

DEST INPUT TO HOUSE OF REPRESENTATIVES INQUIRY INTO INCREASING PARTICIPATION IN PAID EMPLOYMENT

INTRODUCTION

This paper outlines the links between educational attainment and the acquisition of skills and participation in paid employment. Increasing educational participation is shown to be an important factor in increasing labour force participation. The paper draws together material about levels of educational attainment and participation in Australia and particular areas of disadvantage, in particular, people in rural and regional areas. Finally, the paper includes current DEST programmes and initiatives aimed at improving access to education and thereby increasing participation.

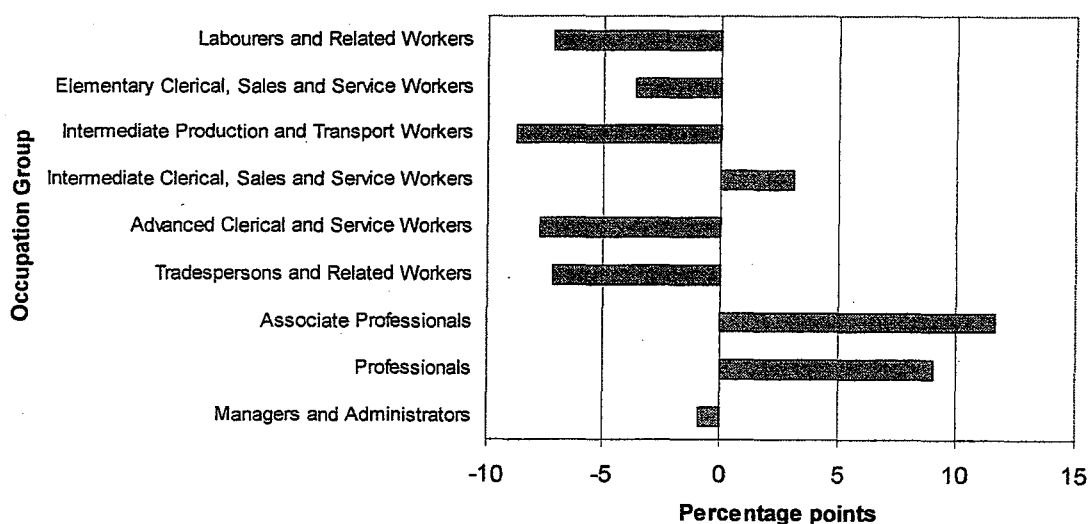
LINKS BETWEEN EDUCATION AND EMPLOYMENT

Skills change

Skill requirements in the workforce in Australia have been changing over the past few decades. The contemporary knowledge-based economy demands the kind of flexibility, skill and resilience that results from sustained and on-going commitment to learning in its broadest sense. This is true not only for children but for adult learners whose livelihood may depend on their ability to adapt to new requirements as up-to-date skills are the major determinant of income and provide the best protection against unemployment.

Changing skill requirements in the Australian economy are reflected in Figure 1 below. Higher skilled jobs have taken up an increasing share of employment growth in recent years. The overall employment growth between 1997 and 2002 was 11%. Growth in associate professional jobs, was twelve percentage points greater at 23% and growth in professional jobs was 20%, while growth in jobs in labouring, production and transport, clerical, sales, services and trades was well below the average.

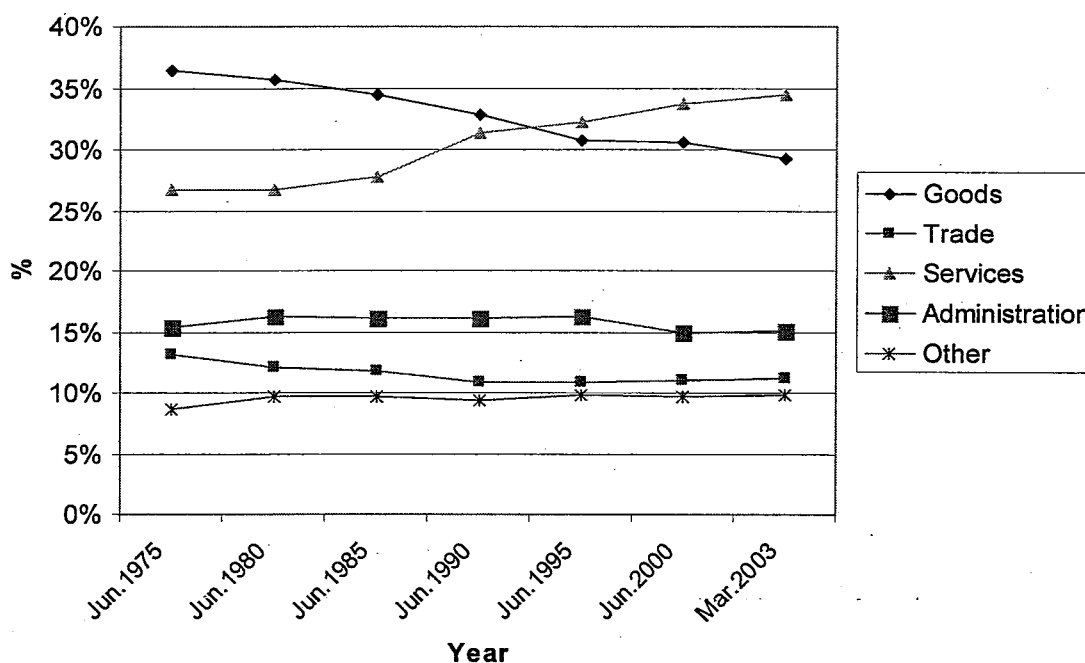
Figure 1: Percentage point difference from overall per cent increase in employment, 1997-2002



Source: ABS, *Labour Force, Australia*, (Cat. No. 6203.0), 1997 and 2002

Changing occupations and associated skill requirements are linked to changing industries in the Australian economy. Figure 2 below shows the increasing importance of service industries to the Australian economy and the decreasing importance of goods-related industries. With regard to rural and regional areas in particular, the decreasing importance of agriculture, forestry and fishing industries¹ means that people in those areas often need to learn skills in new fields to remain competitive in the labour market.

Figure 2: Per cent contribution to total gross value added at basic prices, by industry, 1975-2003



Source: ABS, *National Income, Expenditure and Product* (Cat. No. 5206.0) June quarter 1975, 1980, 1985, 1990, 1995, 2000 and March quarter 2003

Benefits of skill level

Overall, there are some strong correlations of education and training with social and economic characteristics.

- Skills upgrading is correlated with higher standards of achieved education and training. Older people with low levels of qualifications and skills are much less likely to participate in education and training compared to those with higher qualifications, and compared also to younger cohorts. Of those who do participate, many do not complete their qualifications. Many are likely to lag behind in ICT skills.
- Unemployment rates have a strong negative correlation to levels of education and training achieved. Figure 3 shows that the relative likelihood of

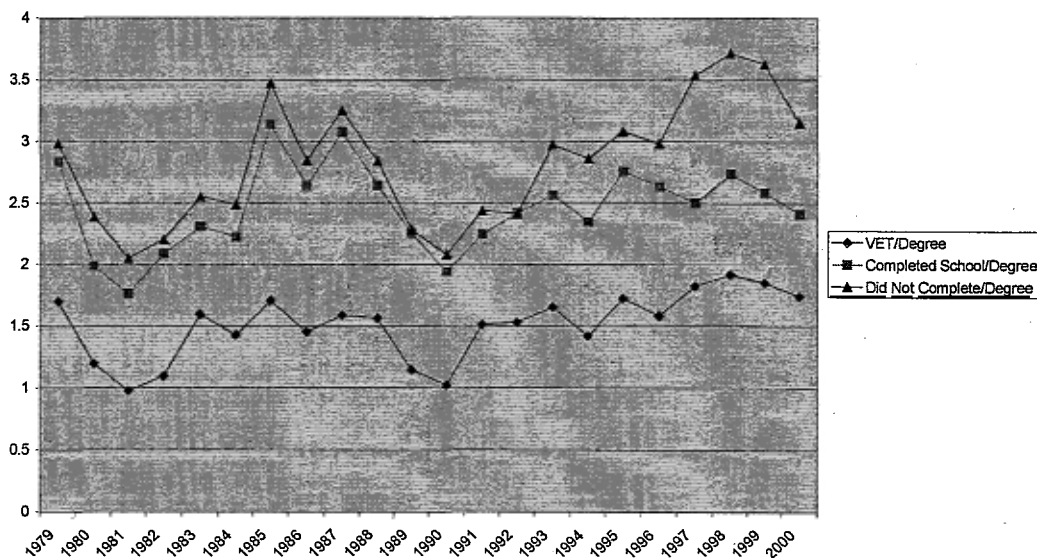
¹ ABS, *National Income, Expenditure and Product* (Cat. No. 5206.0) 1975-2003

unemployment for those without post-school qualifications increased over the 1990s, and that those with higher qualifications were less likely to be unemployed. In 1981 those who did not complete school had twice the unemployment rate of those with a degree, but by 2000, they were approximately three times as likely to be unemployed. From the early 1990s onwards, completion of at least Year 12 became increasingly important. It is interesting to note that the gap between those who completed Year 12 and those with a VET qualification has changed little over the ten years from 1991, although over this period both groups experienced increasing incidence of unemployment relative to those with a degree. As the Australian workforce becomes more highly skilled, higher level skills are required by individuals to compete in the labour market.

Also, the unemployment rate for older Australians without qualifications is higher than for younger people without qualifications. May 2000 data² indicate that 57.3% of unemployed Australians aged 45-54 had no post-school qualifications (compared to 45.8% of those employed) and 44.5% had not completed the highest level of school (compared to 33.5% of those employed).

Figure 3: Unemployment rates by highest educational qualification

Unemployment rates for individuals holding lower than degree level qualifications relative to those of persons with degrees: 1979-2000



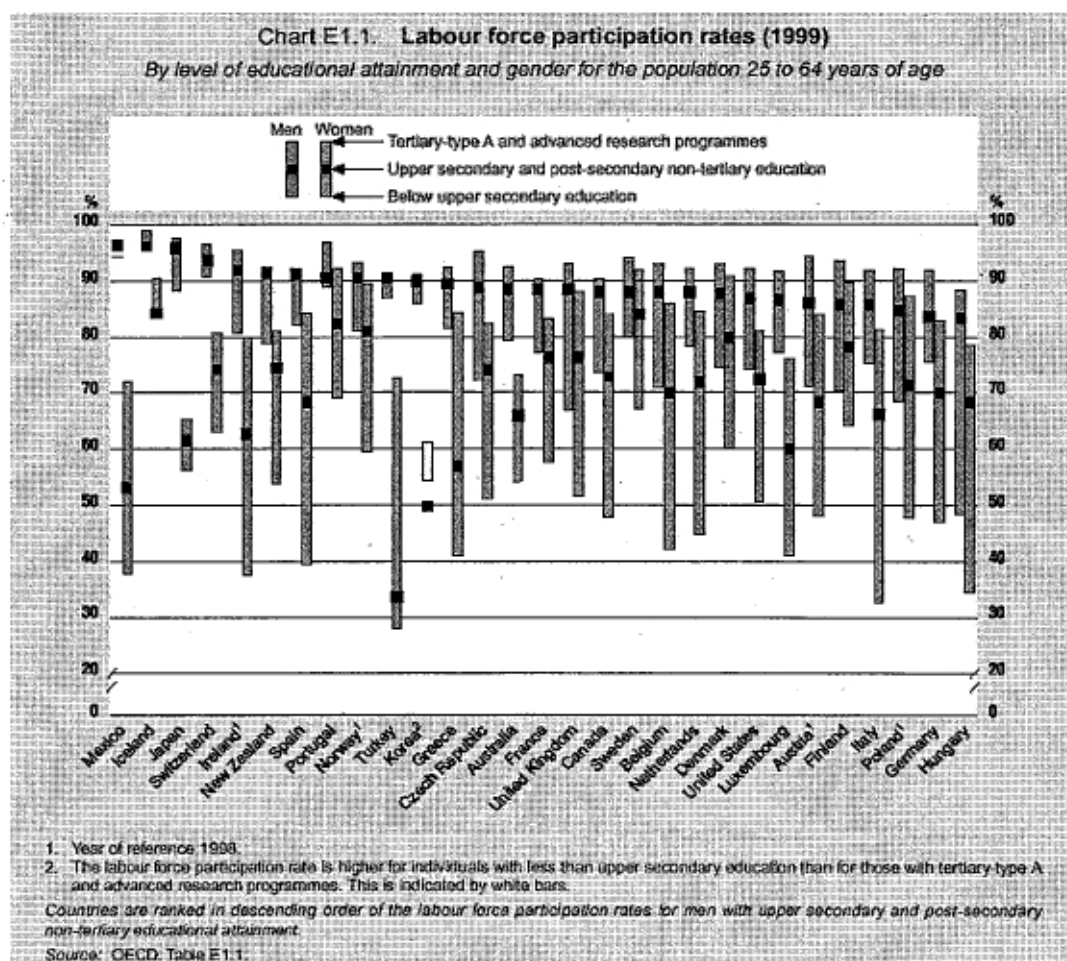
Source: ABS *Transition from Education to Work*, Cat. No. 6227.0 (various dates)

- Indirectly, levels of education achieved contribute to overall personal and family well-being. This has long term effects in health and social adjustment, and intergenerational effects on the educational and economic opportunities of offspring.
- Indirectly, higher standards of education and training in the community generate a more capable and adaptable workforce, with the economic and social opportunities this provides.

² ABS, *Transition from Education to Work Survey* (2000), unpublished data

- Not only unemployment but labour force participation (Figure 4) is strongly linked to attainment in education, especially for women, with upper secondary or equivalent attainment being particularly important. As figure 4 shows, in most OECD countries, including in Australia, there is a considerable difference in labour force participation between those with upper secondary attainment and those with below upper secondary attainment and this gap is larger for women.
- Individual returns to education are well established. There is a clear progression in average earnings as educational attainment increases even though the returns for those with VET qualifications have fallen over time. There are also significant differences between men and women and the returns for women with both Higher Education and VET qualifications have decreased over time (Table 1).

Figure 4: Labour force participation and educational attainment



Source: OECD *Education at a Glance – OECD Indicators*, 2001.

Table 1: Average Weekly Earnings for those with Higher Education and VET Qualifications as a Percentage of those with no Post-School Qualifications, 1978-79 to 1997-98

	Higher Education Qualifications		VET Qualifications	
	Men	Women	Men	Women
1978-79	185	168	122	125
1981-82	171	168	118	120
1985-86	166	164	121	123
1989-90	175	165	117	123
1994-95	171	147	117	110
1997-98	181	156	118	114

Source: ABS *Income Distribution, Australia*, Cat. No. 6205.0 (various dates)

- It is also important to note that, while individuals with higher educational attainment fare better than those with lower qualifications, overall improvements in skills can also lead to higher overall performance for firms, industries and the national economy. The OECD has found that human capital plays a "pivotal" role in raising labour productivity. A more productive, skilled and flexible workforce enables the economy to be more competitive internationally and to be more resilient to economic shocks. This in turn facilitates employment stability and growth, and hence potentially into increased opportunities for participation in paid employment.

A recent assessment by IMD (Institute for Management Development) in their *World Competitiveness Yearbook 2003* showed that Australia ranked as the second most competitive country (behind the USA) among those with populations of 20 million and more. Importantly, Australia ranked first in terms of the extent to which the education system met the needs of industry for skilled labour.³

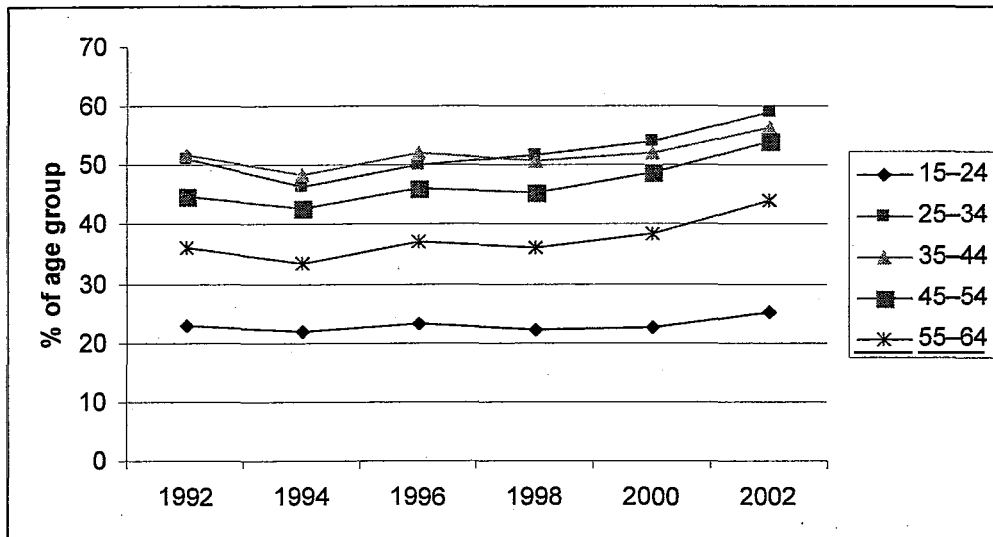
Australia is becoming more skilled

Attainment

Australia is becoming a more highly educated society, with more people in every adult age group obtaining non-school qualifications in recent years (Figure 5).

³ IMD, *World Competitiveness Yearbook*, 2003

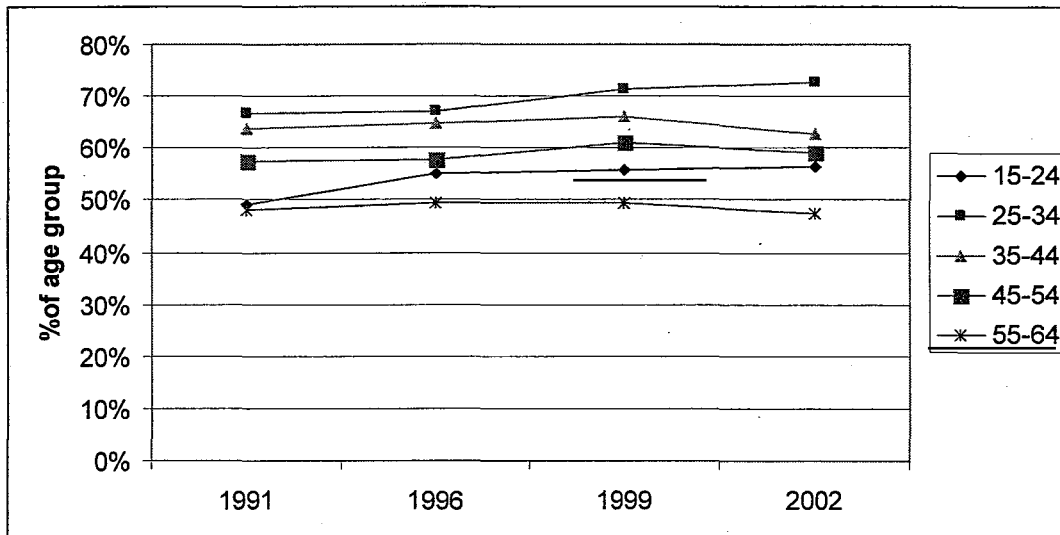
Figure 5: Proportion of persons with a non-school qualification—May 1992 to May 2002



Source: ABS, Survey of Education and Work (formerly Survey of Transition from Education to Work), Cat. No. 6227.0, 2002.

Year 12 completion rates have also increased for the younger age groups (Figure 6), which will flow through to older age groups in future years.

Figure 6: Proportion of persons who completed Year 12 or a post-school qualification, May 1991-May 2002

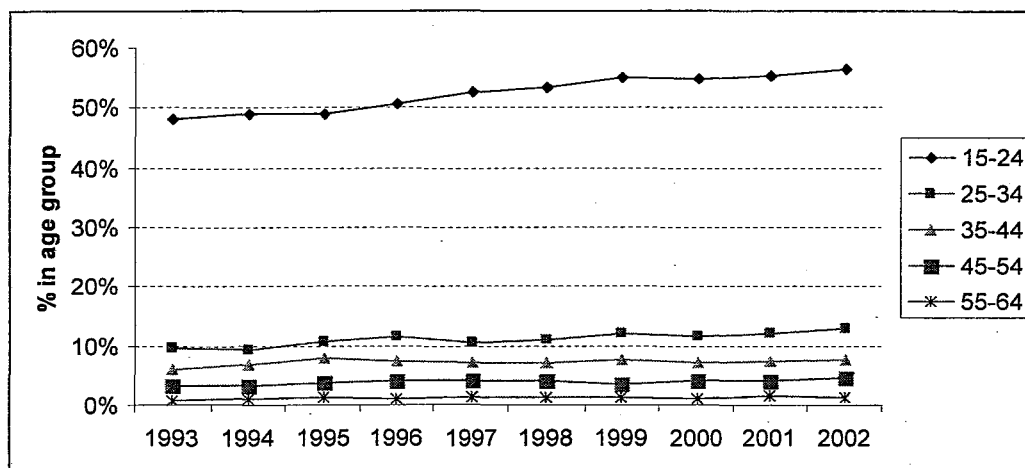


Source: ABS Survey of Education and Work (formerly Survey of Transition from Education to Work), Cat. No. 6227.0, 1991, 1996, 1996, 2002

Participation

Higher levels of year 12 completion (or the equivalent) make it more likely that people will undertake further education and training during their working lives. The proportion of people undertaking study towards a qualification has risen for all age groups over the past decade, but especially for 15-24 year olds (Figure 7).

Figure 7: Percentage of population in age group who are studying towards a qualification, working age population, 1993 to 2002



Source: ABS Survey of Education and Work (formerly Survey of Transition from Education to Work), Cat. No. 6227.0, 1993 to 2002

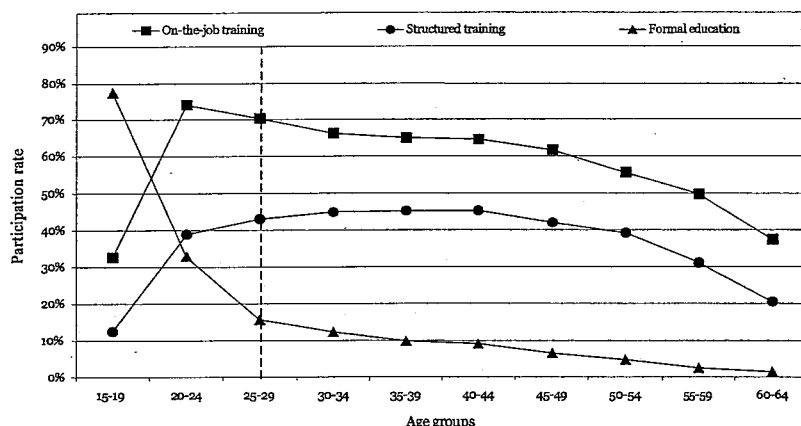
Workplace training

Workplace education is undertaken in two main ways – through structured training involving an instructor and organised courses, and through on-the job training. A high percentage of the workforce receives one or other of these forms of training (Figure 8).

81% of all Australian employers provided some training for their employees during the year ending June 2002⁴

⁴ ABS, *Employer Training Expenditure and Practices, Australia, 2001-02*

Figure 8: Age-Specific Participation Rates in Education and Training (1997)



Source: ABS 2001 Survey of Education and Training, Cat. No. 6278.0, 1997

Structured training is generally not intensive. In 2001, the average course length was 17.4 contact hours, and the average number of courses for those that undertook any was 2.1.

On-the-job training remains the most common form of workplace training, and is received by two thirds or more of 20-44 year olds.

Both structured and on-the-job training decreases markedly for those aged 45 years and over.

Foundation skills

The importance of foundational skills

Data from the Longitudinal Surveys of Australian Youth (LSAY) show the importance of literacy and numeracy among middle-secondary students. Rothman⁵ summarises these findings: 'There is a strong relationship between Year 9 achievement in literacy and numeracy and participation in Year 12 (Marks, *et al.*, 2000), between achievement and subject choice in Year 12 (Fullarton & Ainley, 2000), and between achievement and results on tests for tertiary entrance (Marks, *et al.*, 2001). Higher-achieving students were more successful than lower-achieving students at obtaining full-time employment within the first few years of leaving school (Lamb and McKenzie, 2001), although lower-achieving students who had participated in VET in Schools programs were more successful at finding full-time work than those who did no vocational training while at school (Fullarton, 2001).'

Australian school students and foundation skills

Australian students in the recent international study PISA 2000 (Programme for International Student Assessment) performed above the OECD average in all three

⁵ Rothman, S, *Achievement in Literacy and Numeracy by Australian 14 Year-Olds, 1975-1998*, 2002, p.2

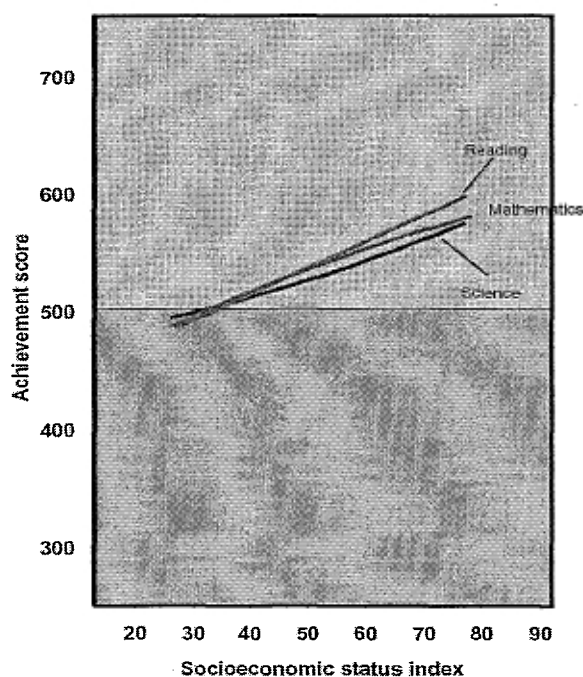
domains of reading, mathematical and scientific literacy.⁶ There was, however, considerable variation in the levels of achievement of different students in Australia. One area of concern is that the gap between the top and bottom performers in Australia was wider than the OECD average for reading. This suggests that there is considerable room for improvement amongst the low-achieving students in reading.

Disadvantage in foundational skills

There are some groups which are at a particular disadvantage in attaining literacy skills. The strong link between socio-economic background and educational outcomes in Australia (Figure 9), and the clear link between low educational attainment and likelihood of unemployment points to the inter-generational transmission of disadvantage. The graph below shows the relationship between socio-economic status (based on parents' occupations) and achievement in reading, mathematical and scientific literacy. The relationship is strongest for reading literacy. The achievement score of 500 is the standardised mean score for reading mathematical and scientific literacy for all the students in the participating countries. Although scores are mostly above the OECD mean, there are some students performing below this average and there is an important relationship between their performance and their socio-economic status.

Evidently, there remain significant barriers to overcoming inter-generational effects. In the next section, the degree of this disadvantage for various groups in obtaining foundational skills is shown.

Figure 9: Achievement levels in reading, mathematics and science of 15 year olds in Australia, by socio-economic status, 2000



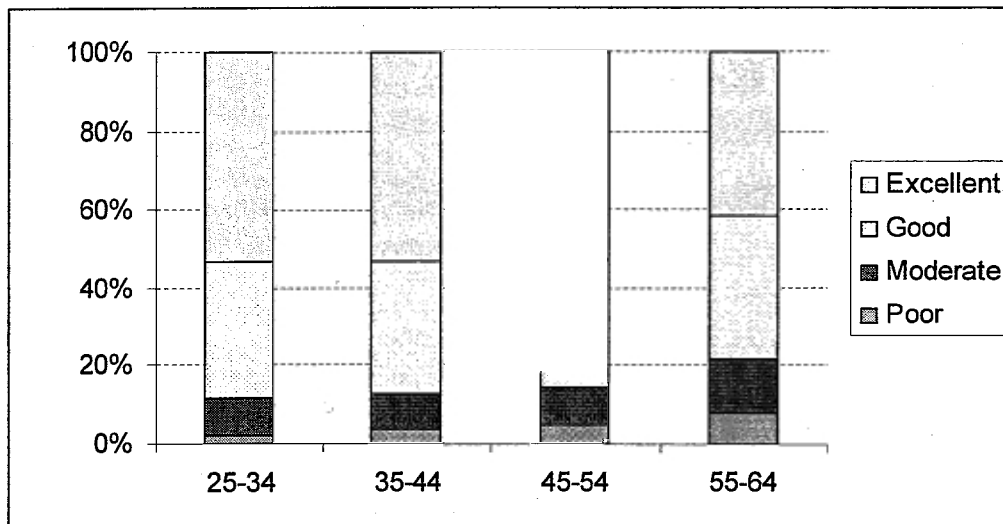
Source: Lokan, Greenwood & Cresswell 2001 (OECD PISA 2000)

⁶ Lokan, J., Greenwood, L. & Cresswell, J, *15-Up and Counting, Reading, Writing, Reasoning*, 2001

Literacy in the workforce

There is also room to improve levels of functional literacy in the Australian workforce, particularly in older age groups. Higher proportions of older age groups report that their reading skills are poor or moderate than younger groups (Figure 10).

Figure 10: Self-rating of reading skills needed for everyday life, by age group, 1996



Source: ABS Aspects of Literacy, Cat. No. 4226.0, 1996

PARTICULAR GROUPS OF DISADVANTAGE

Some groups which are particularly disadvantaged in educational participation and outcomes have been discussed below. Rural and regional issues are a particular focus of the terms of reference of this Inquiry so they have been examined in the most detail. Also, the close relationship of socio-economic status and regionality and the high proportion of Indigenous people in remote areas in particular mean that these two groups are also discussed.

As can be seen in discussions below on achievement of literacy and numeracy skills and in the section on higher education, the impact of region on outcomes is largely a result of socioeconomic factors. Once socio-economic status is controlled for, the effect is greatly reduced.

Regional/rural and urban/outer suburban issues

There is little readily available data for urban and outer suburban categories. A simple rural/urban dichotomy is usual. However, some data is included according to city size or whether the area is a capital or other city which may be useful.

School location and literacy skills

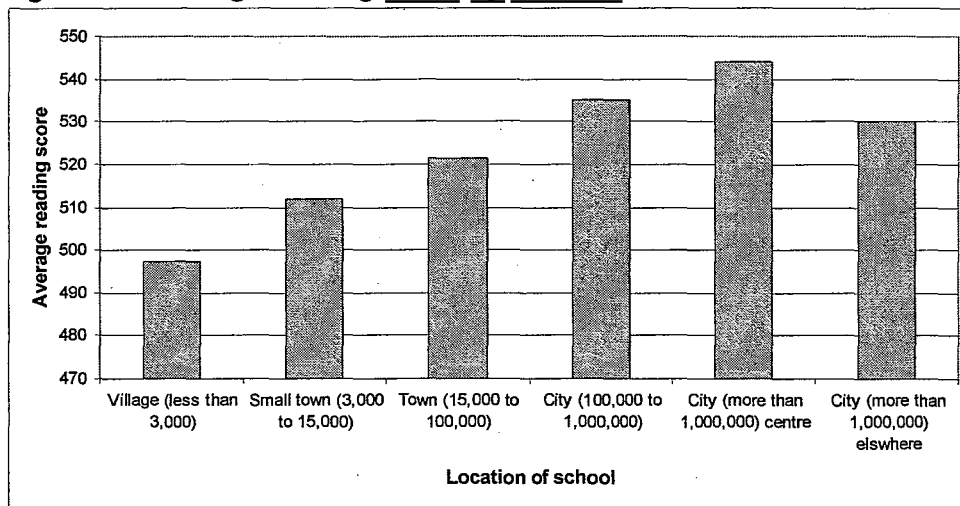
In PISA 2000, there was little difference in the average performance in literacy between students from schools located in major cities, other urban districts or provincial cities. Relatively low achievement in remote schools is apparent in reading and scientific literacy but not in mathematics where differences are smaller. Part of the explanation for the regional differences may be due to the differences in SES in the regions. Students from major cities and other urban areas had higher SES backgrounds than students from other areas. Rural/urban difference also appears to have declined over time⁷.

Reading

Students from regional and rural areas are over-represented in the bottom 25% of reading achievement. Students from urban locations (cities greater than 100,000 people) are mostly under-represented. Conversely, rural and regional students in the top quartile of reading literacy achievement are under-represented and urban students are over-represented. For instance, 37.4% of students in villages of less than 3,000 people were in the bottom 25% of reading achievement compared to 13.0% of them in the top 25% of achievement.⁸

In addition, as can be seen from the charts below, there is a distinct pattern in reading achievement scores by location of school. As the size of the location increases, or as location moves from rural to urban, reading scores increase, with the exception of schools in the outer parts of large cities (the final column in Figure 11).

Figure 11: Average reading score by location of school



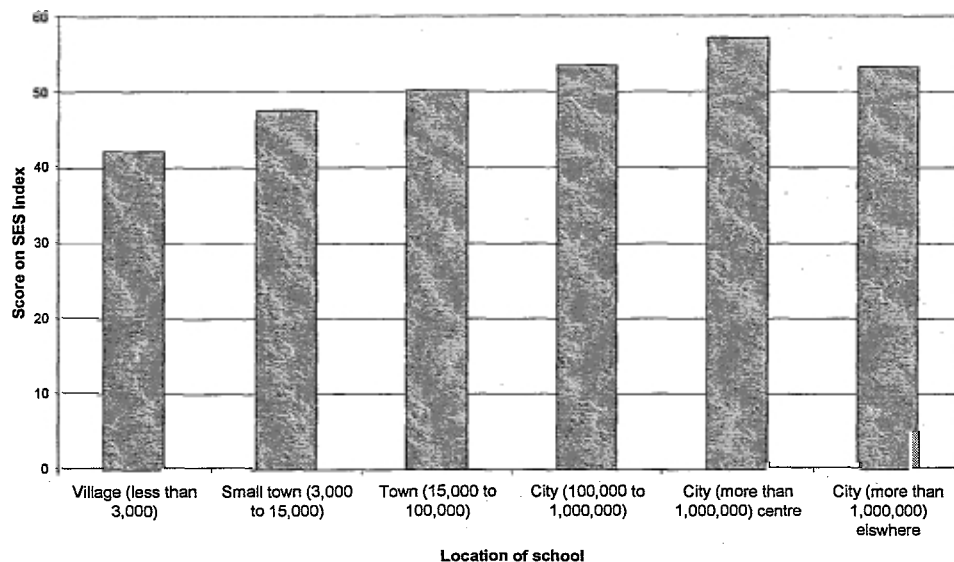
Source: Unpublished PISA 2000 data

However, the pattern of average reading scores reflects the socio-economic status of the location (see Figure 12) indicating that socio-economic status is an important factor in attainment of literacy skills and that the impact of region, with socioeconomic status controlled for, is relatively small.

⁷ Unpublished Longitudinal Surveys of Australian Youth (LSAY) data

⁸ Unpublished PISA 2000 data

Figure 12: Average SES of student by location of school



Source: Unpublished PISA 2000 data

Table 2: Average literacy achievement of 14 year olds, by metropolitan/ non-metropolitan location, 1975 to 1996

Year	Literacy		Difference
	Metropolitan	Non-metropolitan	
All Students	65.5	64.2	1.3
1975	67.1	64.0	3.1
1980	66.8	63.6	3.2
1989	66.5	65.9	0.6
1996	64.8	63.9	0.9
Boys			
1975	67.0	64.2	2.8
1980	66.9	62.8	4.1
1989	65.8	65.0	0.8
1996	64.4	63.2	1.2
Girls			
1975	67.2	63.8	3.4
1980	66.6	64.4	2.2
1989	67.2	66.9	0.3
1996	65.2	64.5	0.7

(a) Metropolitan is defined as having a population of 100,000 or more.

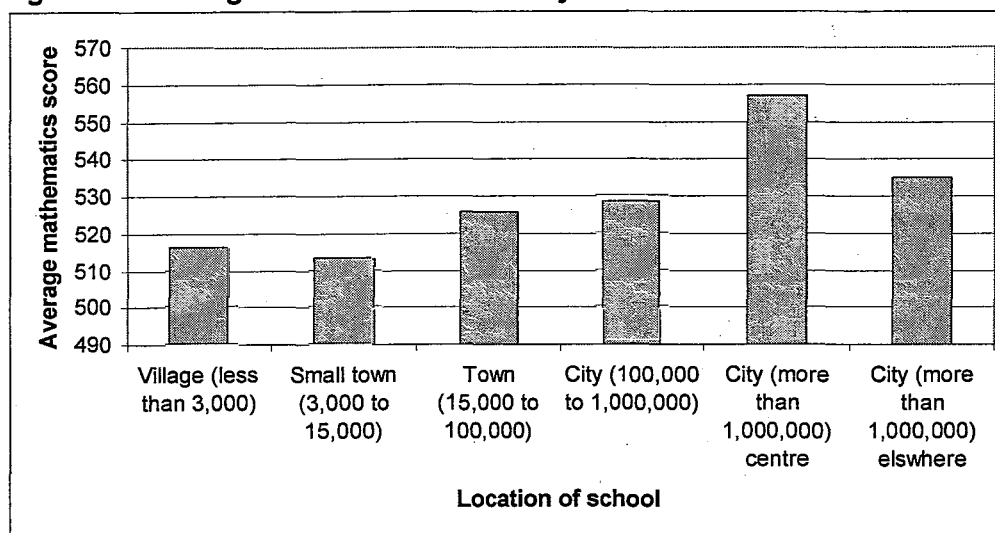
Source: Unpublished LSAY data

Unpublished Longitudinal Surveys of Australian Youth (LSAY) data support the finding of a difference between outcomes in rural and urban areas but the relationship is not as strong as in the PISA data. This difference is slightly greater for boys than for girls, although still, the differences are small. According to the data in the table above, the rural/urban difference appears to have declined over time.

Mathematics

PISA results in Figure 13 show that there is little difference in the average performance in maths of students from schools located in major cities, other urban districts or provincial cities. Relatively low achievement in remote schools is apparent in reading literacy but not in mathematics where differences are smaller. For mathematics achievement, the pattern is more erratic than for reading but there is still an overall tendency for scores to increase as for reading literacy and then decrease for the urban fringes.

Figure 13: Average mathematics score by location of school



Source: Unpublished PISA 2000 data

Table 3: Average numeracy achievement of 14 year olds, by metropolitan/ non-metropolitan location, 1975 to 1996

Year	Numeracy		Difference
	Metropolitan	Non-metropolitan	
All Students	64.2	62.9	1.3
1975	64.9	61.9	3.0
1980	66.2	63.6	2.6
1989	63.4	62.3	1.1
1996	64.8	63.4	1.4
Boys			
1975	65.5	62.0	3.5
1980	67.0	62.7	4.3
1989	64.1	62.5	1.6
1996	65.4	63.3	2.1
Girls			
1975	64.4	61.9	2.5
1980	65.5	63.9	1.6
1989	62.8	62.1	0.7
1996	64.3	63.4	0.9

(a) Metropolitan is defined as having a population of 100,000 or more.

Source: Unpublished LSAY data

As for literacy, according to unpublished LSAY data, there is little difference between urban and rural students in numeracy outcomes. As for literacy, the difference is slightly greater for boys than for girls, although the differences are still small. As for literacy, the difference between rural and urban students has declined over time.

Educational attainment in regional Australia

Over the past decade, participation and attainment levels in education and training for all Australians have improved significantly. However, students in regional, rural and remote areas still lag behind their urban counterparts. This situation starts at school and carries on into post-school education and training, especially higher education. The following section examines some available evidence on this issue.

Schooling - Year 12 Participation and Completion

In line with the general increases in participation and outcomes in education and training since the 1970s, there have been substantial improvements in school participation and outcomes for students in regional Australia. However, these improvements have only broadly kept pace with those of their urban peers, so that the urban/regional gaps still persist. These are evident in measures of Year 12 participation and completion as shown in Table 4 and Figure 14 below.

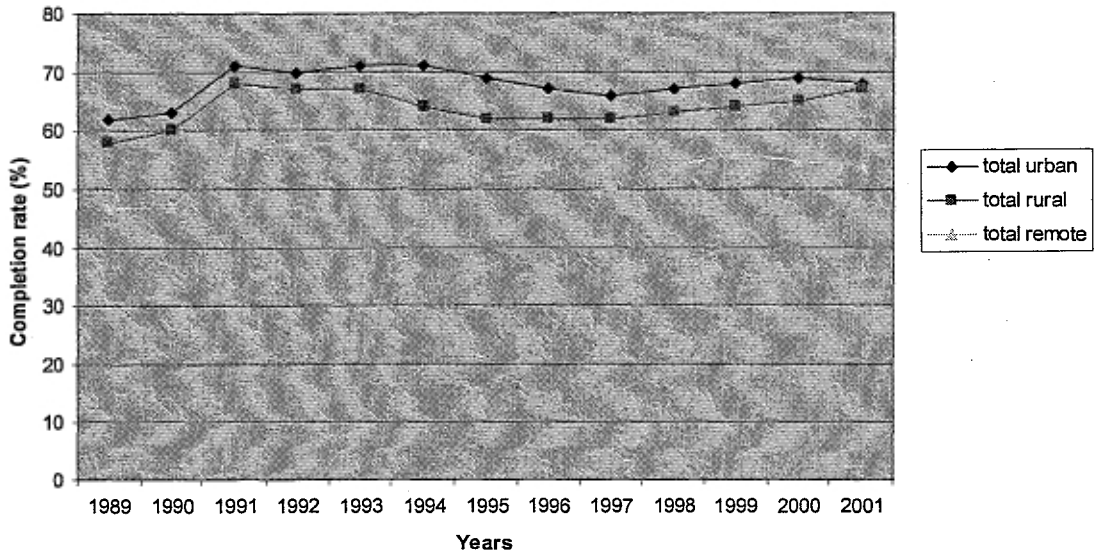
Table 4: Participation in Year 12, 1980-1998, by cohort and locality (percent of group)

Cohort	Born in 1961	Born in 1965	Born in 1970	Born in 1975	Year 9 in 1995
Year measured	1980	1984	1989	1994	1998
Of Total Cohort	35	37	55	78	76
<i>Region</i>					
Non-metropolitan	28	33	53	72	69
Metropolitan	41	40	58	82	81
Participation ratio	1.5	1.2	1.1	1.1	1.2

Source: ACER, LSAY Research Report No.17, *Patterns of Participation in Year 12 and Higher education in Australia: Trends and Issues*, December 2000

Figure 14 shows that although the Year 12 completion rate for rural students increased by 9 percentage points to 67% and the rate for remote students by 7 percentage points to 54% in the period 1989-2001, they still lag behind the completion rate of students in urban areas which was 68% in 2001.

Figure14: Year 12 completion rates by locality, 1989-2001



Sources: MCEETYA, *National Report on Schooling in Australia*, 1998, 1999, 2000, 2001

Looking beyond the aggregate level, students in remote areas fare worse than those in regional/rural areas and like their city counterparts, boys perform more poorly than girls. It is worth noting that the urban/non-urban gaps tend to be smaller for girls. It is important to note, however, that girls do not fare as well as boys in terms of employment outcomes.

A number of potential reasons for these disparities have been suggested. They arise from what might be broadly labelled the socio-cultural characteristics of rural areas. There is evidence that young people continue to pursue training and employment pathways in rural areas that do not require the completion of Year 12. However, it is now more readily acknowledged that non-completion of Year 12 or its equivalent in vocational education and training, by students in rural and remote areas, has the same consequences as non-completion in urban areas: potential unemployment and more limited life choices or post-school pathways.

In general terms, students in regional areas who do not complete Year 12 fit the overall education and training participation and attainment trends: they tend to come from lower socio-economic backgrounds, have parents with lower qualification levels, come from English speaking backgrounds and thus fit the general profile of the group who are more likely to pursue vocational education and training or employment, rather than higher education, post-school. Further, James' study (2002) of aspirations and expectations with regard to higher education shows that higher education is seen as less personally relevant by rural and isolated students and that this is primarily associated with socioeconomic factors.⁹

⁹ James, R., 'Socioeconomic Background and Higher Education Participation: An analysis of school students' aspirations and expectations', 2002

Vocational Education and Training (VET)

Vocational education and training is an important pathway to employment for school leavers in regional Australia, both early leavers and Year 12 completers. For instance, in 2001, the combined total of students from rural and remote areas was 592,200, representing 33.7% of all VET participation.¹⁰ The participation rate in VET in rural and remote areas is higher than in urban centres.

In addition to their higher rates of participation, VET students in rural and remote areas achieve sound outcomes from their studies. For instance, people in rural and remote areas are doing better in completion of New Apprenticeships than their representation in the population. In 2000, the 34.0% of New Apprenticeship completers were from rural areas and 3.5% were from remote areas, whereas the respective proportions of the overall working-age population were 24.2% and 2.8% respectively. On the other hand, capital cities were under-represented in their share of New Apprenticeship completions. This is shown in Table 5.

Table 5: New apprenticeship completions by geographic region, 2000

Location	No. of completion* (‘000)	Proportion of completion (%)	Share of working-age population* (%)
Capital city	39.6	53.7	65.5
Other Metro	5.6	7.6	7.5
Rural	25.0	34.0	24.2
Remote	2.6	3.5	2.8
Other**	0.9	1.2	0.1
Total	73.7	100.0	100.0

Note: * The number of completions over the 12 months ending 30 June 2000

** Includes interstate, outside Australia or unknown location

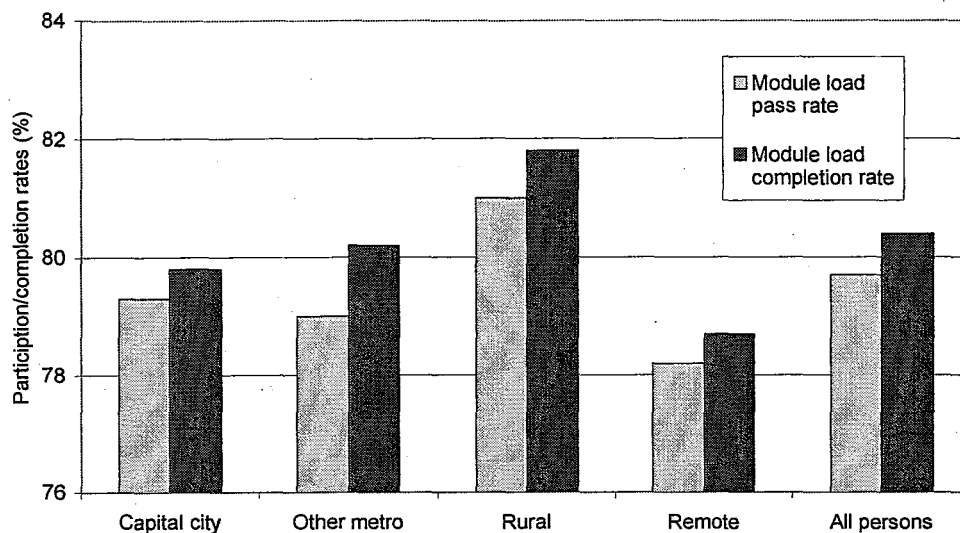
Source: NCVET 2001, *Australian apprenticeships: Facts, fiction and future*

Further, Figure 15 illustrates pass and completion rates for VET modules in capital cities, metropolitan, rural and remote areas. It shows that in 1998 the pass rate in rural areas was marginally above the urban rate, while the rate for students in remote areas was the lowest. In 1999, students in rural areas were more likely to complete all modules undertaken (73% compared to 66.7% for all students) (NCVER, 2000). There should be recognition that these figures are not indicative of the Indigenous population which has significantly poorer outcomes.

¹⁰ NCVER, *Australian Vocational Education and Training statistics 2001: In detail*

Figure 15: VET participation and completion rates, by region, all ages, 1998

Figure 3: VET participation and completion rates, by region, all ages, 1998



Source: Derived from NCVET data for clients and ABS population data.

Higher Education

Students from regional, rural and isolated areas are less likely to participate in higher education than their urban counterparts and continue to be comparatively under-represented at university. With the expansion of access to higher education over the past decade, higher education participation by people from rural and isolated areas has improved in absolute terms, but their participation share relative to people from metropolitan areas has altered little. In particular, people from isolated areas form one of the most under-represented groups in Australian higher education.

Over the past twelve years, the number of rural and isolated students participating in higher education has increased by 22.5% from 102,498 in 1991 to 125,511 in 2002 (see Table 6). Nevertheless, compared to their population shares, (24.3 percent rural and 4.5 percent isolated population), students from rural and isolated areas were still under-represented in the total numbers of higher education students at 17.4 percent and 1.3 percent respectively¹¹.

Table 6: Higher education student participation by locality, and changes from 1991 to 2002

Locality	Number of students 1991	Share of students 1991 (%)	Number of students 2002	Share of students 2002 (%)	Absolute change 1991-2002	Change(%) 1991-2002
Rural students	92,998	18.4	116,578	17.4	23,580	25.4
Isolated students	9,500	1.9	8,933	1.3	-567	-6.0
Rural and isolated students	102,498	20.3	125,511	18.7	23,013	22.5

Source: DEST, *Higher Education Report for 2003 to 2005 Triennium*, 2003

¹¹ DEST, *Higher Education Report for 2003 to 2005 Triennium*, 2003

Table 7 below shows participation in higher education by home location using Jones' multiple classification analysis on LSAY data. The data shows the proportion of the 1995 sample of Year 9 students who were university entrants in 1999. This only includes those who followed a direct path through secondary school and immediately into university but gives some indication of the effect of location. The adjusted column in the table takes into account factors such as language background, parents' occupation, parents' education etc.

Looking at the unadjusted column, the absolute percentage differences across the regions are quite large. For the total student cohort, the largest gap was between Mainland State Capital cities and Remote areas which was 16 percentage points. There is a roughly linear trend downwards in participation from urban areas to provincial areas to remote areas with some variation in provincial areas.

Nevertheless, after accounting for the influence of other factors such as parental education and occupational status, the regional variation decreased significantly.¹²

¹² Jones, R.G, LSAY Research Report 26, *Education Participation and Outcomes by Geographic Location*, 2002

Table 7: Participation in higher education by home location and gender, 1995 Year 9 cohort in 1999 (%)

Home location	N= cases	Total students			
		Unadjusted		adjusted	
		PR (%)	Dif. fm Total	PR (%)	Dif. fm Total
Mainland State Captl	4,850	35	4	32	1
Major Urban region	832	28	-3	30	-1
Large Provincial City	615	24	-7	29	-2
Small Provincial City	344	31	0	29	-2
Other Provincial area					
-inner provincial	813	26	-5	29	-2
-outer provincial	873	27	-4	33	2
Remote area	279	19	-12	29	-2
Total (%)	8,606	31	31	31	31
Males					
Mainland State Captl	2,429	31	5	26	0
Major Urban region	371	20	-6	27	1
Large Provincial City	286	20	-6	25	-1
Small Provincial City	167	29	3	27	1
Other Provincial area					
-inner provincial	395	20	-6	24	-2
-outer provincial	401	18	-8	27	1
Remote area	151	12	-14	21	-5
Total (%)	4,201	26	26	26	26
Females					
Mainland State Captl	2,421	38	3	36	1
Major Urban region	461	34	-1	33	-2
Large Provincial City	329	27	-8	32	-3
Small Provincial City	177	31	-4	31	-4
Other Provincial area					
-inner provincial	419	30	-5	34	-1
-outer provincial	172	34	-1	38	3
Remote area	128	27	-8	37	2
Total (%)	4,405	35	35	35	35

Source: Jones, R.G, LSAY Research Report 26, *Education Participation and Outcomes by Geographic Location*, 2002

The gender differences were large in terms of university entrance. Overall, there was a 9 percentage point gap between girls and boys, no matter where they were from. Boys seemed more likely to be affected by living in rural and remote areas. There was a 19 percentage point gap between boys in Mainland State Capital cities and Remote areas. The gap was narrowed to 5 percentage points when controlling other factors. For girls, the percentage point gap was 12 points and after controlling the influence of other factors, the rate for remote girls was 37%, the second highest among all the regions, just 1 percentage point lower than Other Outer Provincial areas and even higher than Mainland State Capital cities.

While the success and retention rates of higher education students from rural areas are similar to those of other students, this is not the case for students from isolated areas, who are more likely than other students to drop out and slightly less likely to pass the

subjects attempted. In 1999, urban students had higher completion rates (65.3 per cent) than students living in rural (63.2 per cent) and isolated areas (54.1 per cent).¹³

Socio-economic status and literacy skills

Socio-economic status (based on both parents' occupations and parents' educational attainment) was an important factor in reading, mathematical and scientific literacy in PISA 2000.

Reading

PISA data found, consistent with previous LSAY analysis, that SES is an important factor in reading literacy achievement. Students from low SES backgrounds (based on parents' occupation) were on average twice as likely to be in the lowest quarter of reading scores as students from higher SES backgrounds. 38.8% of students in the bottom 25% of reading literacy scores were from the bottom 25% of the SES index. High SES students (top 25% on the SES index) were under-represented at only 19.7%. Low SES boys are even more over-represented having a 49% chance of being in the bottom quartile of reading literacy compared to low SES females who have a 31% chance.

LSAY data also supports the conclusion that SES has a significant impact on reading results. LSAY uses parent's occupation as an indicator of SES¹⁴, and shows that the impact of occupational background on results in reading comprehension has gone through a period of decline. There was a narrowing of the gap between groups I (professional-managerial) and IV (process-labourers) between 1975 and 1995, which may reflect a real decline in this aspect of social inequality. There was also a decline in reading comprehension mastery by students with parents of trades/skilled background between 1989 and 1995. However, in 1998, mean scores for Group I increased and scores for Group IV decreased making the gap between them larger and reversing the previous trend (Rothman 2002).

The educational attainment of the mother and father also plays a part in reading literacy achievement. Students whose mothers or fathers did not have a degree were over-represented in the low-performing group in reading literacy in PISA 2000 data.

Mathematics

As was found for reading literacy, performance on mathematical literacy is highly dependent on socio-economic status. Low levels of SES are over-represented in the low groups of mathematical literacy. However, success in mathematical literacy depends less on home background than does success in reading literacy (PISA 2000).

In TIMSS (Third International Mathematics and Science Study), the data show that low occupational status or unemployment of parents has an impact on mathematics achievement. In 1994, the children of unemployed parents or pensioners were over-represented in the bottom quartile of mathematics achievement with 44.2% of 13 year olds in this group being in the bottom quartile of mathematics achievement and 58.9% of 9 year olds in the bottom quartile. Students from low-skilled, semi-skilled and skilled

¹³ Martin, Y. M, Maclachlan, M, Karmel, T, 2001, *Undergraduate Completion Rates: An update*, 2001

¹⁴ Parents' occupation is categorised into four groups in the 1997 report: professional-managerial (Group I), clerical-sales (Group II), tradespersons (Group III) and process-labourers (Group IV).

backgrounds for both 13 and 9 year olds were also over-represented in the bottom 25% with the effect again being greater for 9 year olds (TIMSS unpublished).

LSAY results show that the relationship between numeracy achievement and occupational background has declined in the more recent data. The difference between the proportion of students from professional and unskilled family backgrounds achieving mastery has declined in numeracy as in reading comprehension. The difference in 1975 was 18 percentage points and in 1995 the difference was only 10 percentage points¹⁵. However, also as for reading comprehension, in 1998 the achievement difference has increased and reversed the previous trend but the difference is still not as great as in 1975.¹⁶

The educational attainment of the mother and father also plays a part in mathematical literacy achievement in PISA 2000. As for reading literacy, students whose mothers or fathers did not have a degree were over-represented in the low-performing group in mathematical literacy. Students whose father did not have a degree were most affected, this ranked as an influence on over-representation in the bottom group higher than language background and country of birth.

Indigenous students and literacy skills

Indigenous students are over-represented in the low-performance groups in reading and mathematics. Importantly, among Indigenous students, the percentages of females and males who were in the low-achieving group in reading literacy were the same. This is in contrast with the non-Indigenous group where males outnumbered females in this group by two to one.

For both reading and mathematics, the gap between indigenous and other students has been declining over time. However, for Indigenous students in both reading and mathematics, there are still around 75% of students scoring below the overall mean for all the LSAY cohorts.

Reading

From National Benchmark data in 2000 the percentage of Year 3 Indigenous students attaining the reading benchmark was considerably lower at 76.9% than the population as a whole (92.5%). Again in Year 5, the same figure was low at 62%.

LSAY data show that there has been a substantial increase in the proportion of those Indigenous students achieving mastery in reading comprehension from 28% in 1975 to 44% in 1995. However, Indigenous students still had the lowest level of mastery of the groups in 1995. Multivariate analyses suggest that much of the difference in average performance between Indigenous and non-Indigenous students was due to socio-economic, language and school differences.

¹⁵ Marks, G., & Ainley, J, *Reading Comprehension and Numeracy Among Junior Secondary School Students in Australia*, 1997

¹⁶ Rothman, S, *Achievement in Literacy and Numeracy by Australian 14 Year-Olds, 1975-1998*, 2002, p.2

Mathematics

Indigenous students are also over-represented in mathematical literacy in PISA with them making up 8.2% of the group performing at a low proficiency level compared with 2.4% of the sample.

LSAY results support the finding that Aboriginals and Torres Strait Islanders have much poorer outcomes on numeracy with only 65% per cent achieving mastery in 1995 compared with 85% overall. However, there has been a considerable decline in the performance gap for mastery between Indigenous and non-Indigenous students between 1975 and 1995. There was a difference of 53 percentage points in 1975 and a difference of 21 percentage points in 1995. As is the case for reading comprehension, some of the improvement can be attributed to other factors (Marks and Ainley, 1997).

In TIMSS, Indigenous students are over-represented in the bottom quartile of mathematics achievement for both populations in 1994 and 1998. The effect is greater for 13 year old students than it is for 9 year old students as is the case for other disadvantaged groups, the disadvantage is showing up more at an older age. In 1994, 37.3% of 9 year old Indigenous students were in the bottom 25% of mathematics achievement compared to 48.3% of 13 year olds. In 1998 the proportion was 47.6% of 13 year olds.

EXISTING PROGRAMMES AND INITIATIVES

There are various barriers to participation in education for different groups of people. Various socio-demographic characteristics are a disadvantage to school students in acquiring foundation skills as discussed in the previous section. Also, for older age groups, barriers include the mode of delivery of education or training, fear of learning particularly for those who have previous negative experiences of education, motivation, lack of financial resources, lack of support from family and lack of support from employers.

Appendix A lists various DEST programmes and initiatives which aim to assist adult Australians in acquiring necessary skills to participate in the workforce.

Lifelong learning for adult Australians

The paragraphs below describe selected DEST strategies and programmes that have played a key role in the development of lifelong learning for adult Australians, including key initiatives relating to participation in learning by mature aged workers and rural/regional and Indigenous learners.

Workplace English Language and Literacy

This very successful programme targets workers at risk of welfare dependency caused by job loss. It involves employer-government cofinancing (employers contribute 25% for the first year and 50% in the second and third years). In 2002/2003 \$12.2m was available to train around 18,000 workers at some 400 work sites.

Language, Literacy and Numeracy Programme

This programme complements WELL in that it offers skills training to jobseekers rather than those in work. Over 19,000 places were made available under the programme in 2002-03.

The Reading Writing Hotline

The Reading Writing Hotline is a national telephone adult literacy and numeracy referral service which refers enquirers to an extensive provider network.

Basic IT Enabling Skills (BITES) for Older Workers Programme

BITES targets low income earners aged 45 or over with limited or non-existent IT skills, with a view to increasing their competitiveness in the job market.

New Apprenticeships Access Programme

This programme provides pre-vocational training and support to unemployed people who require such training to be able to undertake a New Apprenticeship or other vocational pathway. It is expected to assist some 8,500 jobseekers over two years.

New Apprenticeships

New Apprenticeships are available to learners of all ages. Older people and rural/regional dwellers are currently well represented among learners. 20% of New Apprentices are aged 40 or above, and this age group has shown the strongest growth (a sevenfold increase in the five years to 2003). Some 40% of New Apprentices are in rural and regional areas, and this group has also shown strong growth.

Recent changes to the New Apprenticeships Incentives Programme that provides financial incentives to employers of New Apprentices reinforce the commitment to older workers. From 1 July 2003, an additional \$825 is paid both at commencement and completion for New Apprentices aged 45 and over who are welfare dependent, returning to the workforce or redundant. For rural and regional employers, an additional commencement incentive of \$1,100 is available to an employer who employs a New Apprentice in an occupation identified as suffering from skill shortages.

National Industry Skills Initiative

Through the National Industry Skills Initiative the Government has encouraged and supported rural and ten other selected industries to identify and address skills needs.

through focused action plans. This industry-led process enables industries to address the development of education and training arrangements that will help them to attract and retain skilled people, develop career pathways for new and existing workers, and recognise existing workers' skills.

Under the Initiative, rural industry has marketed a new range of modern careers materials and has addressed a range of issues such as improved recruitment procedures and the increased adoption of skills recognition procedures and career pathways, including for seasonal workers.

A regional skills initiative is also being explored under the Initiative, to assess the skills needs of a region as a whole as opposed to a single industry nationally. Such an initiative would address current and future skills needs within one or more particular regions, with a view to developing sustainable supply of cross sector skilled workers to meet the business needs of a region.

Support for rural and isolated students

Universities receive funding from base operating grants under the Higher Education Equity Program (HEEP) for initiatives aimed at improving access and outcomes for all designated equity groups, including those from rural and isolated areas. This is regardless of whether the students study in regional or urban campuses. Access to regional universities and campuses is also being expanded through the funding of new student places.

Multisector campuses

The Australian Government has also assisted with the development of multi-sector education precincts in rural areas (eg a higher education campus co-located with a TAFE college, high school and/or community facilities). Such precincts offer high quality facilities in a central location while avoiding unnecessary duplication.

Income support

At the individual student level, the Australian Government provides financial assistance to eligible rural and isolated students among others through income support schemes which enable them to study away from home. The fact that there is no age limit on receipt of income support for students enables adults to return to full-time study if their circumstances permit.

Support for flexible learning

Flexible learning in VET is supported under the auspices of ANTA through the Australian Flexible Learning Framework. The Framework covers 2000-2004, and is managed by an advisory group which comprises representatives from DEST, the State and Territories, ANTA, and Adult and Community Education. Up to \$20 million per year has been committed to Framework projects and initiatives by the Australian Government, States and Territories in conjunction with ANTA. At the university level, the Australian Government has provided seed funding for a number of projects.

Indigenous programmes

The National Aboriginal and Torres Strait Islander Education Policy (AEP) is the basis of all current Indigenous education programmes. The AEP contains 21 long term goals, which can be divided into four categories:

- Involvement of Aboriginal and Torres Strait Islander people in educational decision making
- Equality of access to educational services
- Equity of educational participation
- Equitable and appropriate educational outcomes

DEST programmes and projects must be able to demonstrate which goals they are working towards.

The major vehicles for the delivery of the AEP are the Indigenous Education Strategic Initiatives Programme (IESIP) and the Indigenous Education Direct Assistance (IEDA). Through IESIP the Commonwealth supplements its normal provisions of recurrent and capital funding to the States and Territories and non-government education providers. IEDA is a direct assistance suite of programmes designed to address the priority areas of the AEP.

Indigenous Education Strategic Initiatives Programme (IESIP) is the key programme delivered by the Commonwealth that provides supplementary funding to education and training providers specifically for their Indigenous clients. It provides funding under seven discrete elements:

Supplementary Recurrent Assistance (SRA)

IESIP provides supplementary per capita funding to education providers across the preschool, school and vocational education and training sectors.

Targeted Outcomes Programme (TOPS)

Education providers that cannot meet the required minimum number of enrolments of Indigenous students may establish a cluster under the TOPs element to become eligible for per capita funding under IESIP.

English as a Second Language - Indigenous Language Speaking Students (ESL-ILSS)

This programme aims to facilitate the entry of Indigenous students into education by providing intensive English language tuition to each eligible student. The target group is Indigenous students who are commencing formal schooling in English for the first time, and who live in communities and homes in which Aboriginal and Torres Islander languages are heard and spoken, and are assessed as unable to participate in the classroom in English.

IESIP Away-from-base

From January 1 2000, 'mixed-mode' away from-base assistance, formerly funded under ABSTUDY, was transferred to IESIP. Institutions are funded by block grants under Indigenous Education Agreements for the purchase of agreed education outcomes. Away-from-base assistance meets travel costs, meals and accommodation for some secondary and tertiary students participating in compulsory course activities.

Short Term Special Assistance

Funds may be made available for Short Term Special Assistance (STSA) to assist providers who have experienced a substantial reduction in their funding and who can clearly demonstrate that their continued viability is consequently at risk.

Working Together for Indigenous Youth (WTIY)

This initiative aims to support local partnerships involving the community, business and education sectors to identify the barriers and solutions to a successful education experience for Indigenous secondary (aged) students. The solutions, as mapped out in a locally developed holistic intervention plan, will provide support agencies with guidance on how to target their support programmes more effectively.

National Indigenous English Literacy and Numeracy Strategy (NIELNS)

This strategy was initiated to accelerate Indigenous students' improvement in literacy and numeracy. Its aim is to achieve English literacy and numeracy for Indigenous students at levels comparable to those achieved by other young Australians. The Strategy is a blueprint to lift school attendance rates, address health problems that undermine learning, attract and retain good teachers and use the most effective teaching methods to obtain successful results for Indigenous students.

The Indigenous Education Direct Assistance (IEDA) programme has three elements: the Aboriginal Student Support and Parent Awareness (ASSPA) Programme, the Aboriginal Tutorial Assistance Scheme (ATAS) and the Vocational and Educational Guidance for Aboriginals Scheme (VEGAS).

Under the Aboriginal Student Support and Parent Awareness (ASSPA) programme, per capita funding is available to Committees comprising the parents of Indigenous preschool, primary and secondary school students, representatives of their preschool or school, and community representatives. These Committees decide on and undertake activities, which will enhance educational outcomes for Indigenous children, and which involve Indigenous parents in educational decision-making.

The Aboriginal Tutorial Assistance Scheme (ATAS) provides supplementary tutorial assistance to Indigenous students in primary/secondary school, TAFE, university and formal training programmes. Other types of study assistance, such as Homework Centres, are made available to school students.

Under the Vocational and Educational Guidance for Aboriginals Scheme (VEGAS) grants are provided to sponsoring organisations for the provision of projects for Indigenous students, and/or their parents, and Indigenous prisoners.

Glossary of Acronyms

ABS	Australian Bureau of Statistics
ANTA	Australian National Training Authority
BITES	Basic IT Enabling Skills
ICT	Information communication technology
LSAY	Longitudinal Surveys of Australian Youth
MCEETYA	Ministerial Council on Education, Employment, Training and Youth Affairs
NCVER	National Centre for Vocational Education Research
OECD	Organisation for Economic Co-operation and Development
PISA	Programme for International Student Assessment
SES	Socioeconomic status
TIMSS	Third International Mathematics and Science Study
VET	Vocational Education and Training
WELL	Workplace English Language and Literacy

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