



NSW Board of Vocational
Education and Training

VOCATIONAL EDUCATION AND TRAINING AND THE LABOUR MARKET: A STATISTICAL PROFILE



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Introduction

The aim of this paper is to document the current trends in the provision of training and education for the labour market with a view to providing an insight into the nexus between the labour market and vocational education and training (VET). This paper integrates the findings from the relevant ABS catalogues that focus on the issue of training practices within Australia as reported in the Training Practices Survey (TPS) (1994, 1997), Survey of Training and Education (STE) (1989, 1993, 1997), and the Training Expenditure Survey (TES) (1989, 1993, 1997). This paper seeks to clarify the key issues surrounding the provision of training and education in the labour market.

In the interest of gaining a better understanding of the relationship between the labour market and VET, statistical data was analysed with a view to addressing a number of fundamental issues and assumptions currently guiding VET policy and practice. Specifically, this paper investigates trends in training participation, expenditure and practice that may have important ramifications for training policy.

Trends in Training and Education

The time series results from the three main surveys of interest showed a general decline in the amount of training being provided to employees. The Survey of Training and Education (STE) (1989, 1993, 1997) reports on training participation amongst those who had had a wage or salary in the previous 12 months. Time series results from the STE showed that the percentage of wage and salary earners who had participated in some form of training in 1997 (80.2%) was similar to that of 1989 (79.0%). However, in 1993 there was a 6 per cent increase in the percentage of people participating in some form of training (85.8%) (ABS 1998a). With regard to where the training was being provided however, results from the TPS¹ showed that not all workplaces were actively providing training to employees. From February 1996 to 1997, less than two thirds (61%) of all employers provided training.

Very different trends in the provision of training emerged from the Training Practices Survey (TPS) when organisational size was controlled for. In 1997, large employers (those employing 100 or more employees) employed approximately 56 per cent of all employees² and almost 100 per cent of large employers provided some form of training during the previous 12 months. Medium employers (20 to 99 employees) employed 15.5 per cent of all employees and were also good providers of training with 94 per cent of these organisations providing some form of training. Small employers however, were far less likely to provide training. Those businesses that employed between 10 and 19 employees accounted for 3 per cent of all employees and 86 per cent of these employers provided training. Those business that employed between 5 and 9 employees, accounted for 7.5 per cent of all employees and 74 per cent of these employers provided training. Very small businesses (those with 1 to 4 employees) accounted for 18 per cent of all employees but only 45 per cent of these very small businesses provided training (ABS 1998b).

These results are particularly stark given that over 90 per cent of organisations surveyed in the TPS employed less than 20 employees. Furthermore, results from the Training Expenditure Survey (TES) confirmed a general decline in employer provided training by showing that overall nominal expenditure on training per employee decreased between 1993 (\$191.25) and 1996 (\$185.49), the proportion of employers providing structured training decreased (22.6% in 1993 compared to 17.8% in 1996) and employers provided less hours of training per employee in 1996 (4.91) than they did in 1993 (5.55) (ABS 1997).

The Survey of Training and Education (STE)

In a special article put out by the ABS, the ever-increasing tendency for workers to attempt to keep a pace with the changing work environment by either studying for additional educational qualifications or by participating in training was clearly identified from time series analyses of the STE (ABS 2000). An obvious outcome of this increased interest in further education and training is a workforce that is becoming more highly educated and more highly skilled. Between 1989 and 1997 the proportion of wage and salary earners who had a post-school qualification increased from 47 per cent to 54 per cent. Nevertheless, despite employees having higher than ever levels of educational attainment, results show that people are continually seeking out and participating in additional training activities.

From a policy perspective, analysing the types of training that people undertake is of crucial importance. As shown in Table 1, on-the-job training was overwhelming the primary source of training across the survey years with the next most frequent source of training being in-house. On average across the survey years however, 40 per cent fewer employees participated in in-house training compared to on-the-job training. On-the-job training covered a broad spectrum of different learning activities from at best, "being shown how to do the job" to at worst, "teaching self". The propensity for on-the-job training raises serious questions

TABLE 1. TYPES OF TRAINING UNDERTAKEN

Wage and salary earners	1989	1993	1997
<i>Study or courses undertaken</i>	%	%	%
Studied previous calendar year	16.8	18.6	15.8
In-house	34.9	31.3	33.0
External - Employer supported	6.4	7.3	11.7
External – not employer supported/ not working	9.8	11.8	20.0
On-the-job	71.8	81.8	71.6
Some training undertaken	79.0	85.8	80.2

Source: ABS Education and Training Experience: 1997, ABS Training and Education Experience: 1993. ABS How Workers Get Their Training: 1989. Cat. No. 6278.0.

Population: All wage and salary earners for respective years.

¹ The 1994 Training Practices Survey reported results with respect to those employers who provided formal training, not with regard to all employers as reported in 1997. Therefore, direct comparisons cannot be made between these two reports.

² Note: Figures were derived by using the number of employed persons as reported in the ABS (1998a) Survey of Training and Education, Cat No 6278 and applying these numbers to the proportion of people employed by employer size (management unit) as reported in the ABS (1998b) Employer Training Practices Survey, Cat No 6356.

with regard to the extent to which actual training is taking place particularly given that “being shown how to do the job” was consistently the least likely form of on-the-job training and “teaching self” was consistently the most likely form of on-the-job training. Although participation in external, employer supported training has shown some increase across the years, it remains the least attended form of training for employees, even compared to non-employer supported training or training attended while not working. Overall, these results indicate that despite formal structured training being poorly supported by employers, employees are consistently seeking out additional training opportunities.

In general, a number of segments of the labour force as reported in the results from the Survey of Training and Education, showed similar time series trends revealing persistent inequalities with regard to the access and provision of training. As shown in Table 2, across the three surveyed years those employees with post-school qualifications were far more likely to participate in training than those with no post-school qualifications. A breakdown of these data by actual educational attainment shows that those with an undergraduate degree or higher qualification were consistently more likely to undertake further training than the rest of the workforce.

Furthermore, there was a marked drop-off in each survey year in the participation in training of those with skilled vocational qualifications. However, the apparent declining participation rates in vocational qualifications may in some part be attributable to the fact that many students enrol in VET course with the intention of only completing specific modules in a specified field. These students who enrolled with no intention of completing the whole TAFE course were classified by the ABS as having participated in study for an educational qualification and as such were not regarded as training participants (Dumbrell 2000a).

Table 2 also shows that across the survey years participation in training in the private sector also markedly declined with age. Those aged 20 to 24 were far more likely to attend training (ranging from 91.1 to 94.1%) than those aged 55 to 64 (ranging from 51.1 to 62.0%). With regard to employee status, part-time employees consistently participated less in training than full-time employees. Similarly, casual employees consistently participated less in training than permanent employees. Employees from non-English speaking backgrounds were also far less likely than English speaking employees to participate in training. Surprisingly, there were no differences in the percentage of men and women who participated in some form of training. However, this point shall be discussed further in the section of this report discussing the findings from the TPS and TES (ABS 1998a).

TABLE 2. PERCENTAGE OF EMPLOYED PERSONS WHO UNDERTOOK SOME FORM OF TRAINING IN THE PREVIOUS 12 MONTHS

	1989	1993	1997
With post-school qualifications	84.8	89.2	85.4
Without post-school qualifications	75.0	79.2	74.0
EDUCATIONAL ATTAINMENT			
Higher degree	93.9*	94.8	95.1
Postgraduate diploma		97.9	94.8
Bachelor degree	91.8#	96.0	95.4
Undergraduate diploma		95.3	88.8
Associate diploma		91.7	89.4
Skilled vocational qualification	74.9	81.0	75.3
Basic vocational qualification	85.9	90.2	81.1
No post-school qualification	75.0	79.2	74.0
GENDER			
Male	78.8	85.4	80.3
Female	79.4	86.2	80.0
AGE			
20 to 24	91.1	94.1	91.9
25 to 34	84.2	88.6	84.9
35 to 44	77.9	84.2	80.2
45 to 54	65.2	77.2	73.5
55 to 64	51.1	62.0	57.2
EMPLOYEE STATUS			
Full-time	84.2	87.2	80.7
Part-time	71.4	81.9	72.9
Permanent	84.7	87.2	80.5
Casual	68.9	81.6	73.2
LANGUAGE BACKGROUND			
English	81	79	74
Non-English speaking	70	64	62

Source: ABS Education and Training Experience: 1997, ABS Training and Education Experience: 1993. ABS How Workers Get Their Training: 1989. Cat. No. 6278.0.

Population: All employed³ persons who undertook some form of training. For example, in 1997 62% of all non-English speaking employees participated in some form of training.

*Represents the proportion of those with either a post-graduate degree or a post-graduate diploma.

Represents the proportion of those with either a bachelor degree, undergrad diploma or associate diploma.

³ Employed persons includes wage and salary earners and business owners.

Significant inequalities were also revealed through examination of the characteristics of wage and salary earners who had undertaken some form of training by main period employer characteristics. Table 3 reports the percentage of employees in each industry sector who reported having received some form of training. As seen in Table 2, employees in the agriculture, forestry, and fishing industry were consistently less likely to participate in training than employees in any other industry.

TABLE 3. INDUSTRY BREAKDOWN OF TRAINING RECEIVED BY WAGE AND SALARY EARNERS

Wage and salary earners	1989	1993	1997
INDUSTRY	%	%	%
Electricity, gas, water	85.1	90.7	91.6
Community services	84.1	90.7	89.0
Mining	76.6	91.2	88.3
Public administration and defence	81.9	90.0	87.8
Communication	85.1	86.6	87.8
Finance, property and business	85.0	89.2	85.9
Manufacturing	73.2	80.1	75.5
Construction	75.7	84.8	75.4
Transport and storage	72.0	81.8	74.5
Recreation, personal and other services	75.7	82.1	74.0
Wholesale and retail trade	79.3	84.4	73.6
Agriculture, forestry, fishing, hunting	67.8	79.7	69.5
SECTOR			
Public	83.7	89.9	89.8
Private	77.2	84.4	77.3

Source: ABS Education and Training Experience: 1997, ABS Training and Education Experience: 1993, ABS How Workers Get Their Training: 1989, Cat. No. 6278.0.

Population: All wage and salary earners. For example, in 1997, 69.5% of all wage and salary earners in the agriculture, forestry... industry received some form of training.

With respect to employees who were more likely to participate in training across the survey years, employees in the electricity, gas, and water industry had consistently high participation rates in training with in 1989, 85.1 per cent of all employees in 1989, 90.7 per cent in 1993, and 91.6 per cent in 1997 participating in some form of training. It is interesting to note the obvious impact of the Training Guarantee in 1993 which showed notable increases in the training received amongst employees in some industries that were otherwise inconsistent with training participation figures from 1989 and 1997. This trend was particularly apparent in the mining industry where 76.6 per cent in of all employees in 1989 and 89.0 per cent of all employees in 1997 received some form of training compared to 91.2 per cent of all employees in 1993⁴.

In general, industry breakdowns closely reflect the fact that in traditional public sector industries (ie, utilities, community services, public administration, communication, and finance) employees were consistently more likely to receive training than private sector employees.

Demonstrated inequities were also apparent with regard to occupational groups. Employees in managerial/administrative, professional or para-professional occupations were more likely to receive training than those employed in clerical or sales occupations and were far more likely to receive training than employees in the trades, plant and machinery, or labourer occupations (see Table 4).

Another notable trend with regard to occupation was the marked fall in training between 1993 and 1997 for lower skilled workers that coincided with the demise of the Training Guarantee. This decline in training was particularly evident for labourers and sales and personal service workers. In 1993, 74 per cent of labourers received some form of training compared to only 65 per cent in 1997 and 87 per cent of sales and service personal workers received some form of training in 1993 but only 76 per cent received some form of training in 1997. These results suggest that the Training Guarantee had its biggest impact down market.

Time series results showed the prevalence of underemployment in the form of labour resources being under-utilised with respect to existing qualifications and skills. In both 1989 and 1993, STE data was collected on the

TABLE 4. OCCUPATION BREAKDOWN OF TRAINING RECEIVED BY WAGE AND SALARY EARNERS

Wage and salary earners	1989	1993	1997
OCCUPATION	%	%	%
Managers and administrators	84.0	91.9	89.6
Professionals	92.0	96.4	96.0
Para-professionals	89.0	94.4	92.3
Tradespersons	76.7	83.7	79.6
Clerks	83.8	89.0	84.1
Salesperson's and personal services	81.1	86.9	75.8
Plant and machine operators and drivers	63.9	71.8	67.0
Labourers and related workers	65.8	74.4	64.9

Source: ABS Education and Training Experience: 1997, ABS Training and Education Experience: 1993, ABS How Workers Get Their Training: 1989, Cat. No. 6278.0.

Population: All wage and salary earners. For example, in 1997, 89.6% of all managers who were wage and salary earners received some form of training.

⁴ It is important to note that figures for 1993 are inflated compared to other years due to the effectiveness of the Training Guarantee and that results may not be as typical as figures produced in 1989 and 1997 (Fraser, 1996).

educational requirements of jobs. In 1989 and 1993, of all those with post-school qualifications who were employed on a full-time basis, 21 per cent and 40 per cent respectively, were in jobs that required no educational qualifications (unpublished ABS 1989 1993).

Direct comparisons between specific educational achievements of full-time employees and educational requirements of the job for both 1989 and 1993 are provided in Table 5. The proportion of full-time employees that were significantly under-utilised with respect to their skills and qualifications dramatically increased between 1989 and 1993. In 1989, 26 per cent of those with a trade qualification, 13 per cent of those with a bachelor degree, and 8 per cent of those with post-graduate qualifications were employed on a full-time basis in jobs requiring no educational qualification. In 1993, these figures had increased to 38 per cent of those with trade qualifications, 21 per cent of those with a bachelor degree, and 12 per cent of those with post-graduate qualifications employed on a full-time basis in jobs requiring no educational qualifications.

TABLE 5. PERCENTAGE OF THOSE WITH EDUCATIONAL QUALIFICATIONS EMPLOYED IN JOBS REQUIRING NO EDUCATIONAL QUALIFICATION

	1989	1993
Educational Attainment	%	%
Post-graduate diploma or degree	7.5	11.9
Bachelor degree	12.6	21.4
Trade qualification	26.1	37.9

Source: Unpublished data. ABS Education and Training Experience: 1997, ABS Training and Education Experience: 1993. ABS How Workers Get Their Training: 1989. Cat. No. 6278.0.

Population: All employed persons in jobs requiring no educational qualification. For example, in 1997, of all those with post-graduate qualifications, 11.9% were in a job that required no educational qualification.

Information on the educational requirements of jobs was not collected in the STE in 1997. However, extrapolations can be made by examining the highest educational qualification obtained by employees and the occupation in which they were employed on a full-time basis. Table 6 shows that of those who were employed in 1989, 21 per cent of all those with a bachelor degree were working full time in an occupation requiring less than a trade qualification. Although by 1997 only 13 per cent of those with a bachelor degree were working in occupations requiring less than a bachelor degree this decline does not necessarily reflect an improvement in the utilisation of skills and education in the labour market. Rather it is more likely to reflect the general increase during the 1990s in the proportion of jobs available in managerial and professional occupations. The percentage of jobs available in

higher level occupations (eg. managerial, professional, and para-professional) increased from 29 per cent of all jobs in 1989 to 36 per cent in 1997. The assumption that there has not been an improvement over the years in the way in which the labour market utilises skills and education is supported by the fact that since 1989, the percentage of people with trade qualifications working in non-managerial or trade occupations remained stable at around 30 per cent.

TABLE 6. PERCENTAGE OF THOSE WITH HIGH EDUCATIONAL QUALIFICATIONS WORKING BELOW A TRADE OCCUPATION

	1989	1993	1997
Educational Attainment			
Post-grad degree/diploma	11.8	8.6	7.0
Bachelor degree	20.7	18.3	13.4
Trade qualification	29.5	32.0	29.1

Source: Unpublished data. ABS Education and Training Experience: 1997, ABS Training and Education Experience: 1993. ABS How Workers Get Their Training: 1989. Cat. No. 6278.0.

Population: All employed persons with a trade qualification or higher who were working in an occupation requiring less than a trade qualification. For example, in 1997, of all those with a post-graduate degree or diploma, 7% were working in an occupation that required less than a trade qualification.

The under-utilisation of skills and education in the workforce is also demonstrated in the growing proportion of unemployed persons with post-school qualifications. In 1989, 34 per cent of all those seeking employment had post-school qualifications. In 1993 and 1997, 30 per cent and 36 per cent respectively, of those unemployed and marginally attached to the labour market had post-school qualifications (ABS 1998a). Analysis of those persons who were unemployed but had undertaken some form of training in the previous 12 months, portrays an even bleaker picture with regard to the espoused advantages of undertaking additional training. Table 7 presents a demographic breakdown of those persons who were unemployed in 1993 and 1997 and who had undertaken some form of training in the previous 12 months⁵.

Those not employed in 1997 were far more likely to undertake some form of training compared to those not employed in 1993 (see Table 7) and participation in some form of training was highest amongst those with post-school qualifications. In 1993 of all those with post-school qualifications who were not in employment, 36 per cent had participated in some form of training. However, by 1997, 55 per cent of those with post-school qualifications who were not in employment had participated in some form of training. These results, are contrary to the results reported for those

⁵ This data was not available in 1989.

who were in employment in the same period of time. As will be recalled, between 1993 and 1997 there was a general decline in the percentage of employed persons undertaking some form of training, regardless of their educational qualifications. Furthermore, with regard to the employed, those with post-school qualifications were only slightly more likely to participate in some form of training than those without post-school qualifications. Overall the different patterns in training participation observed between the employed and those not in employment suggest that by 1997 those who were not employed were going to greater lengths than ever before to improve their vocational skills and education through additional training.

Looking at training participation amongst those with specific levels of educational attainment is useful in determining exactly where changes in training participation is occurring. As shown, in Table 7, it is particularly evident that amongst those not employed, persons with higher levels of educational attainment were more likely to undertake some form of training in each survey year. However, also evident in Table 7 is the general increase in training participation amongst those not employed regardless of educational attainment level. Of those not employed with a post-graduate degree, there was an increase of 12 per cent between 1993 and 1997 of those undertaking some form of training. Similarly, between 1993 and 1997 there was an 11 per cent increase in the percentage of those not employed with an undergraduate diploma who undertook some form of training and a 17 per cent increase in those with an associate diploma.

Perhaps even more indicative of the state of the labour market and the expectations of those not employed was the increased participation in training amongst those groups who have previously enjoyed comparatively less trouble finding work. Men who were not employed in 1997 were far more likely to undertake some form of training in the previous 12 months compared to men not employed in 1993. In 1993, 33 per cent of males not employed undertook some form of training compared to 45 per cent in 1997. Similarly, there was a significant increase in participation in training for those from English speaking backgrounds between 1993 and 1997. In 1993, 31 per cent of those not employed from English speaking backgrounds undertook some form of training while in 1997, persons in this group had increased their participation in training by 24 per cent, to 55 per cent.

TABLE 7. PERCENTAGE OF UNEMPLOYED OR MARGINALLY ATTACHED PERSONS WHO UNDERTOOK SOME FORM OF TRAINING IN THE PREVIOUS 12 MONTHS

	1993	1997
With post-school qualifications	36.0	55.1
Without post-school qualifications	25.5	34.4
EDUCATIONAL ATTAINMENT		
Higher degree	53.2	65.3
Postgraduate diploma	54.8	57.3
Bachelor degree	64.4	64.8
Undergraduate diploma	47.7	59.1
Associate diploma	50.7	67.3
Skilled vocational qualification	41.3	50.1
Basic vocational qualification	52.4	50.3
No post-school qualification	37.8	42.1
GENDER		
Male	32.5	44.7
Female	40.1	38.1
AGE		
20 to 24	43.2	70.6
25 to 34	37.8	46.0
35 to 44	35.0	37.0
45 to 54	25.0	31.9
55 to 64	16.4	25.2
LANGUAGE BACKGROUND		
English	30.9	55.1
Non-English speaking	25.7	34.4

Source: Published and unpublished data. ABS Education and Training Experience: 1997, ABS Training and Education Experience: 1993. ABS. Cat. No. 6278.0.

Population: All those not employed⁶ in the reference week. For example, in 1997, of all those with a post-school qualification who were not employed, 55% undertook some form of training.

Across all age groups amongst those not employed there was an increase in training participation between 1993 and 1997. As with those who were employed, amongst those who were not employed, the young (those aged 20 to 24) were still far more likely to undertake some form of training compared to all other age groups (see Table 7). Of those aged 20 to 24 and not employed 71 per cent undertook further training in 1997 reflecting an increase of 27 per cent since 1993.

⁶ Not employed includes those unemployed or marginally attached to the labour market during the reference week (week prior to the interview).

The Employer Training Practices Survey (TPS)

Time series comparisons on the TPS between 1994 and 1997 were limited due to the nature in which the results for each of these years were reported. In 1994, the main focus of the analyses was on the 32 per cent of Australian employers who provided some form of formal training and on those covered by the Training Guarantee (ie: those employers with a wage bill in excess of \$226,000) as such the reported results do not include any information on those employers who provided no training or those who only provided informal training⁷. In 1997 however, the Employer Training Practices, 1997 (ABS 1998b) included analyses on both formal (structured) and informal (unstructured) training. As such, this section will focus primarily on results from the later survey.

As shown in Table 8, large (100 or more employees) and medium sized employers (20 to 99 employees) were far more likely to provide both structured and unstructured training than small employers (1 to 19 employees). Furthermore, while 43 per cent of small employers provided no training at all in 1997, only 6 per cent of medium sized employers and approximately 1 per cent of large employers provided no training at all.

TABLE 8. TRAINING PROVIDED IN THE LAST 12 MONTHS

TYPE OF TRAINING	Employer Size			
	1-19	20-99	100 +	All employers
	%	%	%	%
Structured training	30	71	94	35
Unstructured training	49	86	91	53
Did not provide training	43	6	*1	39
Percentage of all employers	90	8	2	100

Source: ABS Employer Training Practices: 1997, ABS Cat. No.6356.0.

Population: All employers defined as organisational units. For example, of all employers with 1 to 19 employees, 30% provided structured training.

Note: employers may provide more than one type of training.

* Results may be different if fully enumerated data were available.

Table 9 presents the type of training provided by employers within each industry. By far the norm across the majority of industries was a heavy reliance on unstructured training⁸.

The poorest of training providers were the transport and storage industry and the construction industry with over half of all employers in these industries (57% and 53% respectively) provided no training at all. Other industries that were relatively poor providers of training included, cultural and recreational services, mining⁹, communication services and accommodation, cafes, restaurant. However, it is also evident from Table 9 that only the education (52%), government administration and defence (99%) and electricity, gas and water (83%) industries provided

substantial levels of both structured and unstructured training. The inequities in access to training across industries is further highlighted by funding allocations from the Australian National Training Authority (ANTA). National

TABLE 9. TRAINING PROVIDED BY INDUSTRY IN THE LAST 12 MONTHS

INDUSTRY	Structured Training	Unstructured Training	No Training
	%	%	%
Transport and storage	31	37	57
Construction	29	36	53
Cultural and recreational services	29	44	50
Mining	37	39	46
Communication services	37	45	46
Accommodation, cafes, restaurants	24	52	45
Retail trade	29	55	40
Property and business services	36	53	40
Wholesale trade	40	53	39
Manufacturing	35	60	32
Finance and insurance	47	53	32
Health and community services	42	59	32
Education	52	64	24
Personal and other services	36	70	*22
Government admin and defence	99	88	*1
Electricity, gas, water	83	77	**

Source: ABS Employer Training Practices: 1997, ABS Cat. No.6356.0.

Population: All employers defined as organisational units. For example, of all employers in the transport and storage industry, 57% provided no training at all. Note: employers may provide more than one type of training.

* Results may be different if fully enumerated data were available.

** Results are unreliable

⁷ Formal training referred to activities that had a structured plan and format designed whereas informal training referred to unstructured on-the-job training.

⁸ Unstructured training refers to "training activity that does not have a specified content or predetermined plan" (ABS 1998b p. 66).

⁹ It is interesting to note that when employers were asked to indicate the extent to which they provided training (as evidenced in the TPS) 50% of all mining employers provided no training at all. However, when mining employees were asked to indicate the extent to which they participated in training (as evidenced in the STE) 88% indicated that they undertook some form of training.

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resources allocations by training area indicate that some industries that are poor providers of training (e.g. construction and accommodation, cafes, and restaurants) receive relatively generous and growing public funding via ANTA (Dumbrell, 2000b).

Despite the fact that 92 per cent of all employees worked for employers that provided some form of training, the TPS supported results of the STE by showing that not all occupational groups had equal access to training. Table 10 shows that employers of para-professionals were by far the better providers of training with only 19 per cent of para-professional employers not providing any form of training and 59 per cent providing structured training. In comparison, 34 per cent of employers who employed labourers provided no training at all and only 38 per cent provided structure training.

With regard to the total percentage of employees within each occupational category, only 4 per cent of all para-professionals worked for employers who did not provide any training (see Table 11). As was also shown in Table 10 however, labourers did not fare as well with 11 per cent of all labourers working for employers who did not provide any

training at all and only 72 per cent working for employers who provided structured training (ABS 1998b).

Workforce stability was another factor impacting on inequitable provisions of training by employers. Employers whose annual turnover rate was 50 per cent or more of their entire workforce provided more unstructured training than employers with a more stable workforce. Table 12 shows that 61 per cent of employers whose annual turnover rate was 50 per cent or greater provided unstructured training and 66 per cent provided some form of training, while only 44 per cent of employers with a majority of their workforce employed for five years or more, provided structured training and 53 per cent provided some form of training. Employers who reported continuous turnover (ie, more than half of their workforce did not remain stable for any of the nominated lengths of time) were the most likely of all employers to provide both structured (62%) and unstructured training (85%).

TABLE 10. PERCENTAGE OF EMPLOYERS PROVIDING TRAINING IN THE LAST 12 MONTHS BY OCCUPATIONAL PROFILE OF EMPLOYEES

OCCUPATION	Structured Training %	Unstructured Training %	No Training %
Professionals, managers, administrators	48	64	27
Para-professionals	59	74	19
Tradespersons and related workers	48	61	29
Clerical, sales, and service workers			
Elementary	44	58	33
Intermediate	46	67	26
Advanced	50	67	24
All	41	59	32
Production and transport workers	37	63	32
Labourers and related workers	38	59	34
All Employers	35	53	39

Source: ABS Employer Training Practices: 1997, ABS Cat. No.6356.0. Population: All employers. For example, of all employers who employed labourers, 34% provided no training at all. Note: employers may provide more than one type of training.

TABLE 11. PERCENTAGE OF EMPLOYEES WHO WORKED IN WORKPLACES WHERE TRAINING WAS PROVIDED IN THE LAST 12 MONTHS BY OCCUPATIONAL PROFILE OF EMPLOYEES

OCCUPATION	Structured Training %	Unstructured Training %	No Training %
Professionals, managers, administrators	88	89	6
Para-professionals	90	87	4
Tradespersons and related workers	79	78	10
Clerical, sales, and service workers			
Elementary	77	84	7
Intermediate	80	86	8
Advanced	77	85	10
All	78	85	8
Production and transport workers	78	85	9
Labourers and related workers	72	79	11
All Employees	80	84	8

Source: ABS Employer Training Practices: 1997, ABS Cat. No.6356.0. Population: All employees. For example, of all labourer employees, 11% worked for an employer who provided no training at all.

TABLE 12. TRAINING PROVIDED IN THE LAST 12 MONTHS BY LENGTH OF SERVICE OF EMPLOYEES

Workforce Turnover	Structured Training	Unstructured Training	Some Form of Training
50% or more employees employed for	%	%	%
Less than one year	31	61	66
One year to less than five years	35	52	60
Five years or more	31	44	53
Employers with continuous turnover	62	85	91
All employers	35	53	61

Source: ABS Employer Training Practices: 1997, ABS Cat. No.6356.0.

Note: Employers had to choose one category which characterised their workforce.

Population: All employers. For example, of all employers whose who had 50% or more of their workforce work for less than one year, 66% provided some form of training.

The results in Table 12 suggest that a large part of employer supported training is aimed at providing new employees with what is likely to be organisationally specific knowledge and skills. Although work-based learning and organisational knowledge and skills obviously have intrinsic value for both the employee and the employer, organisation specific knowledge and skills may not readily be transferable to other organisations. One concern raised by this issue is the extent to which organisation specific training was the only form of training provided by employers. The danger of organisation specific training being the only form of training is that a significant proportion of the workforce remains stagnant with minimum competence in a core set of low skilled tasks. This 'low skills equilibrium' (Finegold & Soskice 1988) is typified by a high proportion of transient employees who are utilised by employers to deal with fluctuations in the market and a corresponding small core periphery of highly skilled workers who are strongly attached to the organisation (Fraser 1996).

A number of results presented in this paper support the assumption of a low-skills equilibrium. Supporting the assumption of a core-periphery of highly skilled employees were the findings that employers of para-professionals provided the most training and that those employed as managers, professionals and para-professionals were most likely to participate in some form of training. However, the high levels of training provided by employers with high turnover workforces suggests that transient workforces are receiving a large proportion of the remaining training in the

form of unstructured on-the-job training. The high levels of training provided to employees in high turnover workplaces may also partially explain the increased training participation amongst those that are not in employment. That is, the training undertaken by those not in employment may have been completed whilst working in a short term position. These assumptions are further supported by the fact that amongst those most likely to be employed in precarious positions – those under the age of 24 years – were more likely to participate in training than any other age group. Of all employees who had received some form of training, 54% of those aged between 15 and 19 and 34% of those aged between 20 and 24, had been employed for less than one year (ABS 1998a).

The Training Expenditure Survey (TES)

The extent to which employees in small and medium sized organisations have had to take control of their own professional development has been increasing since the suspension in 1994 and subsequent abolition in 1996, of the Training Guarantee. Results from the Training Expenditure Survey show that since the suspension of the Training Guarantee the average number of hours of training provided per employee has declined, expenditure has been reduced and there has been a reduction in the proportion of employers providing training (ABS 1997).

TABLE 13. AVERAGE TRAINING HOURS PER EMPLOYEE BY EMPLOYER SIZE

SEPTEMBER QUARTER	Employer Size			All employers
	1-19	20-99	100 +	
1989*	3.30	3.40	7.30	5.70
1990	3.99	4.10	7.06	5.92
1993	4.11	5.30	6.17	5.55
1996	2.42	3.79	6.45	4.91

Source: ABS Employer Training Expenditure, July to Sept, 1997, ABS Cat. No.6353.0.

Population: All employers. For example, in 1989, of all employers who employed more than 100 employees the average number of hours spent training was 7.3.

* Based on a sample of 2000 employers. The sample for 1990 1993, and 1996 was the same 6000 employers surveyed in the Employer Training Practices Survey.

Table 13 shows the relative decline in hours of training provided by employers with different size workforces. For small and medium sized employers the greatest decline in the average number of hours of training provided occurred between 1993 and 1996. In 1996, the average number of hours of training provided by small employers was at its



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lowest since first measured (2.42 hours in 1996 compared to 3.3 hours in 1989). In comparison however, employees in large organisations fared much better. Overall, in 1996 employees in large organisations received over twice the amount of structured training (6.45 hours) than employees in small business (2.42 hours).

Analyses of the proportion of gross wages and salaries spent on training also revealed that employees in large organisations were better off than employees in small organisations. In large organisations, the proportion of gross wages and salaries spent on training was significantly higher (3.2%) than for both medium (1.9%) and small employers (1.2%).

Time series analysis also showed substantial differences in levels of training effort between industries. Table 14 summarises the percentage change in training expenditure per employee between 1993 and 1996. As with the time series data on the TPS, the results in Table 14 provide an indication of industry responses to the abolition of the Training Guarantee. Overall, declines in total training expenditure ranged from between – 5.5 in Manufacturing to – 29.6 in communication services while increases in total

training expenditure ranged from 1.3 in Personal and other Services to 30.5 in Mining.

However, a number of important issues need to be considered when interpreting these results. The majority of industries that reported declines in total training expenditure had consistently lower average expenditure on training in both 1993 and 1996. The notable exception to this was the communication industry where despite showing a significant decline in total training expenditure this industry still reported higher expenditure per employee in 1996 than all but two other industries (being mining and electricity, gas and water) (Dumbrell 2000b).

Furthermore, there were also marked differences in expenditure between industry sub-divisions. In general, the construction industry showed a 25.5 per cent decline in total training expenditure. However, within this industry, the sub-division of non-building construction spent nearly four times as much on training as other sub-divisions within this industry. Similarly, within manufacturing, the sub-divisions of wood and paper products, machinery and equipment, and non-metallic mineral products increased their training expenditure (Dumbrell 2000b).

Looking at the field in which training was provided, Table 15 shows both the hours and dollars spent per employee. Concurring with the results of the TPS and STE, management and professional training was the field in which expenditure was the highest. Across all employers, \$20.56 or 0.88 hours of training per employee was dedicated to management and professional training. At the opposite end of the spectrum, and leaving aside undefined fields of training, the fields afforded the least amount of training were general supervision (0.26 hours and \$5.01 per employee) and plant and machinery (0.27 hours or \$5.02 per employee).

A significant finding, with regard to expenditure on training, was that in the field of trade and apprenticeship training, small organisations dedicated more time per employee on training (0.93 hours) than both large (0.81 hours) and medium (0.84 hours) employers.

TABLE 14. INDUSTRY CHANGES IN STRUCTURED TRAINING EXPENDITURE, 1993 – 1996

Industry	% change in training expenditure per employee
Mining	+ 30.5
Manufacturing	- 5.5
Electricity, gas, water	+ 25.6
Construction	- 25.5
Wholesale	- 15.5
Retail	+ 18.7
Accommodation, cafes, & restaurants	- 14.6
Transport & storage	+ 13.1
Communication services	- 29.6
Finance & insurance	+ 13.0
Property & business services	- 15.2
Government administration	+ 11.2
Education	+ 23.1
Health & community services	- 13.6
Cultural & recreational services	- 17.6
Personal & other services	+ 1.3
All industries	- 3.0

Source: ABS Employer Training Expenditure, July to Sept, 1996, ABS Cat. No. 6353.0.

Note: Adapted from Dumbrell (2000b).

TABLE 15. FIELDS OF TRAINING BY EMPLOYER SIZE

	Employer Size			All employers
	1-19	20-99	100 +	
HOURS PER EMPLOYEE				
Management and professional	0.27	0.54	1.29	0.88
Trade and apprenticeship	0.93	0.84	0.81	0.85
Sales, clerical/office and personal service	0.44	0.38	0.76	0.61
Technical and associate professional	*0.16	*0.28	0.72	0.49
General computing	0.21	0.35	0.55	0.42
Induction	*0.12	0.26	0.53	0.37
Health and safety	0.04	0.39	0.49	0.36
Personal development	**	0.22	0.43	0.30
Plant and machinery	*0.05	0.20	0.41	0.27
General supervision	*0.09	0.26	0.34	0.26
Other	**	**	0.13	0.10
All fields	2.42	3.79	6.45	4.91
DOLLARS PER EMPLOYEE				
Management and professional	7.12	13.49	29.25	20.56
Technical and associate professional	*3.19	5.07	14.45	9.76
Sales, clerical/office and personal service	4.42	5.60	12.10	8.88
Trade and apprenticeship	8.10	7.57	9.38	8.70
General computing	3.05	6.81	11.24	8.30
Health and safety	0.70	6.77	9.70	6.82
Personal development	**	4.11	8.77	5.99
Induction	*1.72	3.77	7.96	5.56
Plant and machinery	*0.65	*3.01	7.75	5.02
General supervision	*1.45	5.00	6.65	5.01
Other	**	**	2.42	1.82
All fields	32.42	62.77	119.66	86.43

Source: ABS Employer Training Expenditure, July to Sept, 1997, ABS Cat. No.6353.0.

Population : All employers defined as organisational units. For example, on average all employers provided .88 hours of training in the management and professional field.

* Results may be different if fully enumerated data were available.

** Results are unreliable

As will be recalled, the results from the 1997 STE showed that there was no real difference in the extent to which men and women participated in training. However, the composition of organisations greatly impacted on the amount of training provided to men and women. Table 16 shows that although there has been a decline in the time and money spent on training both men and women, training expenditure in male dominated organisations was consistently above the average while training expenditure in female dominated organisations was consistently below the average. In 1996, male dominated organisations devoted 6.68 hours per employee to training while in female dominated organisations only 3.26 hours per employee was devoted to training. This translates to \$123 less per employee spent on training in female dominated industries compared to male dominated industries.

TABLE 16. MEASURES OF TRAINING EXPENDITURE FOR MALE AND FEMALE DOMINATED INDUSTRIES

	1993	1996
HOURS PER EMPLOYEE		
Employers with		
75% or more male employees	7.47	6.68
75% or more female employees	3.62	3.26
All employers	5.55	4.91
DOLLARS PER EMPLOYEE		
75% or more male employees	233.98	234.90
75% or more female employees	103.89	111.82
All employers	191.25	185.49
GROSS WAGES AND SALARIES (%)		
75% or more male employees	2.90	2.58
75% or more female employees	2.17	2.06
All employers	2.86	2.54

Source: ABS Employer Training Expenditure, July to Sept, 1997, ABS Cat. No.6353.0.

Population : All employers defined as organisational units. For example, in 1996 employers with a male dominated workforce on average provided 6.68 hours of training per employee.

Not surprisingly, similar trends emerge when comparisons were made between casualised organisations and non-casualised organisations. In 1996, in organisations in which 25 per cent or more of the workforce was casual, \$98.45 per employee (or 3.23 hours) was spent on training compared to \$223.71 (or 5.64 hours) in organisations in which less than 25 per cent of the workforce was casual: a difference of \$125 per employee.



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On average, of the 35 per cent of organisations that provided structured training approximately twice as much was spent on the provision of in-house training compared to external training (ABS 1997), despite the fact that of those who provided structure training, 59 per cent provided in-house training compared to 89 per cent who provided external training (ABS 1998b). In-house training was most likely to comprise structured on-the-job training (37% of employers who provided structured training used this method of delivery), facilitated discussions (30%), and practical exercises (27%). Of those who provided external training, TAFE and private providers were the most widely used providers (43% of employers used TAFE and 34 per cent of employers used private providers at some point in the previous 12 months) and were the most frequently used (28% of employers most often used TAFE and 20% of employers most often used private providers).

Conclusion

The aim of this paper was to provide a better understanding of the provision of training and education in the labour market. Overall, the results show that while employees are increasingly participating in training and further education, employers are reducing the amount of training provided both in the workplace and by external providers. Non-employees (those unemployed or marginally attached to the labour market) were also increasingly participating in training activities. As were marginal groups such as non-English speaking employees and older employees.

The results presented in this paper confirm earlier analyses of these data which showed that fewer people are gaining access to employer supported training (Fraser 1996). In general, employers who were most likely to disadvantage employees by restricting access to training were those who employed:

- female dominated workforces;
- employees of non-English speaking backgrounds;
- casual employees;
- part-time employees;
- labourers;
- plant and machine operators;
- few employees (i.e. very small organisations);
- private sector employees.

These inequities raise important concerns with regard to a number of policy recommendations made in a series of influential reports commissioned in the early 1990s that focussed on the increased competition for trainers, increasing¹⁰ participation of young people in post-compulsory education and training¹¹, and refocussing reform on the demand side of training¹² (Schofield, 2000). The challenge will be for policy makers to ensure that demand driven training does not only provide for those who are able to ensure that their needs are met. The decrease in the provision of training with the demise of the Training Guarantee to those at the bottom end of the labour market suggests that demand driven training may effectively exclude those most in need for additional training if they are to break out of low skilled positions. Furthermore, the inequities in access to training for a number of different labour market segments indicates that the increasing fragmentation of the labour market into casualised, part-time and contracted work has not been taken into consideration in policies that are based on traditional workplaces and working arrangements (Schofield 2000).

An additional concern with regard to current policy is the underlying assumption that workplaces provide exemplary learning environments and the results presented in this paper clearly show that not all workplaces provide training. Related to this was the finding that the majority of training provided in workplaces was on-the-job training that was not associated with clear learning objectives and outcomes. This raises the issue of clarifying exactly what the government coffers are funding particularly given that more funds are being directed at enterprise-specific training (Schofield 2000).

With regard to the formal VET sector and the extent to which training impacts on employment outcomes, results from the NCVET Student Outcomes Survey (1999) indicate that only 26 per cent of VET graduates in 1999 undertook their course for reasons associated with their current job (NCVER 1999). These results suggest that contrary to the current Commonwealth policy objective of New Apprenticeships which sees a shift towards the locking in of training to current employer needs, it is not current employment that motivates students in the formal VET sector.

This paper has integrated the findings from the ABS surveys that have investigated training practices, expenditure and participation since 1989. Time series results showed that industry investment in training has been declining. These results suggest that the link between the labour market and VET is increasingly being decided at the individual level. A significant issue arising from these outcomes is the extent to which public interest in terms of skill formation, employment and the future of the labour market will be benefited or disadvantaged as Government intervention declines.

¹⁰ Report on the Training Costs Review Committee (1990) (Chairman, Ivan Deveson), Training costs of Award Restructuring, Vol. 1, The Report, AGPS, Canberra.

¹¹ Report of the Australian Education Council Review Committee (1991) (Chairman, Brian Finn), Young People's Participation in Post-Compulsory Education and Training, AGPS, Canberra.

¹² Allen Consulting Group (1994) Successful Reform: Competitive skills for Australians and Australian Enterprises, Report to the Australian Industry Group.



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NOTES

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