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ABSTRACT

The pathways of Australian graduates in their transition from school to further study and work were examined by analyzing Australian Youth Survey data regarding graduates who obtained a university degree or technical and further education (TAFE) diploma and who were enrolled for such qualifications in their seventh postschool year. Ninety-four percent of young Australians who obtained tertiary qualifications made relatively successful transitions to full-time work. Only 6% recorded experiencing major difficulty in obtaining stable full-time work or extended episodes of unemployment, part-time work, or periods out of the labor force. Characteristics associated with difficulty finding stable full-time employment were as follows: graduating a TAFE rather than with a university qualification; being from a low socioeconomic background; graduating in the fields of arts and humanities, social sciences, or education; and graduating from government schools. Although labor market benefits for graduates varied depending on pathway and study, tertiary qualifications appeared to smooth young people's transition to work. The study results supported recent policy efforts to expand the number of tertiary places and alter policies regarding government income support so as to encourage more young Australians to participate in tertiary education. Definitions of the study variables and two additional tables are appended. (Contains 21 tables and 5 references.) (MN)

Longitudinal Surveys of Australian Youth

Research Report Number 19

The Pathways from School to Further Study and Work for Australian Graduates

Stephen Lamb

June 2001

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Longitudinal Surveys of Australian Youth: Research Reports

- Lamb, S. *Completing School in Australia: Trends in the 1990s.* (LSAY Research Report No. 1). Melbourne: ACER, September 1996.
- Robinson, L. *School Students and Part-Time Work* (LSAY Research Report No. 2). Melbourne: ACER, October 1996.
- Marks, G. & Ainley, J. *Reading Comprehension and Numeracy among Junior Secondary School Students in Australia* (LSAY Research Report No. 3). Melbourne: ACER, March 1997.
- Lamb, S. *School Achievement and Initial Education and Labour Market Outcomes* (LSAY Research Report No. 4). Melbourne: ACER, July 1997.
- Marks, G. *Attitudes to School Life: Their influences and their effects on achievement and leaving school* (LSAY Research Report No. 5). Melbourne: ACER, September 1998.
- Fleming, N. & Marks, G. *Well-being among Young Australians: Effects of work and home life for four Youth in Transition cohorts.* (LSAY Research Report No. 6). Melbourne: ACER, September 1998.
- Marks, G. & Fleming, N. *Factors Influencing Youth Unemployment in Australia: 1980-1994.* (LSAY Research Report No. 7). Melbourne: ACER, September 1998.
- Marks, G. & Fleming, N. *Youth Earnings in Australia: 1980-1994: A comparison of three youth cohorts.* (LSAY Research Report No. 8). Melbourne: ACER, September 1998.
- Robinson, L. *The Effects of Part-time Work on School Students.* (LSAY Research Report No. 9). Melbourne: ACER, March 1999.
- Fullarton, S. *Work Experience and Work Placements in Secondary School Education.* (LSAY Research Report No. 10). Melbourne: ACER, June 1999.
- Marks, G. & Fleming, N. *Early School Leaving in Australia: Findings from the 1995 Year 9 LSAY Cohort.* (LSAY Research Report No. 11). Melbourne: ACER, August 1999.
- Lamb, S. & Ball, K. *Curriculum and Careers: the education and labour market consequences of Year 12 subject choice* (LSAY Research Report No. 12). Melbourne: ACER, September 1999.
- Long, M., Carpenter, P. & Hayden, M. *Participation in Education and Training 1980 – 1994.* (LSAY Research Report No. 13). Melbourne: ACER, September 1999.
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- Marks, G., Fleming, N., Long, M. and McMillan, J. *Patterns of Participation in Year 12 and Higher Education in Australia: Trends and Issues* (LSAY Research Report No. 17). Melbourne: ACER, December 2000.
- Lamb, S. and McKenzie, P. *Patterns of Success and Failure in the Transition from School to Work in Australia* (LSAY Research Report No. 18). Melbourne: ACER, June 2001.
- Lamb, S. *The Pathways from School to Further Study and Work for Australian Graduates.* (LSAY Research Report No. 19). Melbourne: ACER, June 2001.

The *Longitudinal Surveys of Australian Youth* (LSAY) study the progress of several cohorts of young Australians between school, post-secondary education and training and work. The oldest cohort was born in 1961, while the youngest was a nationally representative sample of Year 9 students selected in 1998. The information from the surveys is used to provide a picture of what young Australians are doing and how this picture changes both as the cohort gets older and compared with other cohorts.

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Longitudinal Surveys of Australian Youth

Research Report Number 19

THE PATHWAYS FROM SCHOOL TO FURTHER STUDY AND WORK FOR AUSTRALIAN GRADUATES

Stephen Lamb

This report forms part of the Longitudinal Surveys of Australian Youth:
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Executive Summary

This report examines the pathways of Australian graduates in their transition from school to further study and work. It focuses on the pathways for those who obtained a university degree or TAFE diploma or who were enrolled for such qualifications in the seventh post-school year. It is the second report on pathways from school to work for young Australians. The first report investigated the education, training and work experiences of non-graduates — those who did not obtain university or TAFE diploma qualifications in the first seven years beyond school.

The results are based on data from the *Australian Youth Survey*, a major longitudinal survey of young Australians interviewed annually on their school experiences, post-school education and training participation and work activities. The sample comprised those who were in Year 10, or who had left school but would have been in Year 10, in the late 1980s (1986, 1987 or 1988). The analyses concentrate on those who graduated from degree or diploma courses in the first seven post-school years, or who were working towards these qualifications in the seventh post-school year. The education and labour market experiences of this sample were measured over the first seven post-school years with the first year taken from the time at which they finished Year 12 or would have finished Year 12 had they remained at school.

Main findings

Most graduates make successful transitions to full-time work

The results show that the move from school to further study and work is a relatively smooth transition for most graduates:

- 45 per cent obtained a full-time job after graduation and remain in full-time work;
- 9 per cent deferred study, entered the workforce then after graduation re-entered the workforce;
- 7 per cent studied part-time while working and remained in work during the seven years;
- 16 per cent were still in study in the seventh post-school year; and
- 17 per cent experienced a brief interruption in the transition to work with periods of unemployment or not looking for work after graduation, though this was less than 12 months and these graduates were in stable full-time work by their mid-20s.

Settling in to the labour force takes longer for some graduates

Approximately 6 per cent of graduates experienced what could be described as a more problematic transition to work. Their pathway involved extended periods of unemployment, part-time work or not looking for work. Most in this group were not in full-time work by their mid-20s.

Those who were in this pathway more often:

- graduated with a TAFE rather than university qualification;
- were from low rather than high SES backgrounds;

- graduated in the fields of Arts and humanities, social sciences, and education; and
- were from government schools.

Labour market benefits varied for graduates, depending on the pathway and study

Weekly earnings varied by pathway for graduates. Those who deferred entry to study and worked before completing their study and then re-entering the workforce earned significantly less ($50 a week on average, all else equal) than those who entered study after leaving school and then moved into full-time work.

Qualifications and field of study were also important. Those who obtained a TAFE diploma earned on average $46 a week less than those who obtained a university degree, irrespective of the path or field of study. But field of study also exerted an influence. Those who graduated from computing and engineering courses did significantly better in income terms than those taking courses in other fields of study.

Compared to other school leavers, graduates do well in the labour market

Despite differences across groups of graduates, in general their transitions were less often interrupted than those of non-graduates. While about 6 per cent of graduates had difficulty gaining stable full-time work, up to one-third of non-graduates did. Graduates less often experienced lengthy periods of milling and churning, suggesting that tertiary qualifications did facilitate transition to stable full-time employment.

Conclusions

The results suggest that tertiary qualifications work to protect young people from labour market difficulties in making the transition to work. They show that the majority of those who obtained tertiary qualifications were able to make a relatively successful transition to full-time work. Only a small group (about 6 per cent) recorded major difficulty in obtaining stable full-time work, experiencing extended episodes of unemployment, part-time work or periods out of the labour force.

These results support the recent policy efforts to expand the number of tertiary places and, through changes to government income support, encourage more young people to participate. Those who succeed in education in Australia generally do well in the labour market. However, the continued expansion in the number of graduates may produce diminishing returns in the future if growth in high-skilled jobs does not keep pace with the growth in the number of graduates. Therefore, on the one hand, while opening up tertiary education and training opportunities to more young people may not only help improve school to work transition, and help lessen social differences in outcomes, on the other hand, it may undermine these goals if employer demand does not keep pace with the growth in the supply of graduates.

1

Introduction

This report examines the pathways from school to further education and work for graduates of diploma and degree courses. It is the second report on pathways from school to work for young Australians. The first report investigated the education, training and work experiences of non-graduates — those who do not obtain university or TAFE diploma qualifications in the first seven years beyond school (Lamb & McKenzie, 2001). The current report documents the pathways followed by the group who do obtain degree or diploma qualifications. It maps the experiences of this group of young people in the years between leaving secondary school and the time they reach their mid-20s.

While the majority of young Australians do not enrol for a university degree or a TAFE diploma course after leaving school, around 40 percent do. Of this group, many aspire to work in one of a range of professions. But how successful are university and TAFE graduates in getting jobs? Is the transition from education to work relatively smooth for graduates? Is it the same for those who graduate from different courses? Do all groups of young people benefit from their qualifications in the same way?

These questions are addressed in this report by examining information from the Longitudinal Surveys of Australian Youth (LSAY) - one of the most extensive sources of data available on the school to work transition experiences of young Australians. Comparisons are made between different groups of degree and diploma graduates to identify the pathways for those who make successful transitions to stable full-time employment, and the pathways for those who have more difficulty in securing full-time work.

It is important to note that obtaining a degree or diploma can take several or more years and it varies depending on the qualification. By focusing on only the first seven post-school years means that many of the graduates may still be in the initial transition stages from education to work. Others may still be in study if they entered lengthy specialist courses or they deferred entry to study. However, it will be possible using the same seven-year period to compare experiences with the results obtained for non-graduates. Also, many of the graduates will have had several years of workforce experience after graduation.

The report commences in Section 2 by providing an outline of the data used for the analyses in the study. It gives information on the sample of participants. Section 3 begins by providing a brief account of the main annual activities of young people as they move from school to further education and work. It then identifies the main pathways by which stable full-time employment is reached, as well as indicators of a failure to attain stable full-time employment — intermittent or part-time work, unemployment, and withdrawal from the labour market. Section 4 presents information on the characteristics of the young people who participate in the various pathways in terms of their social, individual and educational backgrounds. Section 5 analyses the labour market experiences associated with the various pathways: unemployment incidence and duration; types of occupations; and earnings. Section 6 compares the pathways for graduates with those of non-graduates profiled in an earlier report. The final part of the paper, Section 7, identifies the main policy issues arising from the analyses.

2

Participants in the Study

The results presented in this report are based on data from the *Australian Youth Survey*. The sample comprises those who were in Year 10, or who had left school but would have been in Year 10, in the late 1980s (1986, 1987 or 1988). The analyses concentrate on those who graduated from degree or diploma courses in the first seven post-school years, or who were working towards these qualifications in the seventh post-school year.

The education and labour market experiences of this sample are measured over the first seven post-school years with the first year taken from the time at which they finished Year 12 or would have finished Year 12 had they remained at school. Appendix 1 details the variables used in the study.

Table 2.1 contains the original and target sample sizes for the sample of Year 10 students in the late 1980s. For example, 38 per cent of the original sample of 1062 Year 10 males satisfy the criterion for inclusion in the study, i.e. they obtained a university or TAFE diploma qualification in the first seven post-school years or were studying for one of these qualifications in the seventh year. Thus, there were 405 in the target male sample and 534 in the target female sample.

According to the figures in Table 2.1, after seven years from school about 38 per cent of male school leavers in the late 1980s had obtained a university degree or TAFE associate diploma, compared to over 48 per cent of females. About six in ten students from high socio-economic status (SES) origins proceeded to university or TAFE and received a degree or diploma, whereas only three in ten did so from low SES origins. Young people living in urban areas of Australia were more likely to graduate from a university or TAFE diploma course than young people living in rural areas (48 per cent compared to 34 per cent).

The effect of excluding from the analyses those who did not complete or were not studying towards a qualification equivalent to a diploma or university degree was to decrease in the target sample the representation of early school leavers, low achievers, males, young people living in rural areas, those with Australian-born parents, and students from government schools. The composition of the target sample used for the analyses in this work is displayed in the fifth column of Table 2.1 which presents the percentages of young people in the target sample from different backgrounds.

Table 2.1 Percentage distribution of the original and target samples, by selected background characteristics: Year 10 students in the late 1980s

Characteristic	Original sample of Year 10 students				Target sample*	
	Graduate qualification or current study	No qualification or current study	Total	N	Percentage of target sample	N
	%	%	%		%	
Sex						
Males	38.1	61.9	100	1062	43.1	405
Females	48.3	51.7	100	1106	56.9	534
Socio-economic status[a]						
Lowest	30.0	70.0	100	456	15.6	137
Lower middle	39.7	60.3	100	658	29.8	261
Upper middle	52.8	47.2	100	494	29.8	261
Highest	61.4	38.6	100	352	24.7	216
Parents' education[a]						
Secondary school or less	33.3	66.7	100	1234	44.3	411
Some postsecondary	47.2	52.8	100	362	18.4	171
University	66.7	33.3	100	517	37.2	345
Ethnicity						
Australian-born	41.9	58.1	100	1682	75.1	705
Other-English	39.5	60.5	100	157	6.6	62
Non-English-speaking	52.3	47.7	100	329	18.3	172
Residence						
Urban	47.8	52.3	100	1491	75.8	712
Rural	33.5	66.5	100	677	24.2	227
School type						
Government	35.0	65.0	100	1487	55.4	520
Catholic	59.9	40.1	100	439	28.0	263
Independent	64.5	35.1	100	242	16.6	156
Disability						
No disability	43.9	56.1	100	1979	92.5	869
Disability	37.0	63.0	100	189	7.5	70
School attainment[a]						
Less than Year 12	8.2	91.8	100	564	5.0	46
Year 12	55.6	44.4	100	1587	95.0	882
Total	939	1229		2168	100.0	939

Appendix 1 details the variables used in the study.

* The target sample includes young people who had completed a university degree or TAFE diploma in the first seven post-school years, or were studying towards these qualifications in the seventh year.

[a] The figures for SES, parents' education and school attainment add to less than the total number (N) in the original and target samples because of missing data.

3

Pathways from School to Further Study and Work

Education and training is the preferred pathway for many school leavers in Australia. One of the main reasons for this is that historically those who succeed in education generally do well in the labour market. But there has been a rapid expansion in the number of tertiary graduates over the past 20 years. Are graduates still doing well in the transition to work? Does this apply to all graduates?

The current chapter identifies some of the main pathways that summarise or capture the most common patterns of activities in the transition from school to further study and work. It initially examines some of the features of transition by using a series of snapshots of the early post-school education and work careers of those who graduate. The snapshots are taken annually across the first seven post-school years and focus on the main education and work activities. It then provides on outline of the main pathways of graduates derived using the different patterns of annual activity.

Main annual activities in the transition to work

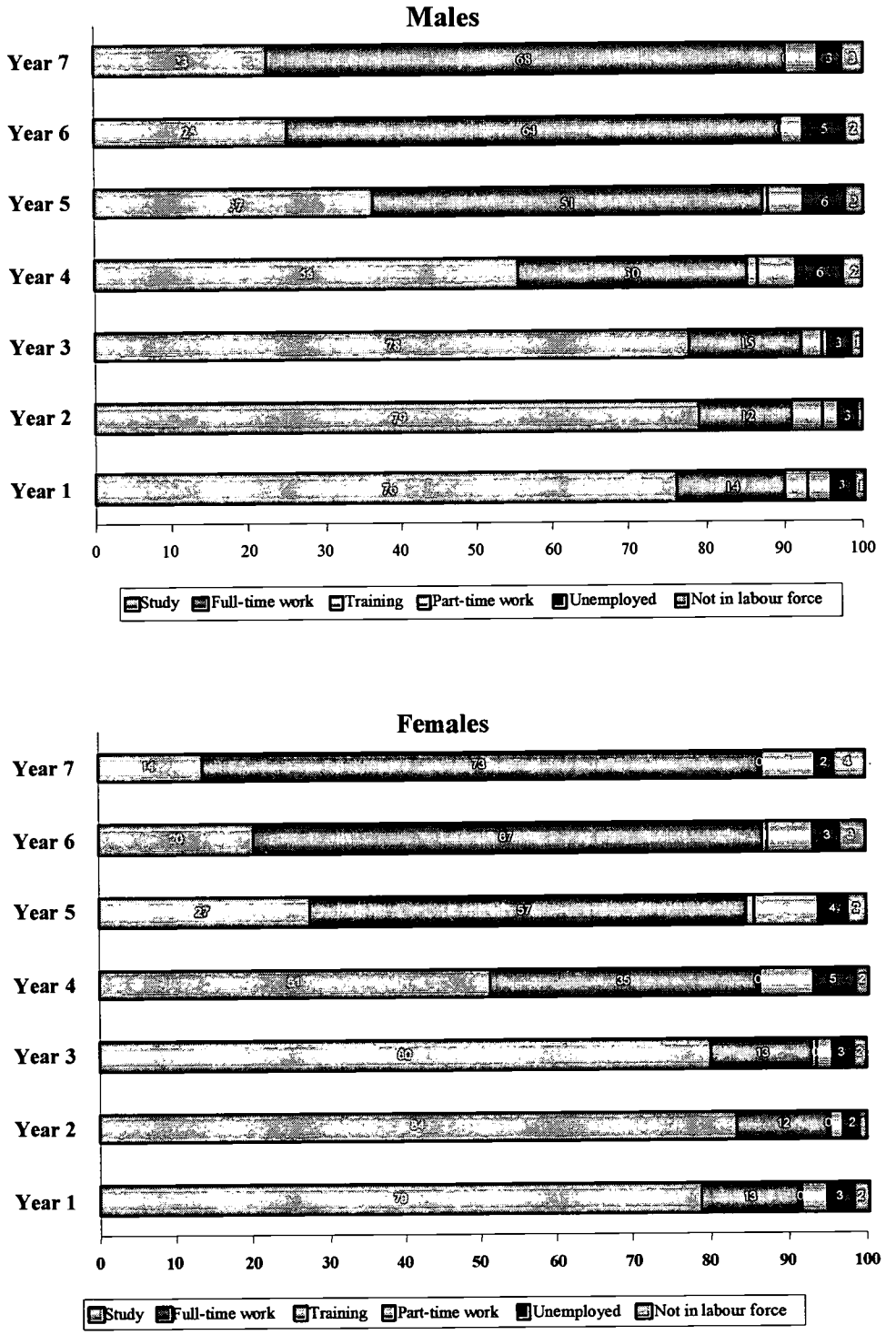
One way to examine school to work transition is to take a snapshot of activity status for each post-school year. The current analysis identifies six main activities for graduates:

1. Further study
2. Full-time work
3. Vocational training — apprenticeship or traineeship
4. Part-time work
5. Unemployment
6. Not in the labour force

Figure 3.1 presents the distribution of the sample in each post-school year across the different activities. The experiences of males are shown in the top panel and the experiences of females in the lower panel.

The figure shows that 79 per cent of female graduates were in study during their first post-school year with a further 13 per cent in full-time work. About 3 per cent were in part-time work, 3 per cent were unemployed and a further 2 per cent were not in the labour force. In the second year the numbers in study grew slightly to 83 per cent falling back to about 80 per cent in the third post-school year. In the fourth post-school year the numbers in study fell to about 50 per cent as females graduated from their degree and diploma courses and entered the workforce in larger numbers. The numbers in full-time work increased from 13 per cent in the third year to 35 per cent in the fourth year. The numbers unemployed, as well as those in part time work, also increased as female graduates attempted to find work.

Figure 3.1 Percentage distribution of education and employment activities, by gender and year-out-of-school



From Year 5 to Year 7 the trends continued with a declining number of graduating women in study and an increasing number in work. In Year 7 roughly 14 per cent were in study, 73 per cent were in full-time work, 7 per cent were in part-time work, 2 per cent were unemployed and 4 per cent were not in the labour force and not studying.

The patterns for males are similar, except that the total in study was higher from Year 4 to Year 7. It suggests that either males spend longer in study before entering the workforce or more often delay entry to study after leaving school. In support of the second view, the numbers of males in study in the first and second post-school years were lower than for females. In Year 1, 76 per cent of males were in study compared to 79 per cent of females. In Year 2, the rates were 78 per cent and 84 per cent respectively, suggesting that males more often deferred entry to post-school study.

The other noticeable differences between males and females are higher rates of part-time work among females from Year 4 to Year 7, and a growing gap in the numbers not in the labour force. As graduates attempt to make the transition from education to work, more females than males were in part-time work — 7 per cent in Year 4 compared to 5 per cent of males. In Year 5, the rates were 8 and 4 per cent respectively, 6 against 3 per cent in Year 6, and 7 against 4 per cent in Year 7. The gaps could be due to the higher numbers of males in study across that time, or fewer full-time labour market opportunities for female graduates. Unemployment rates were higher among males (1.5 percentage points on average) over the time, though the numbers not in the labour force were lower. The percentage of females not in the labour force grew from 2 per cent in Year 4 to 4 per cent in Year 7. The rate for males remained the same at 2 per cent.

The overall rates of those not in study or in full-time work were much the same for male and female graduates from the fourth to the seventh post-school year.

Mapping the tertiary education pathways to work

Annual snapshots of education and employment activities are useful for looking at aggregate changes in participation and status over the seven years. However, they do not take account of changes in individual status from year to year. It would be possible, for example, for an individual to have been in study for the first three years, employed full-time the following year, unemployed the next, and in part-time work the following year. This pattern of transition is lost when the activities are presented as aggregate annual participation rates. The aggregate figures can conceal a large degree of movement between activities for different individuals.

To gain some measure of the extent to which the education and employment states change as young people progress from year to year, the annually recorded activities were treated as combinations.[1] For the graduates there were around 300 different patterns. A large number of these (209 patterns) were experienced by just one person. These individually unique patterns of activity were experienced by 25 per cent of the sample. A further 80 patterns of activity were each experienced by between two and ten persons (involving 24 per cent of the sample). There were seven slightly more common patterns of activity that each involved between 11 and 24 people, and which in total accounted for 16 per cent of the sample. By far the most common pattern of activity, which 35 per cent of the sample experienced, was to make a transition from school directly to further study and then to full-time work.

[1] Further detail on the procedure for deriving the pathways is provided in the report on non-graduates (Lamb & McKenzie, 2001).

To abstract from the mass of detailed individualised data the analysis grouped similar patterns of activity that can be viewed as pathways. Six main pathways were identified. They comprise:

1. School leavers who entered further study on leaving school, completed their studies and then moved in to full-time employment;
2. Those who entered work after leaving school before undertaking their study and then into full-time work;
3. Those who combined work and part-time study on leaving school;
4. Those who were currently in study in their seventh post-school year;
5. Young people who went straight from school to tertiary study and who then experienced a brief interruption (up to a year) before obtaining full-time work; and
6. Young people who experienced an extended interruption (more than one year) before obtaining work.

It is noteworthy that in the group of Australian graduates who obtained tertiary qualifications, it is really only the last of the pathways that stands out as likely to have been "problematic". This is not to say that the other pathways have necessarily led to the types of jobs that young people have wanted, but the participants are in productive activities — full-time employment or study — and therefore fall outside conventional notions of young people at risk.

Figure 3.2 presents the percentages of young people who experienced the various education and training pathways. It also displays the percentage of the original sample that did not obtain university qualifications or a TAFE diploma.

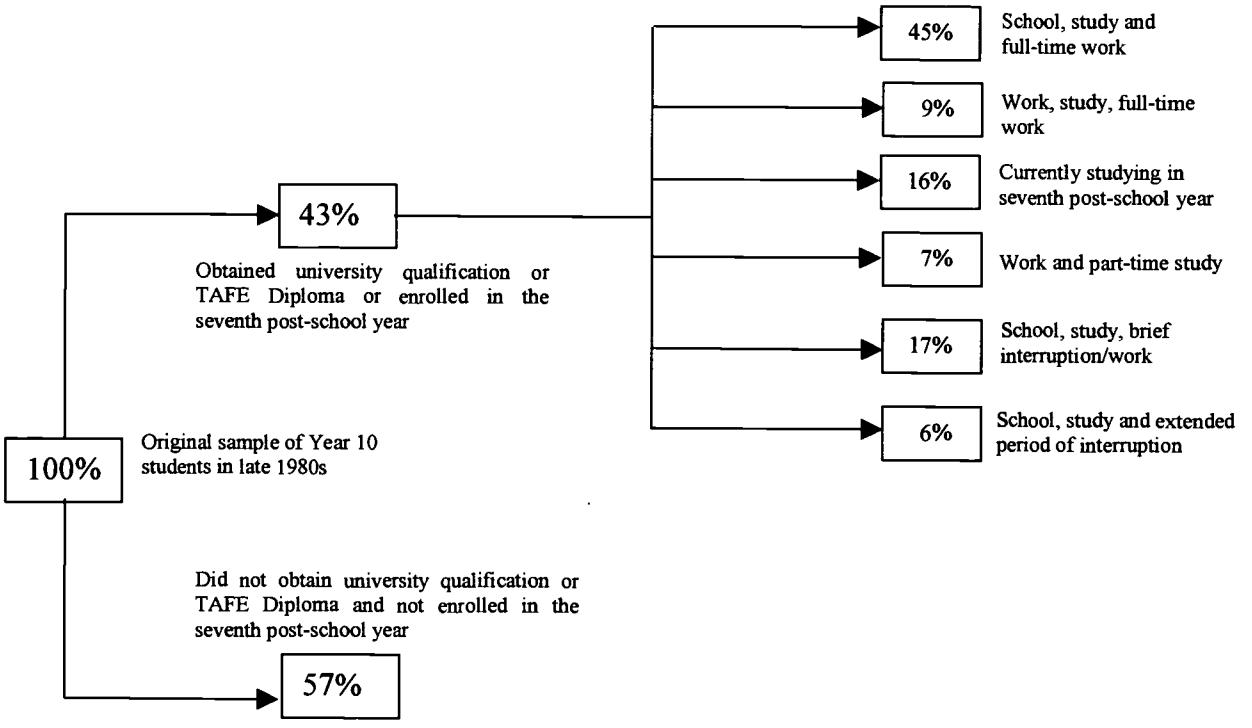
Overall, about two in five (43 per cent) school leavers obtained a university degree or a TAFE diploma in the seven post-school years or were studying for such a qualification in their seventh year. Of this group, 45 per cent entered further study straight from school and then after graduation found full-time work. There was no hiatus for this group taking what could be described as the more "classical" career path.

Not all tertiary graduates enter further study directly from school. Approximately 9 per cent left school and entered the labour market, deferring their studies. After working for a period of time they then entered further study and following graduation obtained full-time work.

A further 7 per cent of school leavers entered the labour force on leaving school and studied part-time. This group of young people did not have any periods out of the labour force and completed their studies while working.

The second largest single group of young people were those who went from school to study but then experienced a short period of interruption before obtaining full-time work. For nearly one in six of the target sample (17 per cent), the transition to work from further study was interrupted by a brief period of unemployment, part-time work or a period out of the labour force.

Figure 3.2 Pathways of graduates measured over the first seven post-school years



There was only a relatively small group that experienced greater difficulty in finding full-time work. About 6 per cent of the sample of graduates experienced a post-school pathway that involved tertiary study and extended periods of unemployment, part-time work or not being in the labour force in the move from further study to work.
Approximately 16 per cent of the sample were still in further study in their seventh post-school year. For some this was because of deferred entry to study, for others it represented continuous study.

Overall, the results suggest that over 75 per cent of graduates could be considered to have made a "successful" transition from school to further study and then work, in that they made a fairly smooth transition between school, further study and employment. But a further 16 per cent were still studying seven years out, meaning that over 90 per cent of the sample were engaged in productive activities during the transition phase. Only about 6 per cent experienced a disrupted or problematic transition, experiencing extended periods trying to find full-time work.

4

Which Young People Take Different Pathways?

The education, training and work pathways of Australian graduates suggest that most are successful in making the transition to work. However, this is not true of all graduates. There is a small group that finds the transition difficult and a larger group that experience some interruption in their transition from study to work. This section looks at the graduates who were most affected and those who tended to have relatively smooth transitions.

Gender differences

Figure 4.1 shows that, overall, a higher proportion of females (48 per cent) than males (38 per cent) obtained a university degree or TAFE diploma in the seven post-school years or were studying for such a qualification in the seventh year.

As well as more often gaining university degrees and TAFE qualifications, females also more often experienced a direct transition from school to further study and then to full-time work without interruption. This applied to 48 per cent of the females and 40 per cent of males. A higher number of females (11 per cent) than males (7 per cent) entered the workforce immediately after leaving school before undertaking further study and returning to the workforce after graduation. Overall, it meant that 59 percent of females had made the transition from further study to work without any interruption. The rate for males was 47 per cent.

Males more often deferred their entry to study or continued in study for the full period since one in five were in study in the seventh post-school year compared to only one in ten females.

Fewer females experienced interruptions in the transition from study to employment (25 per cent compared to 22 per cent), though similar percentages experienced an extended period of disruption (7 per cent for females and 6 per cent for males).

Differences in pathways by qualification and field of study

Qualification

In terms of who enters the different pathways to work, the type of qualification matters. Figure 4.2 displays the percentages of school leavers across the different pathways according to the type of qualification they obtained or were studying. Table 4.1A (Appendix 2) provides the backgrounds of school leavers according to type of qualification.

Figure 4.1 Pathways of school leavers, by gender

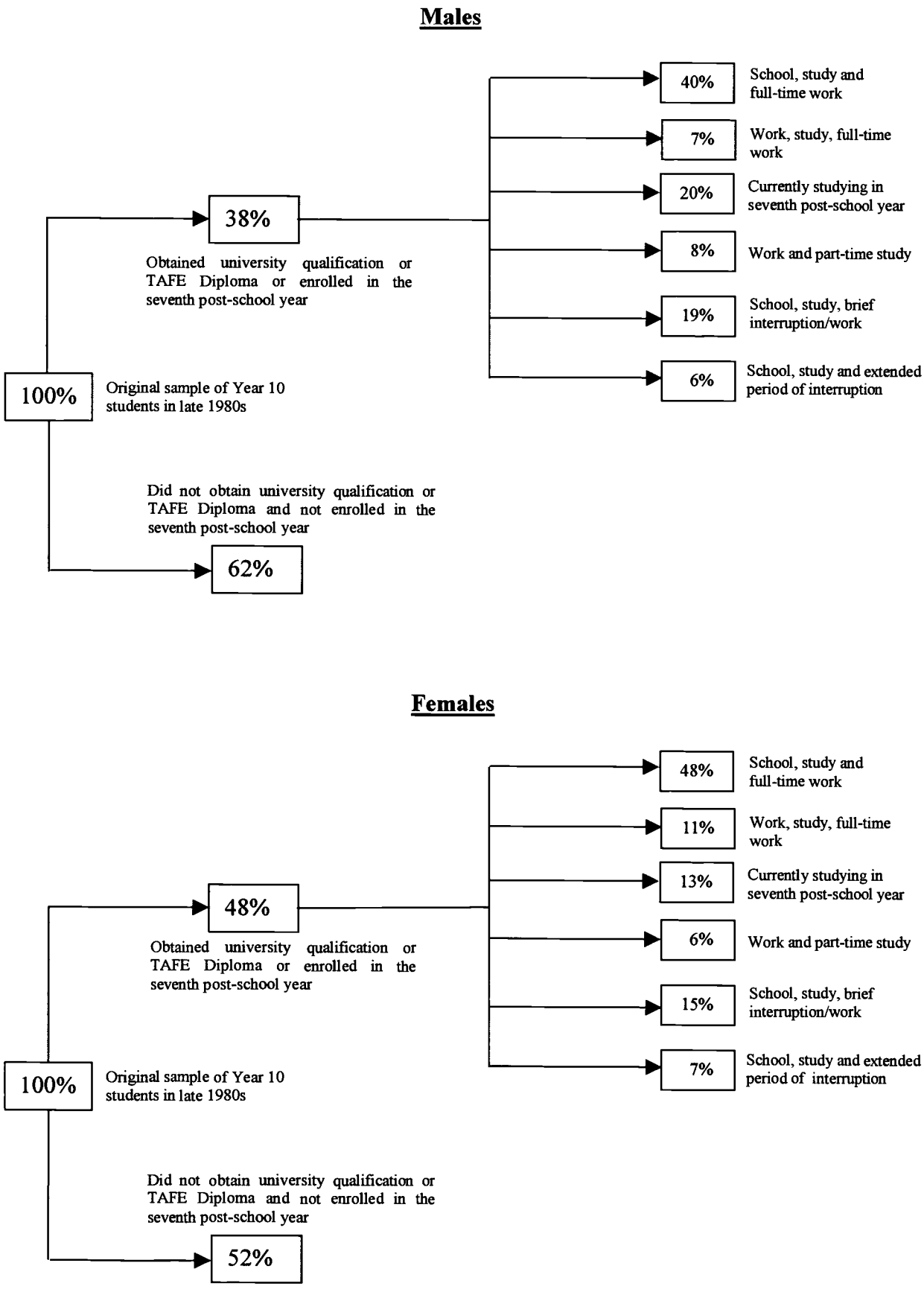
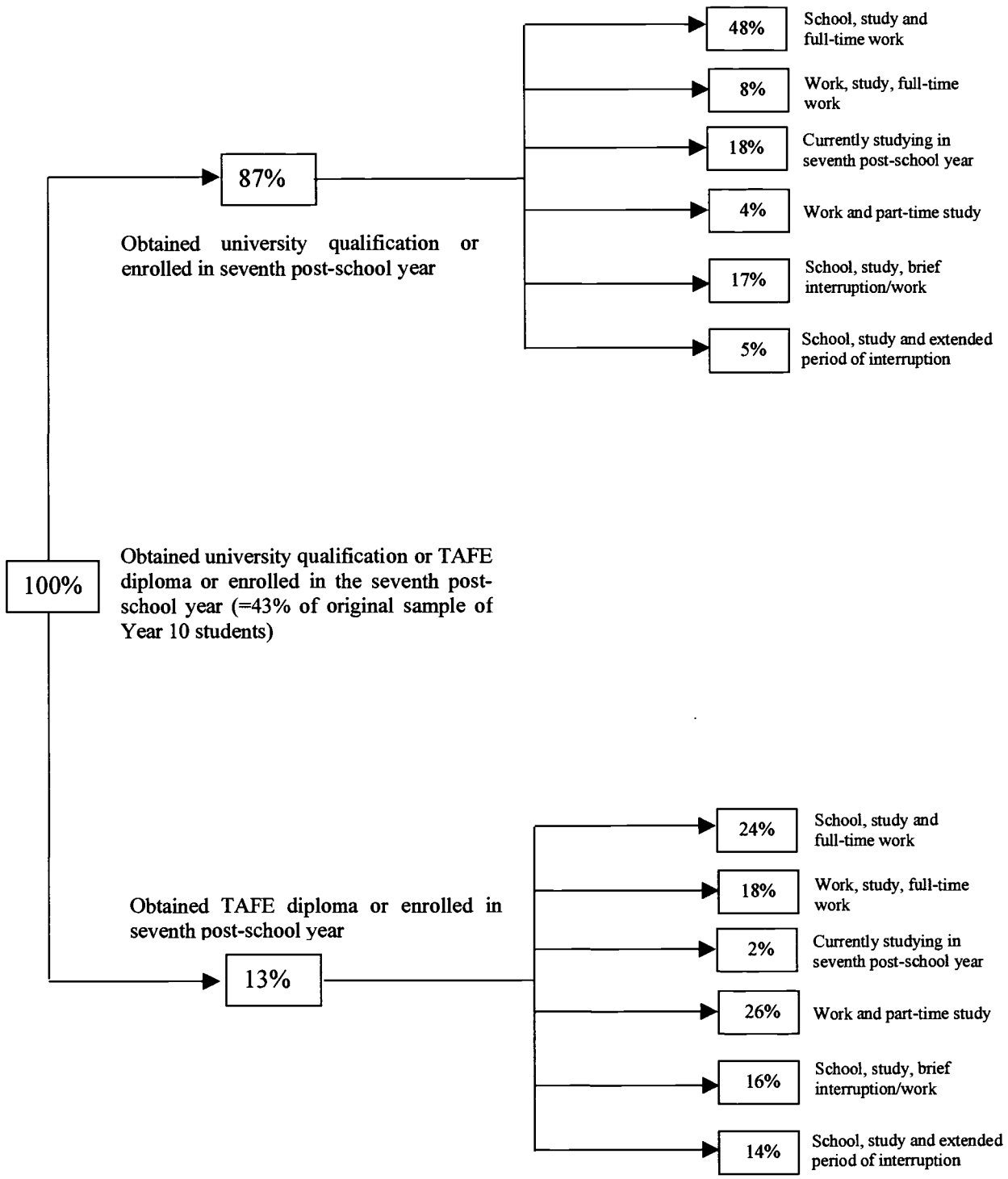


Figure 4.2 Pathways of school leavers, by qualification



It shows that the vast majority of school leavers pursued university qualifications (87 per cent). The remaining 13 per cent of leavers obtained a TAFE diploma in the seven post-school years, or were studying for the qualification in their seventh year. The pathways associated with both types of qualifications were quite different. For those who obtained a TAFE diploma, the most common pathway involved combinations of work and part-time study. Over a quarter (26 per cent) of those who studied for a TAFE diploma did so while working, undertaking their studies part-time. This was 6.5 times the rate for those who entered university (4 per cent).

The most common pathway for university students was the more traditional pattern of progression from school to university and then to work. Almost one in two (48 per cent) did so without any period of interruption. The number of school leavers experiencing this path was double that for those who studied at TAFE (24 per cent).

Another point of contrast between those obtaining or studying TAFE qualifications and those at university was the experience of interruption in the move from study to work. The transition from study to work was far less smooth for those studying at TAFE rather than at university. While similar proportions experienced a short interruption in gaining full-time work, about 14 per cent of the graduates of TAFE diplomas experienced an extended period (more than one year) of unemployment, part-time work or not being in the labour force compared to 5 per cent of those who graduated from university. This finding is consistent with the results of other work showing that university qualifications provide the highest returns for young people in the labour market, with returns measured in terms of episodes and durations of unemployment.

Field of study

There are also differences in the education to work pathways for graduates depending on the field of their study. Table 4.1 presents the pathways of graduates by broad field of study. Table 4.1B (Appendix 2) provides the backgrounds of school leavers according to type of qualification.

Leavers who entered education courses in higher education most often moved from school to further study and then directly into work. The rate, 57 per cent, was almost 20 percentage points higher than those undertaking arts and humanities courses or those in the social sciences. High rates were also recorded for those in health sciences (51 per cent), engineering (51 per cent) and accounting and economics (52 per cent).

Students still in study in their seventh post-school year were often in double-degree or extended professional courses such as medicine (32 per cent) and law (34 per cent). However, there were still substantial percentages in arts and humanities courses (22 per cent), social sciences (27 per cent), and the maths and sciences (22 per cent). These fields attracted students who continued into postgraduate study as well as some who had deferred entry to study.

Table 4.1 Percentage distribution of pathways, by field of study

Field of study	Pathway					
	School, study and work	Work, study and work	Currently in study	Work, part-time study	Study, short spell, work	Study, extended transition to work
Arts and humanities	38	7	22	4	20	9
Social sciences	40	8	27	4	10	10
Business Studies	42	14	9	15	16	4
Accounting and economics	52	10	7	5	21	5
Education	57	11	13	1	11	8
Engineering	51	2	15	17	11	4
Health sciences	51	13	7	4	21	4
Medicine and related	38	2	32	2	23	2
Law and related	43	14	34	0	6	3
Maths and sciences	41	9	22	1	17	8
Computing	45	11	13	5	21	5
Hospitality, travel and tourism	38	13	8	21	15	5

The fields of study which attracted young people who were working and undertaking their studies part-time were those that have a high number of TAFE diploma enrolments — business studies (15 per cent), engineering (17 per cent), and hospitality, travel and tourism (21 per cent).

The social sciences (10 per cent) and arts and humanities (9 per cent) were associated with pathways of extended interruption in the transition from further study to work. Those in these courses more often than those in other courses experienced extended periods of unemployment or part-time work in the transition to full-time work.

Socioeconomic status

Social background is strongly related to whether or not young people take a tertiary education path or not on leaving school. About 30 per cent of school leavers from low SES backgrounds (those in the lowest quartile of SES) obtained a university degree or TAFE diploma in the seven post-school years or were studying towards a qualification in their seventh year (see Figure 4.3). In contrast, over 60 per cent of those from high SES (highest quartile) backgrounds did so.

Figure 4.3 Pathways of school leavers, by socioeconomic status

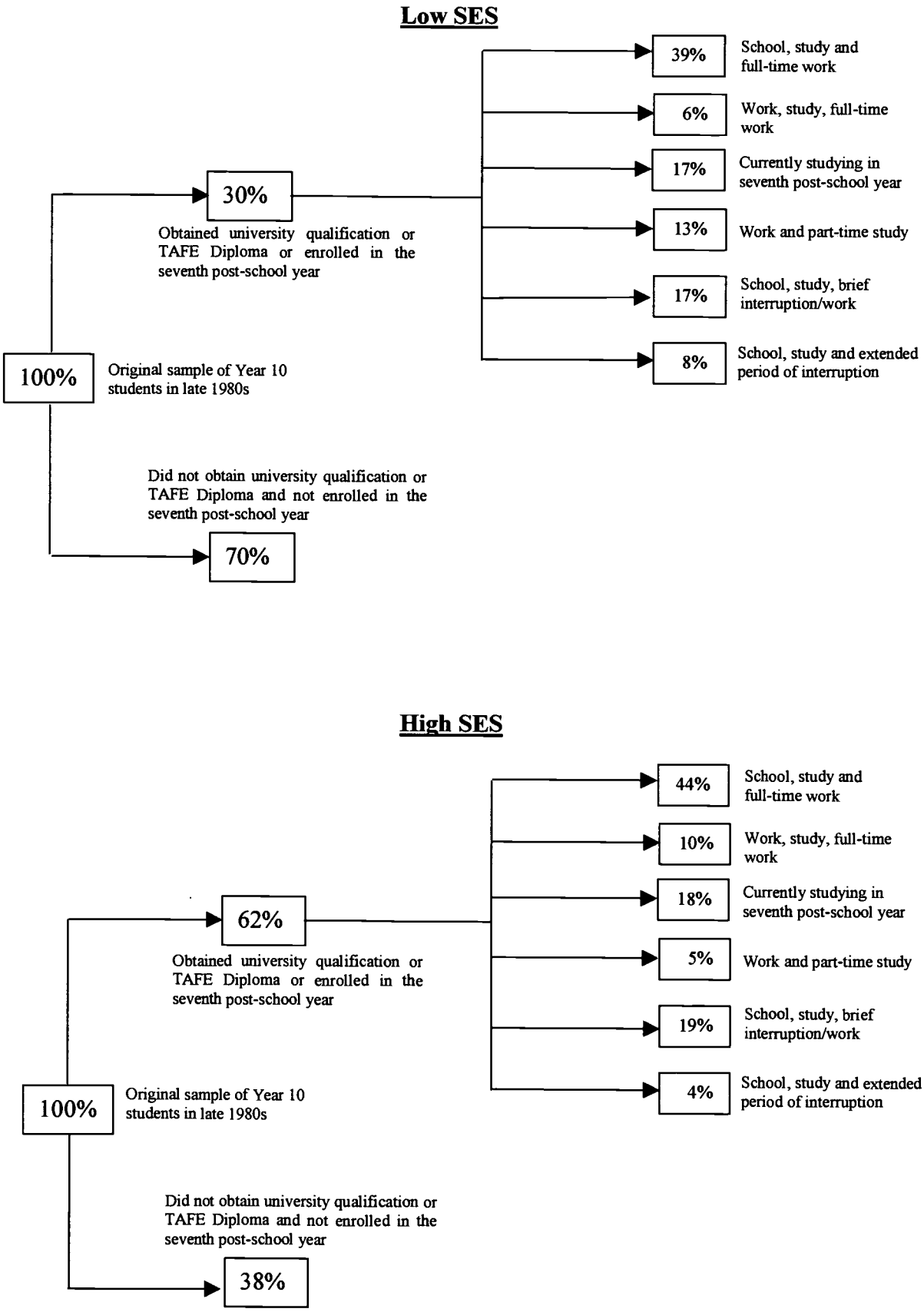


Table 4.2 Pathways from school to further study and work, by selected background characteristics

Characteristic	% of graduates from each category in original Year 10 sample	Pathway					
		School, study and work	Work, study and work	Currently in study	Work, part-time study	Study, short transition to work	Study, extended transition to work
Place of residence							
Urban	(48)	43	10	17	7	17	7
Rural	(33)	49	8	13	8	17	5
Ethnicity							
Australian-born	(42)	46	10	14	8	16	6
NESB	(52)	38	4	21	5	22	10
School type							
Government	(35)	42	10	15	9	15	9
Catholic	(60)	48	8	16	6	17	5
Independent	(65)	46	8	19	3	22	2
Disability							
No disability	(44)	45	9	15	7	17	6
Disability	(37)	34	7	21	6	19	13

The pathways of low SES and high SES school leavers suggest that while the differences are not large, more low SES students experience difficulties in making the transition to full-time work. About 8 per cent of the low SES school leavers experienced an extended period of unemployment or other interruption after completing their further study. This was double the rate experienced by those from high SES backgrounds. A slightly higher percentage of those from high SES origins experienced a short interruption — 19 per cent compared to 17 per cent.

Rural or urban place of residence

Young people living in urban areas are far more likely to enter a tertiary education path (see Table 4.2). Almost half (48 per cent) of school leavers in urban areas graduated from a university or TAFE degree or diploma course in the seven year period after leaving school. The rate in rural areas was approximately one-third.

While young people in urban areas more often study for degree or diploma qualifications, among those who do, there are only minor differences in the pathways they take compared to those who were living in rural areas. The most common pathway for young people in both rural and urban areas was to move from school to further study and then to full-time work — 49 per cent for those from rural areas and 43 per cent for those from urban centres.

A higher percentage of those from urban areas were still in study in their seventh post-school year (17 per cent as against 13 per cent for those from rural areas). Similar percentages experienced a transition from further study involving a period of short interruption (17 per cent), and a marginally higher percentage of those from urban centres experienced a more extended transition (7 per cent compared to 5 per cent for those from rural areas).

Ethnicity

Young people with parents born in countries with a language background other than English more often obtained tertiary qualifications or were studying for a qualification in the seventh year (see Table 4.2). The gap was 10 percentage points. However, young people from language backgrounds other than English less often experienced a smooth transition from further study to work. Almost a third experienced either a short or extended period of unemployment or part-time work after graduating compared to about a fifth of those from English-speaking backgrounds. Graduates from language backgrounds other than English were more likely to experience extended periods of interruption (10 per cent compared to 6 per cent for those from English-speaking backgrounds).

Type of school attended

According to the figures in Table 4.2, one of the main differences in the pathways taken by government school and private school students is in the numbers who undertake their study while working (9 per cent from government schools, 6 per cent from Catholic schools and 3 per cent from Independent schools) and the numbers experiencing an extended period of interruption in the transition from further study to work. About 9 per cent of government school students experienced an extended period of unemployment or other interruption in their attempt to obtain full-time work after graduation from further study. The rates in Catholic and Independent schools were 5 and 2 per cent respectively. This difference occurs despite the fact that government school students are much less likely to obtain degree or diploma qualifications.

Disability

Young people with disabilities were less likely to obtain or study towards tertiary qualifications. For those who did, more of them than those without disabilities struggled to find full-time work. Approximately 13 per cent of those with a disability experienced an extended period of unemployment, part-time work or not being in the labour force compared to 6 per cent of those without a disability.

Likelihood of participating in the different pathways

This section presents the results from multivariate analyses designed to measure the effects of different qualification and background factors on the chances of having participated in particular pathways. The results from the analyses are presented as predicted probabilities or chances of participating in each of the pathways with the probabilities derived from logistic regression.

Table 4.3 Predicted probabilities of participating in a pathway expressed as percentages, by selected background characteristics

Attribute	Pathway						
	School, study and work	Work, study and work	Currently in study	Work, part-time study	Study, short transition to work	Study, extended transition to work	Total
Comparison group+	40*	8***	20***	13***	11***	9***	100
Female	50***	10	11***	10	8	11	100
Rural students	46	5	16	13	13	6	100
High SES	41	14	18	7**	12	8	100
Upper middle SES	44	15	19	6**	7	8	100
Lower middle SES	44	10	13	10	14	10	100
Disability	32	5	26	7	11	20**	100
Catholic school	46	5	20	10	12	6	100
Non-Catholic private	45	6	23	6*	18**	4*	100
NESB	32	3**	28**	6*	16**	15*	100
TAFE Diploma	14***	15	2***	38***	9	22***	100
Field of study							
Arts and humanities	29	4	32*	8	17	10	100
Social sciences	27	5	39**	9	10	11	100
Business Studies	37	9	15	23	14	2*	100
Accounting and economics	48	7	12	9	19	6	100
Engineering	49	2**	18	21	8	3*	100
Health sciences	43	8	14	8	22*	5	100
Medicine and related	30	2	43***	4	19	2	100
Law and related	33	9	49***	0	5	4	100
Maths and sciences	37	7	30	4	15	7	100
Computing	44	9	17	8	18	4	100
Hospitality, travel and tourism	38	4	24	15	16	2*	100

\+ The control group on which the multivariate logistic regression analysis was based includes low SES males from government schools and with Australian-born parents. They had graduated from or were undertaking university courses in education.

* $p<0.10$ ** $p<0.05$ ***$p<0.01$

The predicted chances are expressed as percentages and presented in Table 4.3. The chances for different groups are based on a comparison with a control group comprising males with Australian-born parents, from low SES origins, who had graduated from or were undertaking a university course in education.

One of the main sources of difference is the level of qualification. The pathways for those who obtain TAFE diplomas are substantially different to those who pursue a university degree. All else equal, there was a 13 percentage point increase in the chances of an extended period of unemployment or other interruption in obtaining full-time work for those who studied for a TAFE diploma. There was also a three-fold increase in the likelihood of undertaking their study part-time while in work. In terms of pathways to full-time work, type of qualification matters.

The main difference linked to field of study is the higher probability for those who studied social sciences, medicine or law to be still in study in the seventh post-school year. The groups of students in such courses have still to negotiate entry to the workforce.

Gender is related to type of pathway. Females more often, all else equal, moved from school to further study and then work without any period of interruption. Males were more likely to be still in study in their seventh year. The differences across other pathways were not significant.

Social background is related to differences in the likelihood of participating in the work and part-time study pathway. Irrespective of qualification, field of study, gender or type of school attended, young people from lower SES backgrounds have significantly more likelihood of entering this pathway than those from high status backgrounds.

The pathways of young people with disabilities vary in one important way. Those with a disability are more likely to experience an extended period of interruption in the move from further study to work.

This pattern is also true of those from language backgrounds other than English. While many more students, proportionately, undertake university study in Australia, the results suggest that they have more difficulty in the transition to work with significantly higher numbers experiencing either a short or extended period unemployed, in part-time work or not in the labour force after completing their further study.

5

Experiences Associated with Different Pathways

In this section, information is presented on the labour market experiences of Australian graduates or those studying towards a degree or diploma to further evaluate differences in the various education and training pathways from school to work. In the discussion that follows, the transition experiences are examined in terms of average weekly earnings, type of occupation, participation in employer-provided training, and the histories of those who experience greater difficulty in making the transition to work.

Average earnings

Table 5.1 presents the average weekly incomes for males and females at the end of the seventh post-school year according to four pathways — (1) those who experienced a smooth transition from school to further study and then to work, (2) those who entered work on leaving school, then took up study full-time before returning to the workforce, (3) those who entered work on leaving school, remained in work and completed their studies part-time, and (4) those who completed their studies and experienced a brief period of interruption before obtaining full-time work.

The results show that for males the highest average weekly income was obtained by those who left school and entered the workforce while undertaking their studies part-time. Their average weekly income — $639 — was higher than for those who took the more traditional path of study and then work — $606. The higher average income may be due to longer duration of work. However, this did not apply for females. Those females who completed their further study part-time while working recorded the lowest weekly income at the end of the seventh post-school year — $484. This was $81 lower than that recorded for female graduates who went directly from school to further study and then into full-time work, $41 less than for those who worked before undertaking their studies and re-entering the workforce full-time, and $44 less than for those who experienced a brief period of unemployment or other interruption in the transition from further study to full-time employment.

For each pathway from school to work, men consistently reported higher earnings than women. The wages gap ranged from $30 for those who experienced an interrupted transition to work to $155 for those who completed their further study part-time while working over the seven post-school years.

Table 5.1 Mean weekly earnings of those in full-time work seven years after leaving school, by pathway and gender

Pathway	Mean weekly earnings		
	Males	Females	Persons
	$	$	$
Study, full-time work	606	565	580
Work, study, work	583	525	543
Work, part-time study	639	484	556
Study, brief interruption	558	528	542

The differences in earnings may be due to background factors or differences in types of qualifications and fields of study. To examine this issue a regression analysis was conducted to derive adjusted weekly earnings for different categories of graduates. The results are presented in Table 5.2. The average income is reported at the top of column 2 with the estimated differences up or down for each category. Significant differences are reported with asterisks. The average is based on low SES male school leavers living in urban areas who entered a university course in education on leaving school and then went directly into full-time work after graduation.

In terms of weekly earnings, the pathways young people take make a difference. Those who entered work on leaving school and then took up their studies before re-entering the workforce earned significantly less ($50 a week on average) than those who entered study after leaving school and moved into full-time work. The weekly earnings were also significantly lower, all else equal, for those who experienced a brief period of interruption in the transition from further study to work. This difference could be due to having a shorter period in work or type of job obtained.

Qualifications and field of study were also important. Those who obtained a TAFE diploma earned on average $46 a week less than those who obtained a university degree, irrespective of the path or field of study. But field of study also exerted an influence. Those who graduate from computing and engineering courses did significantly better in income terms than those taking courses in other fields of study. Over further years this might change but at this early stage in the working careers of graduates there are earnings advantages to those who have gained university qualifications in particular fields of study.

Earnings also vary for graduates from different backgrounds. Females have significantly lower wages than males — $40 per week on average — even after controlling for differences in qualifications, fields of study and background. Graduates from high SES backgrounds earned significantly higher incomes, on average, than graduates from low SES origins. The gap was about $48 a week.

Table 5.2 Adjusted weekly earnings of those in full-time work seven years after leaving school, by selected background characteristics

	Adjusted mean weekly earnings
	$
Average	552++
Pathway	
Work, study, work	-50*
Work, part-time study	-35
Study, brief interruption	-51*
Female	-40*
Socio-economic status	
High SES	+43*
Upper middle	+18
Lower middle	+27
Language background other than English	-20
Rural location	-3
TAFE Diploma	-46*
Field of study	
Arts and humanities	-6
Social sciences	-55
Business Studies	+5
Accounting and economics	+46
Engineering	+58*
Health sciences	+24
Medicine and related	+50
Law and related	+28
Maths and sciences	+39
Computing	+58*
Hospitality, travel & tourism	-29

* $p<0.05$

++ The average is based on low SES male school leavers living in urban areas who entered a university course in education on leaving school and then went directly into full-time work.

Occupation

Part of the reason for differences in pay are differences in the jobs graduates obtain. Table 5.3 presents the percentages of graduates employed in different occupations. The percentages are provided separately across four pathways.

For those who entered study immediately on leaving school and then moved smoothly from further study to full-time work, the majority obtained professional and managerial positions. The rate was higher for males (70 per cent) than for females (55 per cent). Among females, technical (18 per cent) and clerical (12 per cent) jobs were also important for those who experienced this pathway.

Table 5.3 Percentage distribution of type of occupation seven years after leaving school, by pathway and gender

Occupation	Pathway			
	School, study and work	Work, study and work	Work, part-time study	Study, short transition to work
	Males			
Upper professional/managerial	5	4	8	7
Lower professional/managerial	70	43	27	44
Technical	9	17	23	11
Skilled trades	1	9	12	5
Clerical	2	13	4	11
Sales and service	7	1	8	16
Plant/machine operators	3	4	8	0
Labourers	4	9	12	4
	Females			
Upper professional/managerial	6	4	13	4
Lower professional/managerial	55	30	9	45
Technical	18	26	9	20
Skilled trades	0	2	9	5
Clerical	12	13	26	11
Sales and service	8	22	26	16
Plant/machine operators	0	0	0	0
Labourers	1	2	4	0
	Persons			
Upper professional/managerial	6	4	10	5
Lower professional/managerial	61	35	18	44
Technical	14	23	16	15
Skilled trades	0	4	10	5
Clerical	8	13	14	11
Sales and service	7	15	16	16
Plant/machine operators	2	1	4	0
Labourers	2	4	8	2

For those whose pathway from school involved entry to the workforce directly on leaving school and completion of their further study part-time, technical occupations in telecommunications, electronics, engineering and similar fields were important for males. Nearly one-quarter of males who studied part-time while working were in such occupations. A further 12 per cent were in skilled trades and 27 per cent in lower professional and managerial positions. Females who took the same path on leaving school were concentrated in clerical (26 per cent) and sales, service and related (26 per cent) occupations.

Male graduates who experienced a short period of unemployment before finding full-time work were more dependent on jobs in sales and service occupations than those who experienced other pathways. About 16 per cent were in this type of occupation, a rate more than double that for males who found a job directly after graduating. Clerical jobs were also an important source of entry full-time employment for those who had a short period of difficulty in making the transition to full-time work.

Irrespective of the pathway, females are more likely to work in clerical and sales and service occupations than are males. For instance, 22 per cent of females who worked for a period before completing their study and then re-entered the workforce were in sales and service jobs compared to 1 per cent of males.

Table 5.4 Percentage distribution of spells of formal training, by pathway and gender

Number of spells of training	Pathway				
	School, study and work	Work, study and work	Work, part-time study	Study, short transition to work	Study, extended interruption
			Males		
0	15	17	18	34	67
1	28	24	15	36	25
2	26	31	21	18	8
3	18	14	15	5	0
4	8	7	12	4	0
5	4	7	15	3	0
6	1	0	3	0	0
			Females		
0	12	12	19	26	56
1	25	35	9	33	17
2	25	19	13	24	17
3	22	14	9	9	11
4	9	11	19	6	0
5	4	9	22	2	0
6	3	0	9	0	0
			Persons		
0	13	14	18	29	60
1	26	31	12	34	20
2	25	23	17	21	13
3	20	14	12	7	7
4	8	9	15	5	0
5	4	8	19	3	0
6	2	0	6	0	0

* A spell of training refers to reported participation in employer-provided training in a given year. Thus, five spells of training means that the respondent participated in training in five different years.

Employer-provided training

Participation in employer-provided training was partly linked to the length of time in work. Male graduates who reported the largest number of spells of training were those who had entered work straight after leaving school and completed their studies while also working (see Table 5.4). For these graduates, almost a third had received 4 or more spells of formal training at work. The rate for females who worked while completing their study was 50 per cent. The second highest rates were achieved by those who worked before undertaking their studies and then re-entered the workforce. For males taking this path, 14 per cent had 4 or more spells of training, while for females taking this path 20 per cent had 4 or more episodes of training.

Those who had received the least amount of training were those who had experienced an extended period of interruption in the transition from education to work. Over half of the females who were in this pathway had not received any episode of training, while the rate for males was two-thirds.

It would seem from these results that one of the advantages of entering full-time employment earlier in the transition from school is the opportunity it gives for accumulating work-related skills not only through broad job experience but also through specific work-based training. The groups of young people who manage to find full-time work early build on their work experience through access to on-the-job training. It is this sort of skills acquisition that is likely to improve their future job prospects and employability. Those whose pathway from school involves mainly unemployment or periods not-in-the-labour-force fall behind in the acquisition of skills through employer-provided training.

Unemployment

Many graduates experience unemployment in making the transition to work. About a third experienced at least one episode of unemployment in moving from education to the labour force. The length of time spent unemployed varied by pathway. Table 5.5 presents the average number of months of unemployment for two of the graduate pathways — those who completed their studies and experienced a short period without full-time work in the transition from study to work, and those who experienced an extended period of interruption.

Table 5.5 Mean number of months of unemployment in the first seven post-school years, by pathway and gender

	Mean months of unemployment		
Pathway	Males	Females	Persons
Study, brief interruption	10	7	9
Study, extended interruption	16	16	16

The average number of months unemployed for the group who experienced an extended period without work was 16 months for both males and females. Among those who made the transition to full-time employment following a brief period of part-time work, unemployment or a period not-in-the-labour-force, the mean number of months of unemployment was 10 months for males and seven months for females.

As well as duration of unemployment, it is useful to examine the number of spells of unemployment. Information on unemployment spells is presented in Table 5.6.

Table 5.6 Percentage distribution of spells of unemployment across the first seven post-school years, by pathway

	Pathway	
Spells of unemployment	Study, short transition to work	Study, long transition to work
None	19	8
One	19	8
Two	21	20
Three	12	10
Four	9	18
Five	12	12
Six	6	6
Seven or more	2	18

Some graduates experience multiple episodes of unemployment when seeking entry to the workforce after graduation. They might work for short periods and then be unemployed for short periods. This process of milling and churning is particularly noticeable among the 6 per cent of graduates who had considerable difficulty in finding stable full-time work. Of this group, over half experienced four or more episodes of unemployment. Therefore as well as spending longer periods unemployed, they were also likely to spend more periods seeking work.

For the 17 per cent of graduates who experienced a short period of interruption before finding stable full-time work, less than a third experienced 4 or more episodes of unemployment.

Histories of those who experienced difficult transitions

What separates those who experienced an extended period of milling and churning as graduates from those who experienced only a short period? The previous chapter showed that the 6 per cent of graduates who experienced an extended rather than brief period of milling and churning were more often those who:

- graduated with a TAFE rather than university qualification;
- were from low rather than high SES backgrounds;

- graduated in the fields of Arts and humanities, social sciences, and education; and
- were from government schools.

Many of these graduates were still experiencing difficulty in finding full-time work in their seventh post-school year. Figure 5.1 presents the annual activities of these graduates by year out of school. Most studied in the first three or four post-school years. But as they graduated, the main activity was unemployment, part-time work or a period not in the labour force. In the seventh post-school year, when all were no longer in study, only 19 per cent had full-time work. The other graduates in this group were still negotiating their way into stable full-time work. Over a quarter (27 per cent) were unemployed while a further 37 per cent were in part-time work, and 17 per cent were not in the labour force.

The reality for this group was a period of changing episodes of unemployment, work and not looking for work. Over 50 per cent experienced unemployment as their first main activity in the year following graduation. While some found full-time work, few stayed in these jobs. Table 5.7 presents the occupational profiles of those in work in the fifth, sixth and seventh post-school years. It suggests that while there were small differences each year, those who found jobs did so in occupations not markedly different in profile from those who experienced only a short period of interruption before gaining stable full-time work.

Figure 5.1 Annual main activity by year out of school: graduates who experienced an extended interruption in the transition to work (%)

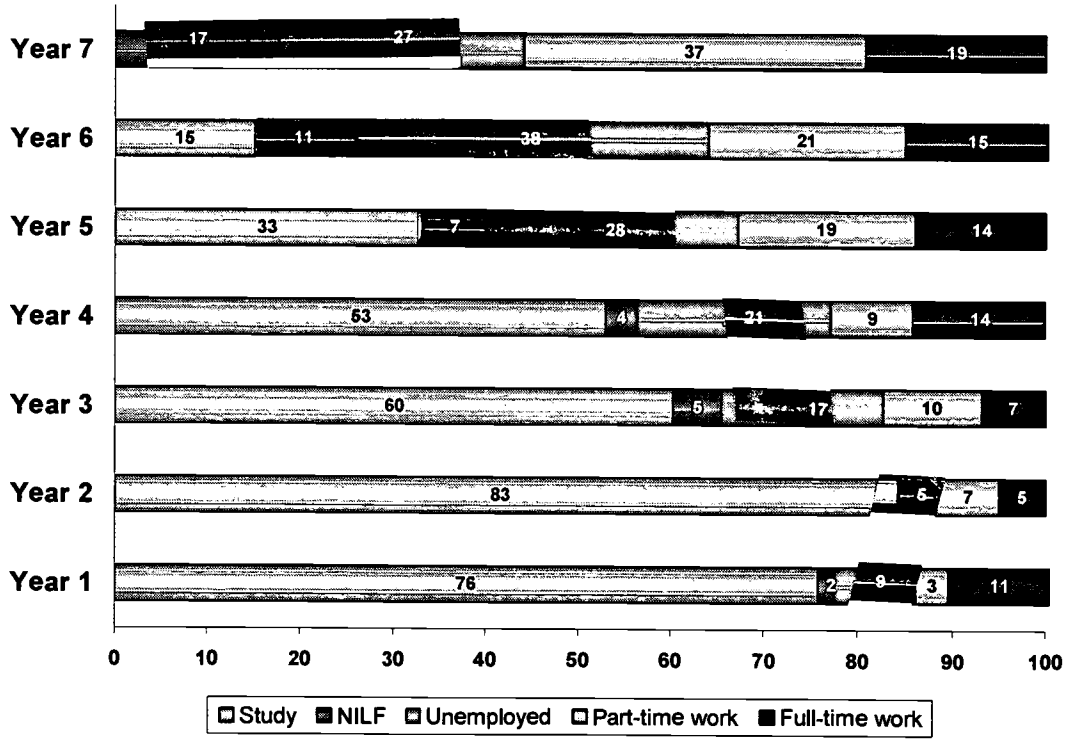


Table 5.7 Occupations of those in work in Year 5, Year 6 and Year 7

Occupation	Year out of school		
	Year 5	Year 6	Year 7
	Extended transition from education to work		
Upper professional/Managerial	4	0	3
Lower Professional	26	22	32
Technical	0	0	12
Trade	0	0	0
Clerical	15	17	11
Sales and related	33	52	35
Plant/machine operators	0	0	0
Labouring and related	22	9	6
	Short transition from education to work		
Upper professional/Managerial	1	1	5
Lower Professional	28	38	44
Technical	10	13	15
Trade	2	3	5
Clerical	18	17	11
Sales and related	29	22	16
Plant/machine operators	0	1	0
Labouring and related	12	6	2

6

Pathways of Graduates and Non-Graduates

This section compares the pathways of graduates and non-graduates. It uses information provided in the earlier report on the pathways from school to work for those who did not graduate from university or TAFE diploma study in their first seven post-school years or were not studying for these qualifications in their seventh year (Lamb & McKenzie, 2000). The first section examines the pathways using the sub-populations (graduates and non-graduates) as the base for analysis. It means it is possible to compare the percentages of graduates who experience particular pathways against the percentages of non-graduates who experience particular pathways. Included in this section is a comparison of income and occupations. The second section briefly reflects on pathways using the whole sample of school leavers (the original sample). It gives the percentages entering different pathways based on the original group of school leavers. This provides a useful profile of the main pathways for school leavers in Australia.

Comparing the pathways of graduates and non-graduates

Figure 6.1 presents the main pathways of graduates and non-graduates across seven post-school years.

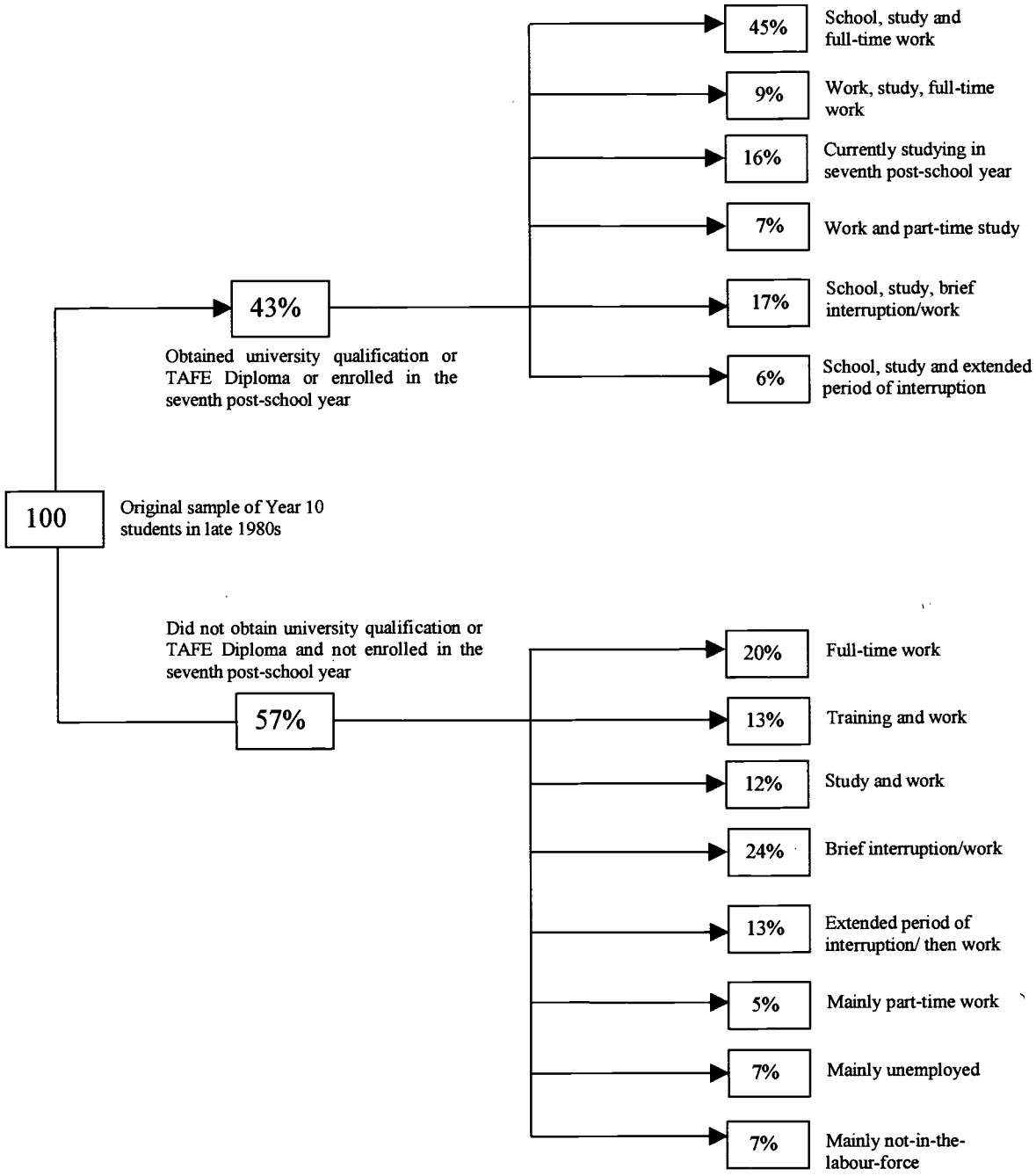
One point to note from the different pathways is the lower level of milling and churning that graduates experience. While 16 per cent are still in study in their mid-20s, almost four in five graduates experience relatively smooth transitions from education to work. Almost half move directly into full-time work after graduation without any disruption. A further 16 per cent work and study or work then enter study and return to work without experiencing any period of disruption. About 17 per cent experience a short period of unemployment, part-time work or a period not in the labour force but then settle into full-time work. Only a small percentage of graduates (6 per cent) experience any major difficulty in entering the labour force with multiple episodes of unemployment, part-time work and job turnover.

While many non-graduates also have relatively successful pathways to full-time work, about one-third experience some difficulty. Overall, 13 per cent experience an extended period of disruption (4 or more years) with intermittent periods of unemployment, part-time work or out of the labour force. A further 7 per cent spent most of the time unemployed, unable to gain full-time work. A similar figure spent much of the first seven years out of the labour force, not seeking work and not undertaking study. Part-time work was the main experience for a further 5 per cent.

Therefore while roughly 1 in 18 graduates have some difficulty negotiating entry to secure full-time work, the rate for non-graduates is about one in three. It suggests that there are some important employment returns to university and TAFE diploma qualifications.

Yet, not all graduates benefit in the same way. The previous chapter revealed that some qualifications provide better avenues to employment: in particular, University degrees rather than TAFE diplomas; and accounting and economics training rather than arts and humanities.

Figure 6.1 Pathways of graduates and non-graduates



Benefits of study

The pathways for graduates reveal some fairly strong employment benefits. The investment in study appears to be repaid for graduates, at least in terms of securing full-time work. But it is not only in terms of full-time work that graduates benefit.

Income

Table 6.1 presents the average weekly earnings of graduates and non-graduates in full-time work. It shows that the average weekly earnings vary by pathway. It also shows that the highest weekly earnings were achieved by male graduates who studied while working. The next highest average weekly pay was obtained by male graduates who went directly from school to study and then into full-time work. Their level of pay ($606 per week on average) was higher than for male non-graduates who left school and worked continuously over the seven years ($558). Therefore, despite having had less time in the workforce, graduates earned more pay.

This finding also applied to females. Female graduates who studied and then entered the workforce earned $565 per week on average, compared to $495 for female non-graduates who had worked continuously since leaving school.

It is not the case that the extra years of study for graduates paid off for all, in income terms. The earnings of male non-graduates who had undertaken some study before entering work or who had gained apprenticeships or similar training (the highest average earnings for non-graduates) were not far below the wages of male graduates who moved from school to study and then into full-time work — $579 and $588 for non-graduates compared to $606 for graduates.

Table 6.1 Mean weekly earnings of graduates and non-graduates in full-time work seven years after leaving school, by pathway and gender

Pathway	Mean weekly earnings		
	Males	Females	Persons
	$	$	$
		Graduates	
Study, full-time work	606	565	580
Work, study, work	583	525	543
Work, part-time study	639	484	556
Study, brief interruption then work	558	528	542
		Non-graduates	
Full-time work	558	495	522
Training/work	579	515	570
Further study/work	588	482	543
Brief interruption/work	527	475	503

Table 6.2 Types of occupation of graduates and non-graduates seven years after leaving school, by pathway and gender

Occupation	Graduate Pathways			
	School, study and work	Work, study and work	Work, part-time study	Study, short transition to work
	Males			
Upper professional/managerial	5	4	8	7
Lower professional/managerial	70	43	27	44
Technical	9	17	23	11
Skilled trades	1	9	12	5
Clerical	2	13	4	11
Sales and service	7	1	8	16
Plant/machine operators	3	4	8	0
Labourers	4	9	12	4
	Females			
Upper professional/managerial	6	4	13	4
Lower professional/managerial	55	30	9	45
Technical	18	26	9	20
Skilled trades	0	2	9	5
Clerical	12	13	26	11
Sales and service	8	22	26	16
Plant/machine operators	0	0	0	0
Labourers	1	2	4	0
	Non-Graduate Pathways			
	Full-time work	Training Work	Further study/ work	Brief interruption/work
	Males			
Upper professional/managerial	17	3	14	3
Lower professional/managerial	4	1	14	9
Technical	9	5	14	7
Skilled trades	12	66	17	28
Clerical	11	1	6	5
Sales and service	23	5	19	18
Plant/machine operators	12	7	6	12
Labourers	12	10	10	19
	Females			
Upper professional/managerial	9	0	6	8
Lower professional/managerial	5	5	10	6
Technical	5	0	8	8
Skilled trades	2	55	4	8
Clerical	42	20	41	24
Sales and service	30	15	27	40
Plant/machine operators	2	0	4	2
Labourers	6	5	0	4

Occupations

Part of the reason for the differences in earnings between graduates and non-graduates were the differences in the sorts of jobs that were accessed. Graduates more often obtained jobs in professional, managerial and technical occupations (see Table 6.2). Non-graduates more often obtained jobs in skilled trades, clerical, and sales and related occupations. For example, 75 per cent of male graduates who graduated from their degree or diploma course gained work in professional and managerial occupations. The highest rate for non-graduates was 28 per cent, achieved by males who did further study without graduating or who studied certificate courses and then gained a job. The rate for male non-graduates in other pathways ranged from 4 to 21 per cent.

Pathways of school leavers in Australia

Figure 6.2 presents the pathways for Australian school leavers. The percentages reported for each pathway are based on the original sample of Year 10 students.

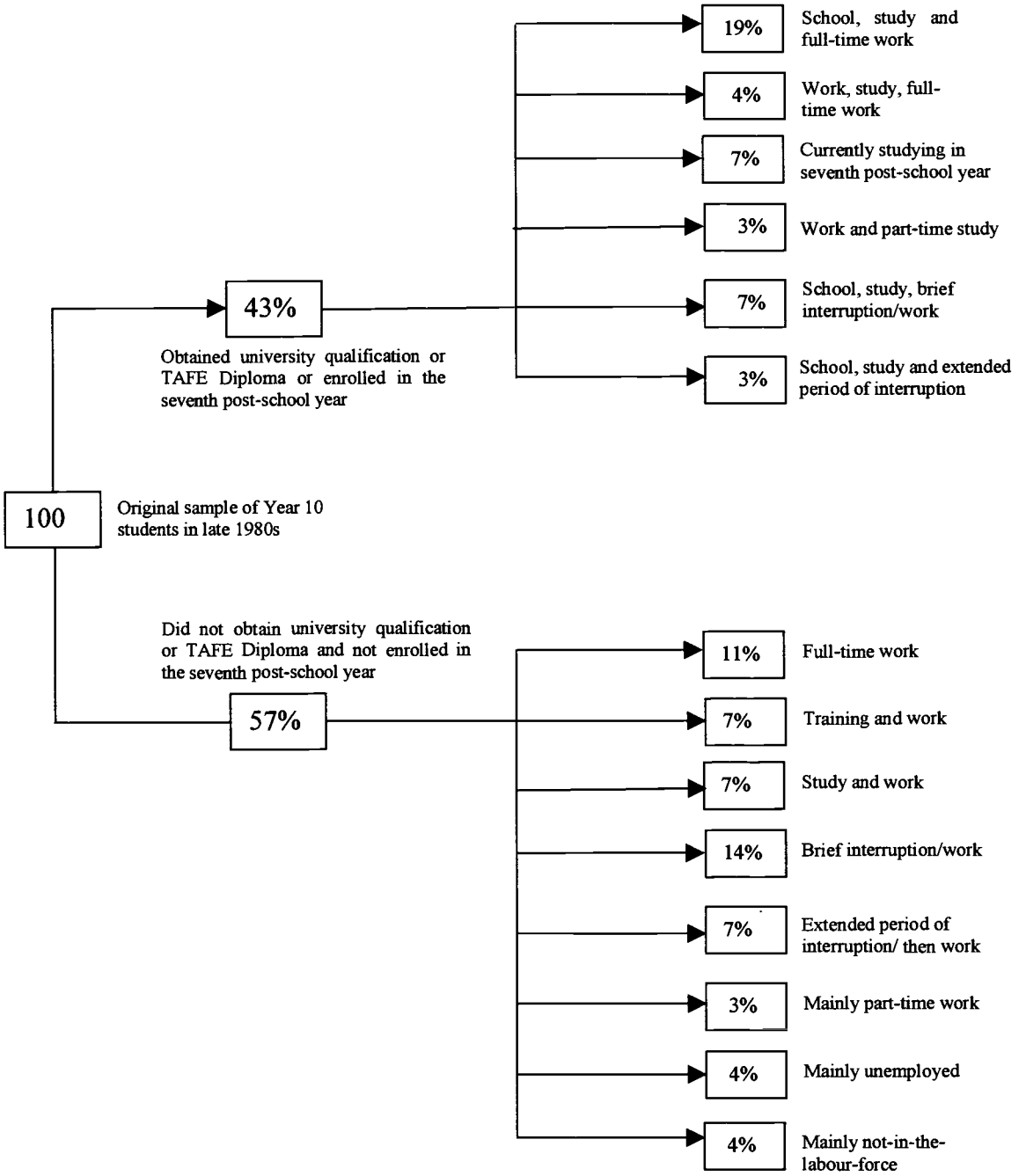
The patterns show that over the seven year period about one in five (21 per cent) school leavers had substantial difficulty making the transition to full-time work. This included 18 per cent who were non-graduates and 3 per cent who were graduates. For 10 per cent of these school leavers (non-graduates 7 percent, graduates 3 per cent) there were extended periods of unemployment and part-time work or periods out of the labour force. A further 4 per cent (non-graduates) were mainly unemployed over the whole seven-year period, 3 per cent were mainly in part-time work, and 4 per cent were mainly not in the labour force.

For the 21 per cent of school leavers who struggle to find stable employment, the metaphor of a pathway is not really meaningful. For this group, the experiences and destinations are less coherent than that implied by this image. Those in this situation struggle to find stable employment and many are still engaged in that search in their mid-20s.

Irrespective of the value of the metaphor to those in this situation, the group represents a major source of concern. For many there have been only brief or no stable periods of full-time work across the entire seven post-school years. They fail to gain the work experience and skills acquisition on which to build a career, or on which to enhance the prospects of a secure working life. They also do not amass other benefits that accrue with work, things such as access to formal on the job training, a stable income, superannuation and paid annual leave. This group is likely to be more vulnerable in times of economic downturn.

For other school leavers the transition from school to work is far more positive. About four in five school leavers do make the transition to stable full-time employment. Graduates make up half of this group, though they make up only 43 per cent of all school leavers. For non-graduates, apprenticeships and other forms of entry-level training are important. For both graduates and non-graduates the transition may involve some periods of unemployment or periods not in the labour force. Approximately 7 per cent of school leavers graduated from tertiary degree or diploma course and then spent a period looking for work or working part-time before finding full-time work, and a further 14 per cent of school leavers who did not graduate and sought entry to the workforce on leaving school shared the same experience. But after the initial brief period of milling and churning, these school leavers did secure full-time work and had established working lives by their mid-20s.

Figure 6.2 Pathways of school leavers across seven post-school years



7

Conclusion: Policy Implications

This report has examined the post-school pathways of a national sample of Year 10 students over a seven-year period from the late 1980s to the mid-1990s. It followed the 43 per cent of the original sample who obtained a university degree or TAFE diploma or who were enrolled for such qualifications in the seventh post-school year.

The results suggest that tertiary qualifications work to protect young people from labour market difficulties in making the transition to work. They show that the majority of those who obtained tertiary qualifications were able to make a relatively successful transition to full-time work. Only a small group — about 6 per cent — recorded having major difficulty in obtaining stable full-time work, experiencing extended episodes of unemployment, part-time work or periods out of the labour force. A further 17 per cent did experience a short period of milling and churning, although they were established in stable full-time work by their mid-20s. For most then, the transition to stable employment was successful and largely uninterrupted. This is not to say that all those who successfully made the transition to work were in the jobs that they wanted, or in the jobs that they will remain in, but they were in full-time work and not among the ranks of those sometimes classified as "marginalised" or "at risk".

The pathways for graduates were largely successful. This was the case in the 1990s despite the huge growth in number of graduates over the preceding 15 years. The number of graduates in 1979 was 66,704 and by 1995 the number had more than doubled to 138,954 (Australian Bureau of Statistics, 1984; Department of Education Training and Youth Affairs, 1996). The positive outcomes for graduates, despite the larger numbers attempting to enter the labour force, suggest several possibilities. One is that employer demand for graduates has kept pace with the growth in supply. Another possibility is that the growth in graduate numbers is being accommodated in employment areas outside of those traditionally entered by graduates, in short that graduates are securing work by displacing non-graduates in areas of employment more traditionally entered by those without university and TAFE diploma qualifications. Both explanations are possible. The results of this study show that the occupational fields that graduates tended to occupy in the mid-1990s were in large part in different segments of the labour market to those occupied by non-graduates. Graduates remained concentrated in professional, managerial and technical occupations. This pattern supports the view that employer demand may have kept up with the increased supply of graduates. However, work by Andrews and Wu (1998) on changes in the graduate labour market during the 1990s suggests that, as well as expansion of employment for graduates in traditional professional occupations, there has also been growth in employment in occupations which have previously not been seen as major employment destinations of graduates. They found that graduates widened their occupational destinations during the 1990s.

The small group of graduates whose transitions from school were more problematic were disproportionately drawn from particular educational and social backgrounds. A greater proportion had obtained diploma rather than degree qualifications and had studied in fields of arts and humanities, social sciences, and maths and sciences and less often from

business studies and engineering. The percentages of females and males experiencing this pathway were roughly the same. Young people from low SES backgrounds tended to have a more difficult time making the transition to full-time work than those from high SES origins, based on the percentages in this pathway.

Difficult transitions were more often experienced by non-graduates than graduates. While about 6 per cent of graduates had difficulty gaining stable full-time work, up to one-third of non-graduates also experienced this. After leaving school they more often had long periods of time unemployed, in part-time work or not looking for work. They also experienced longer periods of milling and churning, suggesting that tertiary qualifications did help facilitate transition to stable full-time employment.

From a policy perspective, the results support the recent efforts to expand the number of tertiary places and, through changes to government income support, encourage more young people to participate. Those who succeed in education in Australia generally do well in the labour market. However, the continued expansion in the number of graduates may produce diminishing returns in the future if growth in high-skilled jobs does not keep pace with the growth in the number of graduates. Therefore, on the one hand, while opening up tertiary education and training opportunities to more young people may not only help improve school to work transition, and help lessen social differences in outcomes, on the other hand, it may undermine these goals if employer demand does not keep pace with the growth in supply.

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APPENDIX 1: VARIABLES

The variables used in this study were defined as follows.

1. **Schooling attained**: School attainment refers to the years of secondary school completed by the respondent. In most analyses it is treated as a dichotomous variable representing completion of Year 12 or not.

2. **Socio-economic status**: Socio-economic status was derived from parent occupation data. Where both parents were employed, the highest status of the two occupations (highest of either the mother or father) was used. The variable was formed by translating the data on occupation to a four point prestige scale comprising (1) professional and managerial, (2) clerical and related intermediate non-manual work, (3) skilled manual and (4) unskilled manual. This scale was developed by Najman and Bampton (1991).

3. **Place of residence**: This variable covered young people living, at the age of 14, in (1) rural areas of Australia or (0) urban/metropolitan centres. It was derived from a question asking whether the respondent lived in a capital city, some other city, a rural town or village, or other rural area.

4. **Parents' birthplace**: The birthplace variable was coded according to three categories: (1) Australian-born, (2) born in another English-speaking nation and (3) born in a non-English speaking country. To be classified as non-English speaking, both parents had to born in a non-English speaking country. To be classified as Australian-born, at least one parent had to be born in Australia.

5. **Type of school attended**: This measure refers to the type of school attended at age 14. Three categories are used: (1) attendance at a government school, (2) Catholic school, and (3) non-Catholic private.

6. **Disability:** Disability refers to 'any disability or health problem which limited the amount of work and/or type of work' young people could do.

7. **Earnings**: The question on earnings asked respondents for their gross weekly/fortnightly/monthly pay. This information has been used to calculate a rate of weekly pay.

8. **Unemployment**: Information on unemployment has been derived from two sources: (1) a question asking respondents whether or not they had been not working and looking for work over the previous four weeks, and (2) the calendar of labour market activity which provides a week-by-week account of the respondent's employment, unemployment and not-in-the-labour force activities.

9. **Occupation**: Employment information was recorded using the Australian Standard Classification of Occupations, First Edition (ASCO). Using this coding scheme, six categories were identified to cover the types of work at age 24. The categories included (1) Upper professional and managerial, (2) lower professional and small-scale managerial (3) technical (4) trades, (5) clerical work, (6) sales and service work, (7) plant and machine operators, and (8) labouring and related work.

10. **Main activity**: This involved the activities that young people reported that they were engaged in at their annual interview. Their main activity was defined as the one which they were doing for the main part of that year (more than six months).

11. **Full-time/part-time work:** Full-time work refers to 30 or more hours per week and part-time work to less than 30 hours.

12. **Not in the labour force**: This included those who were not in paid employment, not in further study or training, and not unemployed.

APPENDIX 2: TABLES 4.1A AND 4.1B

Table 4.1A Type of qualification, by selected background characteristics

Characteristic	Qualification	
	Diploma	Degree
Sex		
Male	13	87
Female	12	88
Rurality		
Urban	12	88
Rural	13	87
SES		
Low	18	82
Lower middle	12	88
Upper middle	14	86
High	8	92
Disability		
No disability	12	88
Disability	17	83
Ethnicity		
Australian-born	12	88
Other-English	13	87
NESB	12	88
School type		
Government	14	86
Catholic	11	89
Independent	8	92
Field of study		
Arts and humanities	7	93
Social sciences	2	98
Business Studies	20	80
Accounting and economics	9	91
Education	1	99
Engineering	7	83
Health sciences	10	90
Medicine and related	6	94
Law and related	3	97
Maths and sciences	10	90
Computing	11	89
Hospitality, travel and tourism	54	46

Table 4.1B Field of study, by selected background characteristics

Characteristic	Arts and humanities	Social sciences	Business Studies	Accounting & economics	Education	Engineering
Sex						
Male	13	3	8	13	6	19
Female	19	7	9	11	10	2
Rurality						
Urban	16	5	9	13	8	9
Rural	18	6	7	10	9	10
SES						
Low	11	4	11	12	9	8
Lower middle	18	4	9	9	11	12
Upper middle	14	8	11	11	9	9
High	21	5	6	14	7	9
Disability						
No disability	16	5	7	12	9	9
Disability	21	6	19	6	4	9
Ethnicity						
Australian-born	18	6	8	11	9	9
NESB	13	3	11	14	5	10
School type						
Government	16	6	7	11	9	10
Catholic	15	5	9	13	10	10
Independent	21	4	11	13	3	7

	Health	Medicine	Law and related	Maths & science	Computing	Hospitality, travel & tour
Sex						
Male	4	5	3	14	10	2
Female	15	5	5	7	4	6
Rurality						
Urban	10	6	4	9	7	4
Rural	11	4	2	11	7	4
SES						
Low	15	2	2	10	10	7
Lower middle	9	9	2	8	9	2
Upper middle	10	5	2	9	6	6
High	9	4	7	11	5	3
Disability						
No disability	10	6	4	9	7	4
Disability	6	0	1	19	4	3
Ethnicity						
Australian-born	11	4	4	10	6	5
NESB	7	9	1	11	13	3
School type						
Government	10	4	3	10	8	5
Catholic	10	6	4	9	7	4
Independent	10	7	9	9	4	2

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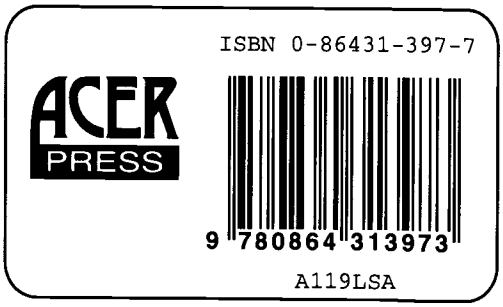

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