skills, with both employers and employees having moderately high levels of training expenditure. The property and business services sector has been by far the fastest growing industry sector in terms of employment over the last decade, so the level of training expenditure in that industry is not surprising. However, these data might also indicate a relatively low level of funding from the public VET system.

The education and training experience survey also allows the calculation of the average amount spent by individuals on their own training. This analysis reveals a wide divergence between industries on this basis.

**Table 14: Expenditure by individuals on training, summary by industry, percentages**

Industry sector	<\$1000	\$1000 to \$5000	>\$5000
Not applicable	78.2	8.3	13.5
Agriculture, forestry and fishing	94.7	3.5	1.9
Mining	92.5	7.5	0.0
Manufacturing	96.3	3.7	0.0
Electricity, gas and water	100.0	0.0	0.0
Construction	89.7	9.4	0.9
Wholesale	76.4	16.2	7.4
Retail	91.6	5.6	2.8
Accommodation, cafés and restaurants	87.3	6.9	5.8
Transport and storage	93.1	4.7	2.2
Communication	80.2	19.8	0.0
Finance and insurance	86.0	7.4	6.6
Property and business services	81.7	16.3	2.0
Government administration and defence	95.5	1.0	3.5
Education	89.4	6.7	4.0
Health and community services	87.4	10.2	2.4
Cultural and recreational services	93.1	4.3	2.5
Personal and other services	90.2	9.5	0.4

Source: Australian Bureau of Statistics (1997a).

**Table 15: Average individual annual expenditure on own purpose training by industry**

Main industry of employment	Average expenditure on own training per employee
Agriculture, forestry and fishing	\$12.67
Mining	\$26.06
Manufacturing	\$14.19
Electricity, gas and water	\$0.04
Construction	\$16.89
Wholesale	\$9.45
Retail	\$12.85
Accommodation, cafés and restaurants	\$16.92
Transport and storage	\$17.57
Communication services	\$1.81
Finance and insurance	\$6.82
Property and business services	\$19.72
Government administration and defence	\$12.51
Education	\$46.54
Health and community services	\$45.64
Cultural and recreational services	\$48.17
Personal and other services	\$35.45
<b>Total</b>	<b>\$21.09</b>

Source: Australian Bureau of Statistics (1997a).



# Funding of education in Australia—sectoral comparisons

---

VET is a part of the national education system, along with school education and higher education (universities). According to the Productivity Commission:

Education is a major area of expenditure and activity. Total operating expenses for all governments in 1999–2000 were approximately \$34.0 billion, which was equivalent to 5.4 per cent of gross domestic product.

(Productivity Commission 2000, Education preface, p.45)

As shown earlier in figure 1, Australian governments spend most—about 55% of educational funding—on primary and secondary school education. Of the remainder, about 38% is spent on VET and university education, with universities accounting for the majority of this amount.

Australian governments spend about the OECD average of gross domestic product on tertiary education (university and VET), around 1.7%. According to Burke (2001), in Australia, the major part of this expenditure goes to university education. He found that, in 1998, about \$5.5 billion was spent on university education compared with about \$3.7 billion allocated under the ANTA Agreement to VET for the same year. The 1998 report for ANTA (1999a) and NCVER financial statistics (NCVER 2001) show that VET expenditure rose in current dollars from \$3938.8 million in 1999 to \$4161.0 million in 2000 (or, in constant dollars, a 3.8% rise from \$4010 million in 1999 to \$4161 million in 2000).

More recent data on government educational expenditure (Productivity Commission 2002) indicate a greater gap in government expenditure on VET and universities, suggesting that university expenditure growth has outstripped that for VET. It shows total government expenditure on universities in 1999–2000 was \$8659 million out of a total of \$34 035 million spent across all areas of education. Of this amount, recurrent expenditure on VET amounted to just under \$3300 million. ANTA (2001, p.116), estimates a total public sector investment in VET in 2000 at \$4.16 billion, an estimate which is not elaborated in that report. However, the report claims that this represents an increase of 5.6% over 1999. In particular, the ANTA report (2001) does not appear to provide details of capital expenditure, and similar details are absent from the Productivity Commission's report (2002).

Between 1993 and 2000, the VET system appears to have grown more rapidly than higher education, when measured by comparing the number of VET clients with the total level of university enrolments. Over this period VET clients grew from about 1.12 million to about 1.75 million, or by more than 56%. University enrolments grew over the same period from about 575 000 to about 695 500, or by about 21%. As discussed earlier in this report, this was the period over which the initial impact of the ANTA Agreement was most likely to have made an impact. Interestingly, almost half of the growth in university enrolments has resulted from overseas students.

Selby Smith et al. (2001, p.57) show that, as a proportion of gross domestic product, *total* expenditure on education (including schools) declined between 1990–91 and 1997–98, from 4.6% of gross domestic product to 4.4%. Over the same period, total government expenditure for all purposes remained stable as a proportion of total gross domestic product, at 35%. Selby Smith et al.'s figures suggest that either there was a marked growth in government education expenditure in recent years, or that there are methodological or definitional differences between his calculations

and those of the Productivity Commission in the measurement of total educational expenditure as a proportion of gross domestic product.

At the start of the 1990s, most recurrent funding was sourced from state and territory governments, with the Commonwealth's main involvement being through capital funding. With the establishment of the ANTA Agreement in 1992, public VET funding in Australia became a joint responsibility of both levels of government. About 70% of VET funding is still provided from state and territory governments, with the Commonwealth providing the remainder.

For the 1.647 million students enrolled in VET in 1999, this amounted to government per capita spending of about \$2093. This compares with more than \$8000 per student in the university sector, almost all of which is Commonwealth-funded. However, the comparison is flawed in that many VET students do not attend their course for a full year. In fact in 1999, VET statistics show that the average nominal course hours for each VET student in Australia was around 200 hours. Another key difference between the two sectors is the existence of the Higher Education Contribution Scheme in the university sector through which about 40% of direct tuition costs are recouped from university students or graduates. Fees in the VET sector are generally low and are often waived for various categories of students.

In its 1998 annual national report, ANTA (1999a, p.83) estimated that in total (that is spending from both government and private sources), about 1.5% of the Australian gross domestic product was spent on vocational education and training. The Productivity Commission estimated that, in 1994–95, direct non-government funding to universities amounted to more than \$4 billion.

There are many indicators that reveal that education provides a range of benefits to the individual. As well as having better access to on-the-job training, persons with post-school qualifications have lower rates of unemployment and higher rates of labour force participation. It is clear therefore, that the labour market continues to place a value on the possession of qualifications. Contrary to some popular perceptions, the value of qualifications does not appear to have diminished in the labour market during the nineties.

In May 2000 the unemployment rate for those with any form of post-school qualification was 4.4%, nearly half the rate of those without post-school qualifications (8.6%). These results are very similar to the situation that applied in 1990. More than 85% of those with a post-school qualification were participating in the labour force (that is, either working or actively seeking work) compared with a rate of only about 70% for those without post-school qualifications. Figure 4 shows that, generally the higher the level of qualification, the lower the unemployment rate. The value of a trade qualification is shown in the bar for 'skilled vocational qualifications'.

Ryan comes to the conclusion:

... existing government subsidies to the higher education and VET sectors allow the operation of sectors from which graduates obtain employment at better rates than those found by job seekers in the broader population. (Ryan 2000, p.42)

However, it is perhaps too simplistic to believe that there is an inevitable and consistent move towards demand for a more skilled labour force. As Selby Smith et al. point out:

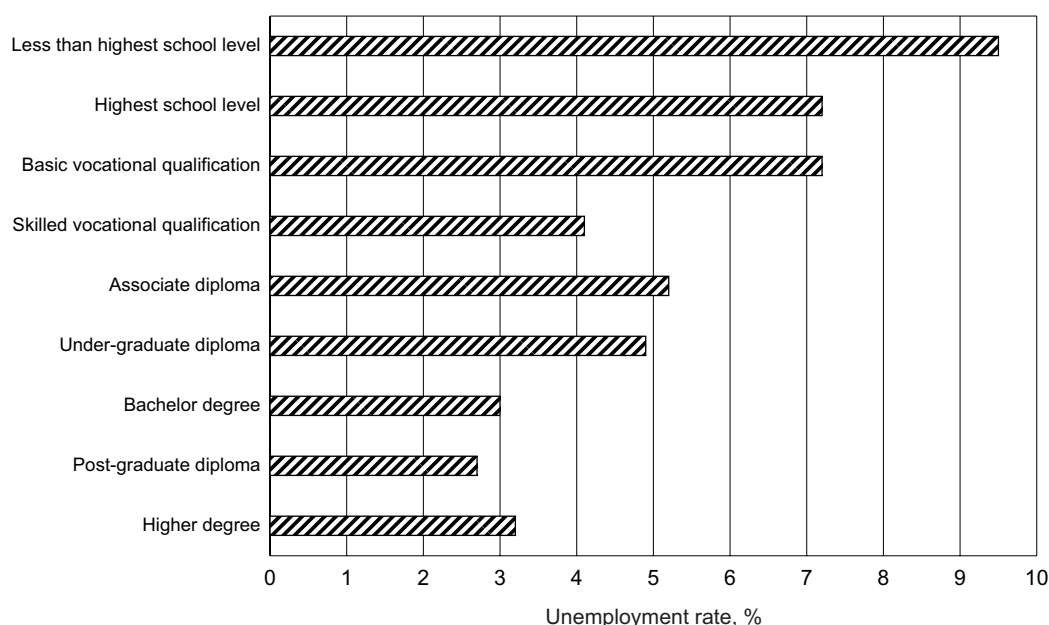
There is a general presumption that enterprise-level changes are increasing the demand for VET. Commonly cited reasons include:

- ✧ Increasing global competition means there is an increasing emphasis on the skills of workers to provide firms with a competitive edge.
- ✧ The use of technology is increasing and places greater demands on the skills of workers
- ✧ The rate of technological change means that knowledge and skills are becoming obsolete at a faster rate.

- ✧ Firms are seeking to organise their work force in ways that place greater emphasis on the skills and knowledge of workers.
- ✧ The growth industries are those that place a greater reliance on knowledge and skills.

A considerable body of the research evidence elaborated in this section supports the above contentions. There are, however, some countervailing trends. For example, the effect of technological change is unlikely to be neutral in terms of the demand for skills—but it is not always clear whether the effect is to enhance the demand for skilled labour or to reduce it. It may well be that technological change increases the level of skills and knowledge required by certain groups of workers, but decreases it substantially among other groups of workers. The core-periphery structure of staffing that seems to be increasingly common in enterprises, and the consequent growth of casual and part-time employment, may also militate against an increased demand for skills. The ways in which changes in enterprises affect the distribution of demand for skills also need to be addressed. (Selby Smith et al. 2001, section 2, p.14)

**Figure 4: Educational attainment and unemployment rate, May 2000**



Source: Australian Bureau of Statistics (2000b).

Perhaps the most robust measure of the value of VET qualifications is the premium placed upon such qualifications in the labour market. However, analysis of this issue is quite complex for a range of reasons including:

- ✧ The possession of qualifications, including VET qualifications, is more likely at the younger end of the labour market, requiring data to be weighted by age.
- ✧ Significant income differences appear to be attributable to other factors such as sex and industry of employment (Dumbrell et al. 2000).

In a study of university and TAFE graduates' earnings Ryan concludes that:

Graduates of lower level certificate courses were paid significantly below the average rates paid to TAFE graduates. In contrast, graduates of higher level qualifications—for example, advanced certificates, AQF Certificate IV and associate diploma graduates—earned substantially more.

What is of interest in comparing the remuneration of graduates of the different sectors is that young Bachelor degree graduates earned only slightly more than the predicted value, given their distribution across occupations. This suggests that, at least in their first year after completing their course, young Bachelor graduates working full time are not paid substantially more than TAFE graduates where they work in the same occupations.

(Ryan 2000, p.22)

In the other study referred to (Dumbrell et al. 2000), the authors found that, in most of the industries examined, the possession of a VET qualification provided an earnings advantage by comparison with others employed in the industry.

The possession of university qualifications appears to provide a greater advantage than does the possession of VET qualifications. In its submission to the higher education inquiry in 1997, the Productivity Commission noted:

University graduates enjoy many benefits from undertaking higher education. Gregory (1995) has estimated that university graduates can, on average, command incomes 1.7 times higher than those who only complete secondary school. University graduates also tend to work in industries with higher rates of employment growth. Between 1968–69 and 1989–90, half of all new full-time jobs went to university graduates, although they accounted for only 14 per cent of the labour force ... University graduates also benefit from lower rates of unemployment, shorter durations of unemployment and greater on the job training ...

(Productivity Commission 1997, appendix 3, p.87)

In its submission to the 1997 review of higher education funding, the Productivity Commission claimed:

... although education is likely to be a factor in productivity improvement and economic growth, the relative contributions of primary, secondary, technical and higher education—and the spillovers from each of these segments—is highly uncertain.

(Productivity Commission 1997, appendix 3, p.67)

The Productivity Commission (1997) went on to argue, in relation to higher education funding, that:

Despite claims that the spillover benefits from higher education are substantial and warrant large scale public subsidies, there is little evidence to support such a view. Although difficulties of measurement, together with the inherently subjective nature of valuing cultural and social effects, have hampered empirical analysis of education spillovers, some economists have expressed scepticism that such spillovers can be large and, at the same time, defy quantification.

(Productivity Commission 1997, appendix 3, p.67)

# Overseas funding models

Comparing Australian public educational expenditure with other OECD countries, Selby Smith et al. (2001) conclude that, in 1995, Australia's percentage of gross domestic product spent on education, at 5.6%, was below the unweighted average of nine other OECD countries at 6%. This placed Australia below Korea, the United States, France, Canada, Denmark and Sweden, but ahead of the Netherlands, Italy and Japan. Selby Smith et al. (2001, p.59) conclude in relation to Australian education expenditure that, during the nineties:

Across the whole of education and training, the average picture is of resources expanding in line with student numbers and with a small increase in the share borne by the private sector. However, the averages hide much more diversified changes across the sectors.

(Selby Smith et al. 2001, p.59)

Selby Smith et al. (2001) point out, however, that much of the growth in government expenditure has been in favour of private schools.

As in Australia, most OECD countries require compulsory involvement in education up to the age of 15 or 16 (Curtain 2001). Curtain notes that age is used as the basis for defining access to initial vocational education in most European countries. He points out that many European countries, especially the Nordic countries, as well as the United States, now regard the possession of at least some form of post-school vocational qualification as a minimum, 'threshold' requirement.

International comparisons of funding are made difficult by the lack of uniformity of the definition of VET across systems. In some European countries there is not the clear division that exists in Australia between universities and other tertiary institutions. Curtain (2001) notes, for example, that in France, completion of qualifications at the *grandes écoles* can provide direct access to doctoral studies, while Austrian *Fachhochschulen* provide a similar pathway.

Curtain (2001) proposes four basic models of European vocational education and training, as shown in table 16 adapted from Curtain's paper.

**Table 16: Types of initial VET by funding sources and country**

Initial VET	Funding	Countries
<b>School-based</b>		
✧ Basic VET in compulsory education	Government	Sweden, UK
✧ VET in post-compulsory education	Government	Denmark, Finland, France, Netherlands, USA
<b>Work-based</b>		
✧ Apprenticeships	Employers, government, students	Germany, Austria, Netherlands, UK
✧ Labour market programs	Government, employers	France, UK, Sweden

Source: Curtain (2001, p.10)

He notes that, in those countries where VET is mainly school-based, VET funding is largely publicly sourced. Countries with larger apprenticeship or work placement systems are more likely to rely on private funding. VET provision in the United States is not federally coordinated and there is a wide variety of provision across the states.

One of the major differences in types of training in Europe noted by some authors appears to be the distinction between initial and post-initial, or continuing training. Elson-Rogers and Westphalen (2000), in investigating post-initial or 'continuing vocational training' in Europe describe a model of VET funding arrangements in the European Union that places each country on a continuum ranging between 'state-led regulation through social partnership regulation towards demand-led regulation' (p.688). Elson-Rogers and Westphalen, while noting the difficulties of applying this model in practice, agree that all European Union countries examined 'do have elements of each type of funding ... to a greater or lesser extent'. They see the degree of state intervention as related to both the importance given to ensuring equity, and the capacity of the state to regulate other economic stakeholders.

Elson-Rogers and Westphalen (2000) find that each country funds some form of continuing vocational training. Nevertheless, their conclusion is that, despite the heterogeneity of funding systems, there is a trend away from state-led funding to market-driven mechanisms. They note that, over the last 15 years, governments, enterprises and households have all increased their expenditure on training. They note a range of funding mechanisms in European Union countries, including direct provision, guaranteeing provision for certain groups, subsidising certain types of provision, funding information and advisory services, and the provision of taxation or other incentives for enterprises and individuals.

A comparison between Australia and Germany produces some striking differences in training outcomes as a result of their different historical approaches to VET. Hummelsheim and Timmermann (2000) show that the skills profile of the German 'dependent' (that is, not self-employed) workforce is very different from the profile of the Australian workforce. In 1999 in Germany, more than 60% of the dependent work force possesses an apprenticeship qualification compared with just 13% of Australians holding a skilled vocational qualification. By contrast, only about 10% of Germans held a university degree compared with about 18% of Australians. Such a contrast demonstrates the difficulty of making international comparisons in relation to the *level* of funding of VET.

Again using the German example, the difficulty of comparing funding models is demonstrated by the variety of options available for undertaking VET. Elson-Rogers and Westphalen (2000) note that the federal structures in both Germany and Austria, with different provision across their respective states, make the determination of federal government responsibilities in those countries very difficult. Under its dual system, young people in Germany can undertake vocational training through either a combination of enterprise-based training and a vocational school, or through a full-time vocational school. These full-time vocational schools provide a variety of options, including, note, Hummelsheim and Timmermann (2000):

- ✧ Berufsoberschule—or higher vocational school
- ✧ Berufsaufbauschule—or vocational extension school
- ✧ Berufsfachschule—full-time vocational school
- ✧ Fachoberschule—higher technical school
- ✧ Fachschule—specialised institute
- ✧ Fachgymnasie—specialised grammar school
- ✧ Kollegschole—college school
- ✧ Berufskolleg—vocational college.

In 1996 there were more than 1.5 million trainees involved in the German dual system, the area most comparable to the Australian apprenticeship system. According to the Central Intelligence Agency's *World fact book*, the German population is estimated to be 82 797 408, meaning that the apprentice to population ratio in Germany was about 1:52. By contrast, there were about 320 000

apprentices and trainees in Australia in June 2001, or an apprentice to population ratio of about 1:62. The rapid increase in the New Apprenticeship system in Australia is therefore challenging the size of the German system in relative terms. (Germany however, has a relatively smaller proportion of its population in the younger age groups, hence the ratios are not quite as close as they appear.)

In Germany most pupils in vocational schools are in the part-time vocational schools which are part of the dual system. In 1997–98, almost 70% of pupils in vocational schools were in the dual system. The remaining 780 000 were mainly in full-time specialised vocational schools or specialised grammar schools (Hummelsheim & Timmermann 2000). In Germany, the enterprise bears most of the cost of in-company training, although the government provides tax incentives, and German apprentices, as in Australia, bear some of the cost through lost income. Hummelsheim and Timmermann (2000, p.28) estimate that total enterprise training costs in 1995 in Germany amounted to DM24.4 thousand million or 0.71% of nominal gross domestic product. Interestingly, this compares unfavourably with Selby Smith et al.'s (2001) estimate of almost 1% of gross domestic product for 1996, based on Australian Bureau of Statistics data. The German data however, use net cost estimates. Their gross cost estimate, which is probably more closely comparable with the Australian measure, puts the German figure closer to 1.2% of gross domestic product.

Sweden presents a different set of definitional problems from Germany. According to Andersson (2000): 'There is no distinct system of vocational education and training in Sweden' (p.7). Instead, VET takes a range of forms in Sweden, including initial vocational training, usually targeted at those aged 16–19, continuing vocational training, aimed at the employed, and labour market programs for the unemployed. Andersson also notes that there is a deficiency of data on private sector VET funding in Sweden. Despite these difficulties, Andersson estimates total Swedish investment in VET as 3.8% of gross domestic product in 1997. Given that total Australian spending on all education and training has been estimated at 5.6%, it is clear that Swedish expenditure on VET substantially exceeded that of Australia.

Andersson notes that almost all initial vocational training in Sweden is provided through upper secondary schools and is virtually entirely publicly funded, as in Curtain's taxonomy referred to earlier. In 1997 in Sweden, there were about 310 000 students in upper secondary schools, of whom the greatest number (142 700) were in 'mainly vocational programs' compared with 139 500 in mainly 'theoretical programs'. The remainder were mainly in remedial or other special programs. Andersson shows that roughly four times as much was spent on 'staff training' (that is, employer-funded training) as was spent on initial vocational training in upper secondary schools. On the surface at least, this suggests a much greater employer commitment to training in Sweden than in Australia.

Enterprises appear to be the major funders of 'continuing vocational training' throughout the European Union (Elson-Rogers & Westphalen 2000). In some countries (including France, Spain, Denmark and the Netherlands) funding is largely via industry or individual levies. Denmark has a system whereby individuals make a compulsory 8% payment into a fund (which also supports other employment benefits) from which training is funded. This allows universal access to training for both employed and unemployed persons.

Elson-Rogers and Westphalen (2000) present a model of funding continuing training that distinguishes between:

- ✧ state-led funding
- ✧ social partner funding
- ✧ demand-led funding.

They present examples of programs which match these categories in a range of European countries. In some cases (the Netherlands, Finland, United Kingdom), the arrangements in place for the provision of initial training appear to have been adapted to provide post-initial training. As noted

earlier, they assert that the largest proportion of ‘continuing training’ in Europe is funded by enterprises. This funding is established through a variety of mechanisms, including through agencies established through collective agreements (such as France) and compulsory levies paid either through the existing social security system (Spain) or through specialist bodies established for the purpose (Denmark). In Finland ‘approximately 1% of contributions from enterprises and employees to unemployment insurance funds are allocated to the training and severance fund, which is used to fund adults who have become unemployed (this is viewed in Finland as part of the continuing vocational training framework)’ (Elson-Rogers & Westphalen 2000, p.692).

While levy schemes are generally established to remove the disadvantage that firms undertaking training suffer when their trained staff are poached by non-training companies, criticism of this approach exists. These criticisms include the view that small firms are less able to take advantage of such schemes than larger firms, and that such levies are perceived as no more than another tax, rather than an investment in human capital. Such a perception, it is argued, can undermine a firm making its own training decisions based on its own needs. Instead, it tailors its training to maximise its taxation advantage. Elson-Rogers and Westphalen (2000) suggest that some of these criticisms are addressed through voluntary schemes or schemes which are regularly reviewed and made as tripartite agreements—agreements between employers, employees and governments. They conclude that:

Whether or not statutory or voluntary regulation of social partner funding leads to under- or over-investment in CVT [continuing vocational training] remains an open question, but the concept of partnership and commitment towards investing increasing amounts in CVT is being fostered in all countries, more recently through funding incentive schemes and demand-led mechanisms. (Elson-Rogers & Westphalen 2000, p.693)

Elson-Rogers and Westphalen (2000) also discuss a range of demand-led funding, by which they mean both active and passive measures to increase the demand for training. These measures can include tax incentives (for individuals or enterprises), a right to training leave, vouchers, loans and individual learning accounts. This policy approach best reflects the ‘advanced liberalism’ social theory discussed earlier in this report. These approaches, such as the provision of vouchers, are not purely demand-led in that there is an element of government intervention to stimulate demand for specific skills or to target specific individuals.

This last measure is used in the United Kingdom, under the Career Development Loans (CDL) program (Department for Education and Employment 1999, 2001). Under this scheme individuals are assisted to pay for VET via a deferred repayment bank loan. It can apply to full-time, part-time, open or distance learning that is vocational and lasts no more than two years. Individuals who are eligible for financial assistance through a Local Education Authority to undertake publicly funded courses are not eligible for career development loans (Department for Education and Employment 2001).

A feature of many demand-led programs is that they can be used to target specific skills needs or other market failures. In Australia, labour market failures are apparent in regional differences in access to both employment and training (for example, see Dumbrell, Finnegan & de Montfort 2001).

Across the seven European Union countries examined by Elson-Rogers and Westphalen (2000) in relation to expenditure on continuing training, these authors find that governments’ shares of expenditure ranged from 39% in France to 29% in Denmark, to around 10% in Germany. Enterprises carried the greatest weight of continuing training costs, ranging from 92% in Sweden and 87% in the United Kingdom, down to around 50% in the Netherlands and France. In the Netherlands, trainees shoulder 32% of these training costs, while in Spain, public funds gathered under its training levy meet 58% of continuing training costs.

In some respects, a country more comparable with Australia in terms of size, population density, culture and industry structure is Canada. In Canada vocational education and training is primarily a



responsibility of the provincial governments, although the Federal Government provides substantial funding for VET. In 1997–98, Canadian governments spent about \$5835.5 million on vocational training (Statistics Canada). With a population of just over 31 million, this amounted to about \$C188 per person, compared with about \$A181 per person in Australia. Despite differences in the exchange rate, this appears to be a very similar overall level of public expenditure between the two countries.

However, funding arrangements are quite different. The Canadian Federal Government supports a student loan scheme through the Canada Education Savings Grant. This pays 20% on the first \$2000 of annual contributions (usually made by students' families) made to 'registered education savings plans' for children up to the age of 18. In addition, the Canadian Government provides 'Canada student loans' through the National Student Loans Service centre. Variations in funding exist across the Canadian provinces.

In British Columbia, for example, a significant portion of the costs of colleges and institutes is publicly subsidised. In 1997–98 a total of \$C897.7 million was allocated to vocational education and training in British Columbia. In this state, government funding for colleges and other institutes covers approximately 60% of operating expenses, and 16% of operating expenditures are covered through tuition fees. The remainder is derived from other sources. Allocations to colleges in British Columbia are based on planned delivery expressed in terms of full-time equivalent students. However, a complication in making these comparisons is the inclusion of universities in this funding as part of post-compulsory provision.

# Conclusion

---

The period leading up to the establishment of the first ANTA Agreement in the early 1990s was characterised by a previously variable commitment by the Commonwealth Government to vocational education and training funding. The ANTA Agreement has, at least during the 1990s and the early years of the new millennium, created greater funding certainty for the sector. Much of the Commonwealth's interest in the VET sector was related to its long-standing involvement in social security and the labour market. The 1980s saw rapid change in the labour market accompanied by frequent complaints of skill shortages, which were often attributed to shortcomings in the (then) state-run VET sector.

Structural changes in the labour market over that period also highlighted the growing problem of youth unemployment, which was often perceived to be high even in times of relative strength in the general labour market. Again this perception contributed to a belief by the Commonwealth that its interests, particularly in reducing youth unemployment, warranted greater involvement in the VET system. A concern over poor school retention rates was an important associated issue.

A third feature of the policy environment in the late 1980s was concern over the international competitiveness of Australian industry, and a belief that a more skilled workforce could materially contribute to improved competitiveness.

During the decade or so since the debate leading to the initial ANTA Agreement, the policy environment has shifted in several important areas. The decentralisation of the industrial relations system has laid the groundwork for the growth of non-standard modes of employment, including casual, part-time, individual contracts, and 'over-full-time' work (with more than 30% of males now working 49 or more hours per week).

Of equal importance has been the changed industry structure that has emerged partly as a result of these changes. During the 1990s, most industry divisions either grew quite slowly (in terms of persons employed) or declined (see figure 5 in appendix). Against this trend, the business services sub-division of the property and business services division grew at a rapid rate, especially between 1993 and 2000. During this period it grew from about 620 000 persons in November 1993 to 1 080 000 persons in November 2000. Much of this growth reflected the growth of outsourcing.

Another important change in the policy environment over the last decade has been the growing realisation of the changing distribution of the Australian population by age. Young persons' share of the population is declining, while older Australians are becoming a larger segment of the population. In 1989 the population under 20 represented about 30% of the total Australian population; by 1999, this share had fallen to below 28%. The over-35s' share rose from about 45% in 1989 to almost 50% over the same period.

While the numbers of those over 65 years are growing in size, it is important to acknowledge that numbers of older Australians of working age are also growing more rapidly than those aged under 20. Those aged 20 to 65 rose from 58% to 60% of the population over the decade of the 1990s. Few elements of the VET policy environment appear to acknowledge this demographic shift.

The VET system has responded to these changes through the implementation of a range of measures designed to make the system more demand-driven. However, a shortcoming in this approach

appears to be the lack of integration between the public VET system and the large, but less-well-documented privately funded sector. This lack of integration could be the cause of disincentives to invest in training, and a range of inequitable outcomes for individuals and industry sectors.

Perhaps the planning process at the state/territory training authority level should explicitly consider the degree to which industries are contributing to their own training needs when allocating public funds. Public funding might be made partly contingent upon greater own-purpose efforts and more equitable access for existing workers, regardless of their occupational level.

International comparisons of Australia's VET system are fraught with definitional difficulties. This is especially the case when trying to compare total government support for VET, since the boundaries of VET vary substantially across OECD countries. However, one comparison is of interest and again draws attention to the linkages between VET and employment policy. Despite the high rate of change in the labour market and hence the need for retraining and lifelong learning, prime-age unemployed persons in Australia are markedly less likely to undertake training than those in comparable OECD countries. This finding indicates the lack of integration between VET and labour market policy that exists in Australia, and also perhaps indicates an overall deficit in funding levels.

A major challenge for the funding of VET over the next few years therefore appears to be an improvement in the level of integration between public and private VET expenditure. An equally important challenge will be to address the inequities, broadly defined, that result from these funding anomalies. The employer training practices survey (Australian Bureau of Statistics 1998) revealed that only around one-third of employers in Australia were providing structured training, and that there were marked variations between industry sectors in the provision of structured training. That survey also shows fewer employers providing structured training to lower status workers (labourers and production and transport workers) than to associate professionals and professionals. These variations appear to be a necessary consideration in the development of any policies aimed at increasing employer and employee responsibilities for funding their training needs.

If one of the major policy challenges for VET in coming years is to raise the level of VET funding, it will be necessary, both for economic efficiency reasons and equity, to adopt a more holistic approach to the provision and funding of VET. This means developing a better understanding of how formal, qualifications-based provision can interact more effectively with the informal sector, whose size rivals the formal sector. In the development of a more holistic approach to funding, it is important to recognise that an industry-by-industry approach is required in order to reflect the different historical and cultural attitudes that influence both government- and industry-sourced funding.

However, better integration in funding is just one issue. It is apparent from the above analysis that Australia's public commitment to post-school funding is below that of many comparable OECD countries. It is clear that a substantial group of young people, despite the expansion of training under New Apprenticeships, continue to be excluded from the education and training system. Moreover, reflecting this excluded group, unemployed Australians are less likely in their adult life to receive training to assist their movement out of unemployment. The debate over the extension of a Higher Education Contribution Scheme-like arrangement to at least some VET courses is not focused on this group.

Future debate on VET funding should embrace the needs of those unemployed and those, especially older workers, facing redundancy. Changing patterns of demand for skills are likely to be a growing feature of the Australian and international labour markets in the new century. Placing greater responsibility for VET funding on individuals has the potential to increase social inequity.

It is clear that, despite the undoubted success of the ANTA Agreement in expanding the VET system in Australia and the many associated structural improvements in the system, there are still some shortcomings. Although funding for VET has risen to a level comparable with other OECD countries, the original Finn targets (1991) have still not been met. Much of this shortcoming seems attributable to the failure to increase transition rates from school to VET. It would appear that the

major increase in VET participation has been among older students—a trend not to be deplored. It seems from an analysis of labour market data, that increased VET participation among young people who drop out of all education should be a policy priority. An important element of any such policies should be the capacity to target specific regions within Australia.

It seems clear that VET qualifications confer benefits on their holders, both in terms of somewhat higher earnings and in lower unemployment rates and higher labour force participation, although these benefits are not consistently available to all, particularly females. These benefits are generally not as great as those accruing to university graduates, and in some cases, are not noticeably different from those accruing to Year 12 leavers. An argument that supports a Higher Education Contribution Scheme-like arrangement for VET on the grounds of future earnings benefits should logically extend to Year 12 leavers over leavers from earlier stages, as their subsequent earnings exceed those of early leavers. Clearly a system under which Year 10 leavers entering VET had to pay for VET, while their Year 11 and 12 colleagues continued to receive public support, would be inequitable.

An alternative approach for a more integrated approach to VET funding might revolve around the old notion of universal access to post-school education and training based on individual need, realistic aspirations and the nation's skill needs. Determining the nation's future skill needs requires greater enunciation of national objectives and national agreement on economic employment goals.

# References

---

- Andersson, R 2000, *The financing of vocational education and training in Sweden*, CEDEFOP, Thessaloniki, Greece.
- ANTA (Australian National Training Authority) 1996, *Developing the training market of the future: A consultation paper*, ANTA, Brisbane.
- 1999a, *Annual national report 1998*, vol.3, ANTA, Brisbane.
- 1999b, *Directions and resource allocations for 2000*, ANTA, Brisbane.
- 2000, *National evaluation of user choice, phase 2: Overview report*, KPMG, Brisbane.
- 2001a, *Annual national report 2000*, vol.3, ANTA, Brisbane.
- 2001b, *Directions and resource allocations*, ANTA, Brisbane.
- Allen Consulting Group 1994, *Establishing an effective Australian training market*, Office of Training and Further Education, Melbourne.
- Australian Bureau of Statistics 1989, *How workers get their training*, cat. no.6278.0, ABS, Canberra.
- 1987–2001, *Labour force Australia*, cat. no.6202.0, ABS, Canberra.
- 1993, *Education and training experience Australia*, cat. no.6278.0, ABS, Canberra.
- 1996, *Labour force Australia 1978–95*, cat. no.6202.0, ABS, Canberra.
- 1997a, *Education and training experience Australia 1997*, cat. no.6278.0, ABS, Canberra.
- 1997b, *Employer training expenditure Australia July to September 1996*, cat. no.6353.0, ABS, Canberra.
- 1998, *Employer training practices Australia*, cat. no.6356.0, ABS, Canberra.
- 2000a, *Labour force Australia, preliminary*, cat. no.6202.0, ABS, Canberra.
- 2000b, *Transition from education to work, Australia*, cat. no.6227.0, ABS, Canberra.
- 2000c, *Estimated resident population by sex and age, Australian states and territories*, cat. no.3201.0, ABS, Canberra.
- 2001, *Job search experience of unemployed persons*, cat. no.6220.0, ABS, Canberra, viewed 20 February 2002, <<http://www.abs.gov.au/ausstats/abs%40.nsf/b06660592430724fca2568b5007b8619/2f04d51aabb022bdca2568a9001393c2!OpenDocument>>.
- Australian Committee on Technical and Further Education (chair: M Kangan) 1975, *TAFE in Australia: Report on needs in Technical and Further Education, April 1974*, (2 vols), AGPS, Canberra (Kangan report).
- Australian Council for Education Research 2002, *Vocational education and training: Participation, achievement and pathways*, LSAY briefing number 7, February 2002, viewed October 2002, <<http://www.acer.edu.au>>.
- Australian Council of Social Service 2001, 'The obligation is mutual: New directions for employment assistance in Australia', ACOSS paper 120, viewed 20 February 2002, <<http://www.acoss.org.au/info/2001/315.htm>>.
- Australian Education Council Review Committee (chair: B Finn) 1991, *Young people's participation in post-compulsory education and training*, (3 vols), AGPS, Canberra, July (Finn report).
- Australian Industry Group & Engineering Skills Shortages Working Group 2001, *Engineering skill shortages: A joint project with the Department of Education, Training and Youth Affairs and the Australian Industry Group*, Commonwealth of Australia, Canberra, viewed November 2003, <[http://www.skillsinitiative.gov.au/1st\\_round\\_industries/working\\_group\\_reports/engineering.pdf](http://www.skillsinitiative.gov.au/1st_round_industries/working_group_reports/engineering.pdf)>.
- Ball, K & Freeland, B 2001, *Factors affecting the provision of entry-level training by enterprises*, NCVER, Adelaide.
- Barry, A, Osborne, T & Rose, N (eds) 1996, *Foucault and political reason: Liberalism, neo-liberalism and rationalities of government*, University College, London.
- Burke, G 1999, *Expenditure on education and training: Data and issues*, Centre for the Economics of Education and Training, Monash University, ACER, Melbourne.
- 2001, 'Trends in educational expenditure', Australian Vocational Educational Training and Research Association Conference, Adelaide, 2001.
- Carmichael report 1992 (see: Employment and Skills Formation Council).
- Chapman, B, Doughney, L & Watson, L 2000, 'Financing cross-sectoral education and training in Australia: Some issues', paper prepared for the 9th Annual Vocational Education and Training Research Conference, Coffs Harbour Education Campus, 6th July.

- Chapman, B, Watson, L & Wheelahan, L 2001, 'From silos to seamlessness: Towards a cross-sectoral funding model for post-compulsory education and training', discussion paper no.439, Centre for Economic Policy Research, Australian National University, Canberra.
- Chappell, C 2001, 'Discussion paper: The standing of VET professionals', paper presented at the Australian VET Teacher Education Colloquium, viewed 15 February 2002, <<http://education.curtin.edu.au/avtec/pubs/2000/chappell.html>>
- Central Intelligence Agency 2001, *The world fact book*, viewed 3 September 2001, <<http://www.cia.gov/cia/publications/factbook/fields/population.html>>.
- Christinson, T 2000, 'TAFE's fate in education', *Queensland Teachers' Journal*, 5 October 2000.
- Committee of Inquiry into Labour Market Programs 1985, *Report of the Committee of Inquiry into Labour Market Programs*, AGPS, Canberra (Kirby report).
- Curtain, R 1999, *Young peoples' transition from education to work: Performance indicators*, Dusseldorp Skills Forum, Sydney
- 2001, *An entitlement to post-compulsory education: International practice and policy implications for Australia*, NCVET, Adelaide.
- Dawkins, J S & Holding, A C 1987, *Skills for Australia*, AGPS, Canberra.
- Department for Education and Employment 1999, *Career development loans: Training providers survey, May 1999*, research brief no.114, viewed 21 August 2001, <<http://www.dfee.gov.uk>>.
- 2001, *Second chances: Career development loans*, viewed 21 August 2001, <[http://www.dfee.gov.uk/secondchances/chapter8\\_4\\_ba.html](http://www.dfee.gov.uk/secondchances/chapter8_4_ba.html)>.
- Department of Education, Training and Youth Affairs 1999, *Education participation rates Australia, 1997*, DETYA, Canberra.
- Deveson report 1990 (see: Training Costs Review Committee).
- Dumbrell, T 2000, *Training in Australia: An analysis of 'Education and training experience Australia, 1997'*, Research Centre for Vocational Education and Training, University of Technology, Sydney.
- Dumbrell, T, de Montfort, R, Finnegan, W & Wright, P 2000, *Still not equal: A study of differences in male and female TAFE graduates' earnings in Australia*, NCVET, Adelaide.
- Dumbrell, T, Finnegan, W & de Montfort, R 2001, 'Locational issues in New Apprenticeships', *Australian Apprenticeships Research Readings*, ed. N Smart, NCVET, Adelaide.
- Elson-Rogers, S & Westphalen, S 2000, 'Funding continuing vocational training in the European Union', *Journal of Vocational Education and Training*, vol.52, no.4, pp.687–707.
- Employment and Skills Formation Council (chair: L Carmichael) 1992, *The Australian Vocational Certificate Training System*, AGPS, Canberra (Carmichael report).
- Finn report 1991 (see: Australian Education Council Review Committee).
- Hummelsheim, S & Timmerman, D 2000, *Financing of vocational education and training in Germany: Financing portrait*, CEDEFOP, Thessaloniki, Greece.
- Kangan report 1975 (see: Australian Committee on Technical and Further Education).
- Keating, J 1998, 'The concept of a national VET system is recent in Australia', Curriculum Corporation, viewed 19 November 2002, <<http://www.curriculum.edu.au>>.
- Kirby report 1985 (see: Committee of Inquiry into Labour Market Programs).
- Long, M, McKenzie, P & Sturman, A 1996, *Labour market and income consequences of participation in TAFE*, research monograph no. 49, Australian Council for Education Research, Melbourne.
- Maglen, L & Hopkins, S 1999, 'The place of vocational education and training strategy within the overall planning framework of government: Implications for research', Australian Vocational Education and Training Research Association conference papers 1999, viewed 15 August 2001, <<http://www.avetra.org.au>>.
- Malley, J, Keating J, Robinson, L & Hawke, G 2001, *The quest for a working blueprint: Vocational education and training in Australian secondary schools*, parts 1 and 2, NCVET, Adelaide.
- Marginson, S 1999a, *The changing nature and organisation of work, and the implications for vocational education and training in Australia: Issues paper*, Faculty of Education, Monash University, Melbourne.
- 1999b, *The changing nature and organisation of work, and the implications for Vocational Education and Training in Australia: An annotated bibliography*, Faculty of Education, Monash University, Melbourne.
- McKenzie, P & Long, M 1995, 'Educational attainment and participation in training', in *Efficiency and equity in education policy*, conference proceedings, 6–7 September, National Board of Employment, Education and Training, Canberra, pp.143–74.
- Ministerial Council on Education, Employment Training and Youth Affairs 1999, *National goals for schooling in the twenty-first century*, (the Adelaide Declaration), viewed 15 November 2003, <<http://www.curriculum.edu.au/mceetya/adeldec.htm>>.
- 2001, *New framework for vocational education in schools: Policy directions: A comprehensive guide about pathways for young Australians in transition*, Curriculum Corporation on behalf of the MCEETYA Taskforce on VET in Schools, viewed November 2003, <<http://www.curriculum.edu.au/mctyapdf/policy.pdf>>.

- NCVER (National Centre for Vocational Education Research) 2001, *Australian VET statistics: 2000 financial data*, NCVER, Adelaide.
- OECD (Organisation for Economic Co-operation and Development) 2001, *Innovations in labour market policies, the Australian way*, OECD, Paris.
- Productivity Commission 1995, *Report on government service delivery 1995*, AGPS, Canberra.
- 1997, *Submission to the Review of Higher Education Financing and Policy*, viewed 14 March 2003, <<http://www.pc.gov.au/ic/research/submission/highered/append1.pdf>>.
- 2002, *Report on government services 2002*, AGPS, Canberra.
- Ryan, C 2000, *Where to next? Graduate outcomes from the Australian higher education and the vocational education and training sectors*, NCVER, Adelaide.
- Selby Smith, C, Ferrier, F, Anderson, D, Burke, G, Hopkins, S, Long, M, Maglen, L, Malley, J, McKenzie, P & Shah, C 2001, *CEET's stocktake: The economics of vocational education and training in Australia*, NCVER, Adelaide.
- Statistics Canada, viewed 5 September 2001, <<http://www.statcan.ca/english/Pgdb/People/Education/educ16a.htm>>.
- Taylor, R 1996, *Report of the review of the ANTA agreement*, AGPS, Canberra.
- Training Costs Review Committee (chair: I Deveson) 1990, *Training costs of award restructuring: Report of the Training Costs Review Committee*, (2 vols), AGPS, Canberra (Deveson report).
- Vocational Education, Employment and Training Advisory Committee 1991, 'VEETAC Working Party on Training & Labour Market Programs', unpublished report.
- Vickery, J 1999, *Unemployment and skills in Australia*, Economic Research Department, Reserve Bank of Australia, viewed 16 August 2001, <<http://www.rba.gov.au/PublicationsAndResearch/RDP/>>.

# Appendix

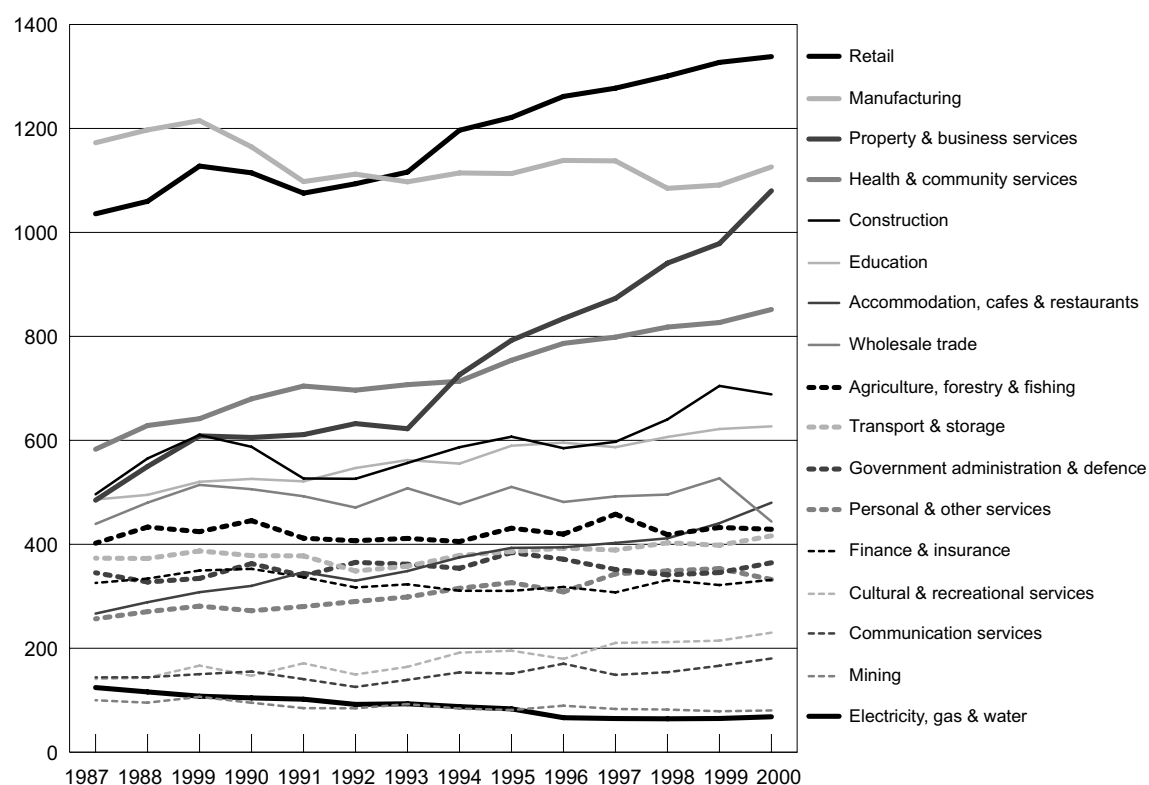
**Table 17: Employment and employment share by industry division, Australia, August 2001**

Industry division	August 2001, no. employed, ('000)	August 2001, industry share, %
Agriculture, forestry and fishing	447.2	4.9
Mining	78.7	0.9
Manufacturing	1091.7	12.0
Electricity, gas and water	71.7	0.8
Construction	677.9	7.4
Wholesale trade	419.7	4.6
Retail	1374.9	15.1
Accommodation, cafés and restaurants	451.7	5.0
Transport and storage	423.3	4.6
Communication services	171.6	1.9
Finance and insurance	352.5	3.9
Property and business services	1048.8	11.5
Government administration and defence	384.6	4.2
Education	658.3	7.2
Health and community services	888.1	9.7
Cultural and recreational services	215.4	2.4
Personal and other services	368.3	4.0
<b>Total</b>	<b>9124.2</b>	<b>100.0</b>

Source: Australian Bureau of Statistics (1987–2001).



**Figure 5: Employment growth by industry, Australia, 1987–2000 (as at November each year)**



Source: Australian Bureau of Statistics (1987–2000).



The National Centre for Vocational Education Research is Australia's primary research and development organisation in the field of vocational education and training.

NCVER undertakes and manages research programs and monitors the performance of Australia's training system.

NCVER provides a range of information aimed at improving the quality of training at all levels.

ISBN I 920895 25 6 print edition  
ISBN I 920895 26 4 web edition