

Chapter 3 – Education and Training

Main findings



- Queensland females are more likely to complete secondary school than males.
- In Queensland fewer females than males study technology, sciences and maths in senior school years. Conversely, a greater proportion of females than males study arts and humanities subjects.
- Few female students pursue engineering, information technology or architecture at university.
- Queensland females are more likely than their male counterparts to hold a bachelor's degree, graduate certificate/diploma, or an advanced diploma/diploma, but are less likely than males to have postgraduate qualifications.^a
- Female apprentices and trainees are most likely to be training for clerical, sales and service occupations. In contrast, males are most likely to be completing apprenticeships and traineeships to become tradespersons and related workers.
- Personal/family considerations are the most common barriers preventing females from pursuing further study.
- Indigenous females are more likely than Indigenous males to hold higher education qualifications, but substantially less likely than their non-Indigenous counterparts to have these qualifications.

^a As per the Australian Standard Classification of Education (ASCED).

'Personal/family considerations are the most common barriers preventing females from pursuing further study.'

Introduction

Educational attainment is closely linked to employment prospects and earning potential. Levels of educational attainment are often positively correlated with socioeconomic status and unemployment generally decreases as education levels increase. However, women's incomes, even when they have same level qualifications, are less than men's incomes.

Fields of study can also influence earning potential, with certain occupations and industries being associated with a higher level of pay. From secondary through to post-secondary learning, there are clear gender differences in fields of study. While the number of women studying within non-traditional fields (such as science, business, architecture, agriculture, engineering and information technology) has gradually increased in recent years, women remain underrepresented as both students and workers in these fields, which are often associated with higher average pay, compared with other fields. Underrepresentation also restricts competitive businesses' ability to recruit from an optimal pool of talent and skills.

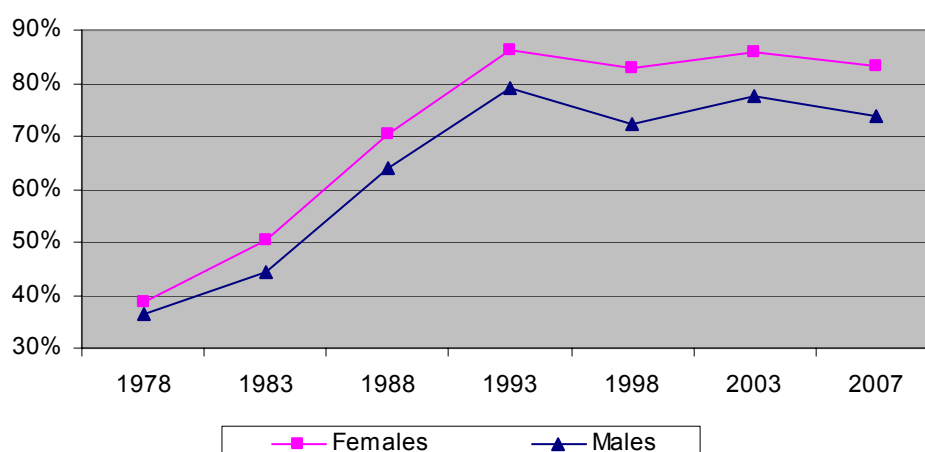
Chapter 4 – Work, and Chapter 5 – Financial Security discuss the relationships between education, labour force participation and income in more detail.

Secondary education

Queensland's secondary school apparent retention rates^b have increased significantly for both males and females over the past 25 years, with females generally more likely than males to finish year 12 (see Figure 3.1).^{1,2} The national apparent retention rate for female students from year 7/8 to year 12 in 2007 was 80.7% (compared with 70.3% for males).³

Figure 3.1

Apparent retention rates for full time students from year 7/8 to year 12 by gender, Queensland, 1978-2007



Sources: Australian Bureau of Statistics ABS, 2004, *Schools, Australia, 2003*, Cat. no. 4221.0, viewed 5 February 2008,

^b Apparent retention rates in this publication, represent the percentage of the student cohort enrolled in year 7/8 who continue through to year 12.

[http://www.ausstats.abs.gov.au/ausstats/subscriber.nsf/o/oB1AE25F1CD8FD0FCA256E430075FC2B/\\$File/42210_2003.pdf](http://www.ausstats.abs.gov.au/ausstats/subscriber.nsf/o/oB1AE25F1CD8FD0FCA256E430075FC2B/$File/42210_2003.pdf)

Australian Bureau of Statistics ABS, 2008, *Schools, Australia, 2007*, Cat. no. 4221.0, viewed 5 February 2008,

[http://www.ausstats.abs.gov.au/ausstats/subscriber.nsf/o/91CC63D5C3277132CA2573FD0015D0EF/\\$File/42210_2007.pdf](http://www.ausstats.abs.gov.au/ausstats/subscriber.nsf/o/91CC63D5C3277132CA2573FD0015D0EF/$File/42210_2007.pdf)

In 2007, approximately 1.9% (3,213) of all 171,974 secondary students enrolled in Queensland state schools were studying part time. Of these part time students 58.8% were female. Females accounted for 62.3% of all part time students completing year 12.⁴

Education statistics highlight distinct trends in the subjects studied by male and female students attending Queensland state schools. Comparison of the 10 most common subjects studied by male and female students reveals commonality in seven of the 10 subjects (see Table 3.1).⁵

Table 3.1
Board subjects with highest number of senior student enrolments by gender, Queensland state secondary schools, 2007

Subject	Number of students	% of all students in class
Females		
English	10,339	56.78
Mathematics A	7,834	55.95
Biology	3,987	64.31
Mathematics B	3,681	47.12
Visual art	3,051	75.69
Business communication & technologies	3,021	63.83
Drama	2,634	74.24
Legal studies	2,560	69.02
Physical education	2,361	40.70
Chemistry	2,081	48.54
Males		
English	7,870	43.22
Mathematics A	6,168	44.05
Mathematics B	4,131	52.88
Physical education	3,440	59.30
Physics	2,504	73.07
Biology	2,213	35.69
Chemistry	2,206	51.46
Multi-strand science	1,720	49.07
Business communication & technologies	1,712	36.17
Information processing & technology	1,694	83.61

Source: Queensland Government Department of Education, Training and the Arts, 2008, *Senior Board Subjects offered in Queensland State Schools, 2007*, unpublished data.

However, examination of those subjects which have a disproportionate representation of either gender reveals that females are heavily overrepresented in arts and humanities subjects and significantly underrepresented in many science, engineering, and technology-related subjects (see Table 3.2).⁶

Table 3.2
Board subjects^(a) with highest and lowest percentage of senior female student representation^(b), Queensland state secondary schools, 2007

Subject	% of all students in class
Highest proportion of female students	
Dance	95.21
Home economics	91.71
Tourism	86.97
Hospitality studies	84.20
Study of society	79.64
English extension (literature)	77.37
Visual art	75.69
Lowest proportion of female students	
Technology studies	8.28
Engineering technology	8.41
Information processing & technology	16.39
Graphics	20.04
Aerospace studies	22.14

^(a) Excludes those subjects studied by less than 100 students in 2007.

^(b) Highest representation refers to at least 75% of all students, while lowest representation refers to less than 25% of all students.

Source: Queensland Government Department of Education, Training and the Arts, 2008, *Senior Board Subjects offered in Queensland State Schools, 2007*, unpublished data.

In Queensland an Overall Position (OP) is awarded to eligible students at the completion of year 12. The OP score range is from 1-25, with 1 being the highest, and scores facilitate entry into various tertiary level education programs. Education Queensland reported that overall, average OP scores for females are slightly better than those of their male counterparts. This trend occurs as the scores of the majority of female students tend to be clustered around the mid OP score, while many male students are likely to have scores which fall within the mid to low score range, skewing their average score towards this mid to low range. Education Queensland suggests that this trend may result from male students' tendency to select 'traditional' subjects in which they may perform poorly. In contrast, it is suggested that female students may be more reserved in their selection of subjects, avoiding those subjects in which they may not succeed.⁷

The Program for International Student Assessment (PISA) provides insight into the science and mathematics performance of students in Australia and internationally. The PISA mathematics and science scales are completed triennially by 15 year old students, with PISA reporting that in 2006 over 400,000 students from 57 countries participated in testing. Results from 2006 testing reveal that average scores for Australian male and female students on the

science scale were comparable, however male students were more likely to have a greater average score than female students on the PISA mathematics scale. Despite this, the average scores for Australian female students on both the science and mathematics scales were higher than both the male and female OECD (international) average scores.⁸

Non-school and post-secondary education

In 2008, 52.6% of Australian females aged 15-64 years had non-school qualifications (including all qualifications other than pre-primary, primary and secondary school completion), compared with 55.3% of males in this age group.⁹ In Australia overall, as of May 2008, there were an estimated 398,300 new enrolments in courses leading to a qualification, of which 54.8% were females. A greater number of women than men began bachelor's degrees in Australia in 2008 (65.2%), however there were slightly more men (52.0%) than women (48.0%) who commenced postgraduate studies.¹⁰ Of the total number of persons enrolled in a course of study in Australia in 2008, 50.8% were female.¹¹

In Queensland by comparison, in 2006-07 there were 32,530 new tertiary enrolments of which 19,462, or 60.5%, were female.¹² Of the total number of persons aged 15-64 years enrolled in a course of study (including school, TAFE, higher education and other institutions) in Queensland in May 2008, 253,900 (51.1%) were women.¹³ Women made up 47.0% of persons with non-school qualifications in Queensland and, as with Australia overall, the numbers of women in Queensland with bachelor's degrees, graduate diplomas/certificates, and advanced diplomas/diplomas were higher than those for men. Fewer women than men had postgraduate degrees, however the proportion of females with postgraduate qualifications increased by four percentage points over the last five years (see Table 3.3). The number of females with non-school qualifications increased across all qualification levels between 2003 and 2008 and the proportion of females with non-school qualifications has increased in all but the graduate certificate/diploma category.^{14,15}

Table 3.3
Level of highest educational attainment^(a) of persons aged 15-64 years by
gender, Queensland, 2003 and 2008

Level of Highest Educational Attainment	2003		2008		% Change 2003 to 2008 ^(a)	
	Persons ('000)	% Female	Persons ('000)	% Female	Persons	Females
Postgraduate degree	44.7	44	83.5	48	87	106
Graduate diploma/certificate	45.2	60	42.2	67	-7	5
Bachelor's degree	262.4	57	388.1	56	48	47
Advanced diploma/diploma	174.7	54	220.8	55	26	27
Certificate	442.8	29	542.1	36	22	51
Year 12	525.4	53	574.0	52	9	7
Year 11	158.2	59	164.7	53	4	-6
Year 10 or below	785.6	56	706.2	53	-10	-15
Level not determined	22.0	36	42.0	53	91	180
Total	2463.1	50	2763.6	50	12	12

^(a) Educational attainment levels are in accordance with the Australian Standard Classification of Education (ASCED).
^(b) Represents the percentage change between years in number of persons and number of females.

Note: Total excludes members of the permanent defence forces, certain diplomatic personnel of overseas governments, overseas residents in Australia, members of non-Australian defence forces (and their dependants), persons permanently unable to work.

Sources: Australian Bureau of Statistics, 2004, *Education and Work, Australia, May 2003*, Cat. no. 6227.0, viewed 5 February 2009, [http://www.ausstats.abs.gov.au/ausstats/subscriber.nsf/o/6A9FoFE4FoD3C2F1CA256DF200712C68/\\$File/62270_may%202003.pdf](http://www.ausstats.abs.gov.au/ausstats/subscriber.nsf/o/6A9FoFE4FoD3C2F1CA256DF200712C68/$File/62270_may%202003.pdf)

Australian Bureau of Statistics, 2008, *Education and Work, Australia, May 2008*, 'Table 13 All Persons, Level of highest educational attainment—by state or territory of usual residence and sex' data cube: Excel spreadsheet, Cat. no. 6227.0, viewed 5 February 2009, <http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/6227.0May%202008?OpenDocument>

Although there are now comparable numbers of males and females attaining non-school qualifications, gendered distinctions exist between the broad study fields chosen by students, as shown in Table 3.4. In 2003 and 2008, the greatest number of female students studied within the management and commerce, and society and culture fields. The highest number of male students were enrolled in management and commerce studies; however the second largest concentration of male students was in the engineering and related technologies field.^{16,17}

Health, education, and society and culture have an overrepresentation of female students (who comprise more than 70% of all students in these fields), which is consistent with the high proportions of women in teaching and nursing professions (as discussed in Chapter 4 – Work). In contrast, female students in information technology, engineering and related technologies and architecture and building comprise less than 25% of all students within those fields. While the number of females studying engineering and related technologies and architecture and building increased between 2003 and 2008, so too did the number of males. The proportion of female students, as a percentage of all students, remained relatively stable for engineering and related technologies but dropped in architecture and building, over the last five years. The number of

students studying information technology has decreased substantially between 2003 and 2008, but the proportion of female students remained stable between years. Statistics suggest between 2003 and 2008 an increasing number of females studied food, hospitality and personal services and agriculture, environmental and related studies.^{18,19}

While the figures for natural and physical sciences indicate a comparable number of males and females students, these figures are skewed by the greater proportion of females studying life sciences such as biology. Women remain underrepresented in physical, earth and mathematical sciences (discussed in detail below).

Table 3.4
Persons aged 15-64 years enrolled in study for a non-school qualification, by field of study^(a), by gender, Queensland, 2003 and 2008

Field of Study	2003		2008		% Change 2003 to 2008	
	Persons ('000)	% Female	Persons ('000)	% Female	Persons	Females
Natural and physical sciences	62.3	56	61.9	50	-1	-12
Information technology	121.1	23	63.7	24	-47	-46
Engineering and related technologies	167.2	9	209.9	9	26	25
Architecture and building	55.3	25	103.2	17	87	22
Agriculture, environmental and related studies	42.8	37	39.9	48	-7	22
Health	152.7	73	186.7	74	22	24
Education	110.1	76	110.8	71	1	-5
Management and commerce	431.4	56	435.4	53	1	-5
Society and culture	297.8	70	305.0	69	2	0
Creative arts	109.7	62	110.6	60	1	-1
Food, hospitality and personal services	49.8	64	76.3	55	53	32

^(a) Fields of study are in accordance with the Australian Standard Classification of Education (ASCED).

Note: Total excludes members of the permanent defence forces, certain diplomatic personnel of overseas governments, overseas residents in Australia, members of non-Australian defence forces (and their dependants), persons permanently unable to work.

Sources: Australian Bureau of Statistics, 2004, *Education and Work, Australia, May 2003*, Cat. no. 6227.0, viewed 5 February 2009, [http://www.ausstats.abs.gov.au/ausstats/subscriber.nsf/o/6A9FoFE4FoD3C2F1CA256DF200712C68/\\$File/62270_may%202003.pdf](http://www.ausstats.abs.gov.au/ausstats/subscriber.nsf/o/6A9FoFE4FoD3C2F1CA256DF200712C68/$File/62270_may%202003.pdf)

Australian Bureau of Statistics, 2008, *Education and Work, Australia, May 2008*, 'Table 4 Persons Enrolled in a Course of Study for a Qualification, Main field of education of current study—by age and sex' data cube: Excel spreadsheet, Cat. no. 6227.0, viewed 5 February 2009, <http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/6227.0May%202008?OpenDocument>

In 2006, female university students were more likely than their male counterparts to study part time. An examination of Queensland universities highlighted that women comprised 54.5% of all internal students studying part time and 54.1% of all external students studying part time.²⁰

Vocational study and training

Vocational qualifications may be obtained by formal study through Vocational Education and Training (VET), as well as through trade apprenticeships. VET is an industry-led system, delivering training packages through registered training organisations such as Technical and Further Education (TAFE) institutes, universities, schools and adult education providers.²¹

In 2006, females made up 47% of VET students nationally and 46% of students in Queensland. As with other types of study, females tended to be underrepresented in non-traditional fields including: architecture and building (8% of all students); engineering and related technologies (10% of all students); agriculture, environmental and related studies (24% of all students); and information technology (36% of all students). Almost two-thirds (63%) of all Australian apprentices and trainees in 2006 were male, with almost half of all female apprentices and trainees seeking qualifications for clerical, sales and service occupations. In contrast, over 60% of males were completing apprenticeships and traineeships to become tradespersons and related workers. Females accounted for only 12% of all persons undertaking an apprenticeship or traineeship to become a tradesperson or related worker.²² It is currently estimated that females account for less than 2% of Australia's manual tradespersons.²³

Female students in non-traditional fields

Females have historically been underrepresented in the areas of science, engineering and technology, and as such these educational specialisations are considered to be 'non-traditional' for females. Interestingly, available data indicates that these fields tend to attract a high average wage, compared to other occupational areas.²⁴

In Queensland in 2007, 63.1% of female year 12 students were represented in biological sciences, 50.1% in multi-strand science, 48.6% in chemistry, 28.3% in earth science and 28.4% in physics. The number of females studying science-related subjects in Queensland has remained relatively stable over the last 20 years. For example, in 2001 females accounted for 28.8% of year 12 students studying physics, 31.5% in 1996 and 30.9% in 1989. Similarly, in 2001 females comprised 63.1% of year 12 students studying biology, 61.6% in 1996 and 58.4% in 1989.²⁵

The dominance of females in biology and life sciences continues through to post-secondary education. In 2006, females commencing tertiary degrees at Queensland universities accounted for 58.3% of bachelor's degree commencements in natural and physical sciences, 74.3% in biological sciences and 59.4% in microbiology. Outside the sphere of biological and life sciences, female commencement rates were lower, with females comprising 31.8% of bachelor's degree commencements in geology and 46.2% in chemical sciences.²⁶

In Queensland in 2007 32.0% of maths C students were female, 46.8% of maths B students were female, and 17.8% of information processing and technology (IPT) students were female and 33.2% of information technology systems students were female.²⁷

The number of female year 12 students studying maths B and maths C in Queensland has remained relatively stable during the last 10 years; however the

number of female IPT students has declined. In 1989, 38.8% of IPT students were female, decreasing to 23.4% in 2001 and 17.8% in 2007. Conversely, the proportion of female year 12 students in information technology systems subjects has increased from 23.6% in 2001 to 33.2% in 2007.²⁸

In all information technology-related courses at Queensland universities, females constituted 19.3% of students commencing bachelor's degrees and 19.4% of completing students in 2006.²⁹

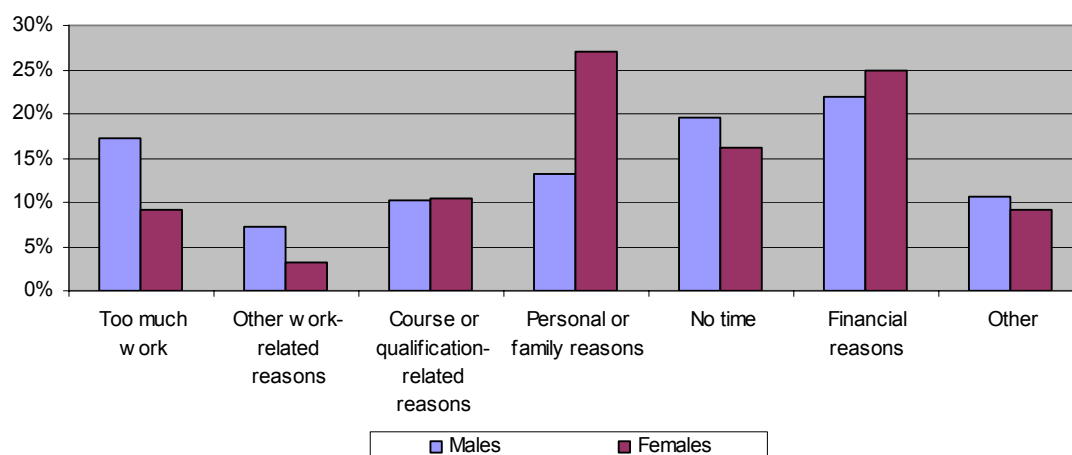
Figures released by the Department of Education, Science and Technology highlighted that of the students commencing all information technology-related courses (from non-award level to doctorate level) in Queensland in 2006, 18.9% were women and in 2001, 22.4% were women. Overall, both men's and women's participation in information technology studies declined during this period; however the number of males participating in this area remains high.³⁰

Females in Queensland made up just 14.1% of those commencing a bachelor's degree in engineering and related technologies in 2006 and 13.9% of students completing this degree in 2006. During the same period, females comprised 29.4% of bachelor's degree commencements in chemical engineering, 31.8% in mining engineering and 10.7% in civil engineering.³¹

Barriers to education

More women than men report facing barriers to education. In a survey conducted by the Australian Bureau of Statistics, persons aged 15 -69 years who had wanted to study for an education qualification but did not do so, were asked to identify the main barriers to their study (see Figure 3.2). In Queensland, 252,000 female respondents and 215,400 male respondents identified that they did not study for an educational qualification but had wanted to. Queensland women are much more likely than Queensland men to cite personal or family considerations as the main reason they did not undertake study (27% of women who did not study but had wanted to). Financial reasons were also a barrier (25% of women who did not study but had wanted to), and this may be linked to women generally earning less than their male counterparts (see Chapter 5 - Financial Security). The most common barriers cited by men were financial reasons and having no time (22% and 20% of men who had wanted to study, respectively).³²

Figure 3.2
Barriers to education: main reason for not undertaking study for a qualification for persons aged 15-69, by gender, Queensland, 2005



Source: Australian Bureau of Statistics, 2006, *Education and Training Experience, Australia, 2005*, 'Table 31. Persons aged 15-69 years not at school: Barriers to study and training, weighted estimates - Queensland - 2005', data cube: Excel spreadsheet, Cat. no. 6278.0, viewed 5 February 2009, [http://www.ausstats.abs.gov.au/ausstats/ABS@Archive.nsf/o/83F7127753B8936CA2571E7001F2AC5/\\$File/62780_qld.xls](http://www.ausstats.abs.gov.au/ausstats/ABS@Archive.nsf/o/83F7127753B8936CA2571E7001F2AC5/$File/62780_qld.xls)

Indigenous women's education

Nationally, Indigenous students attend secondary school at a lower rate than the general community, with an apparent school retention rate from Year 7/8 to Year 12 of 43% in 2007, compared with 76% for non-Indigenous students. However, the Indigenous school retention rate increased in 2007 by 3 percentage points from 2006, compared with the non-Indigenous rate, which decreased by 0.3 percentage points. Between 1997 and 2007 the number of Indigenous full time school students in Queensland increased by around 68%, with the increase for female students lower than that for males (66% and 69% respectively). In 2007 there was also a greater number of full time male Indigenous students than female students, with female students comprising 49% of all Indigenous full time students in Queensland.³³

Nationally, the majority (59%) of Indigenous full time students attended schools in New South Wales or Queensland. In 2007 there were more Indigenous full time students in Queensland than in any other state in Australia, with Queensland's students making up 29% of all Indigenous students nationally.³⁴ Furthermore, a greater proportion of Indigenous students completed year 12 in Queensland, compared with Australia as a whole (30% and 23% respectively).³⁵

Indigenous non-school education rates have increased significantly for persons aged 25-64 over recent years in Queensland and Australia overall, but participation is still much lower proportionately than the total population, with non-Indigenous persons twice as likely to hold non-school qualifications.³⁶ Nationally, between 1986 and 2006, there was a substantial increase in the proportion of Indigenous persons with non-school qualifications, from 12% in 1986 to 26% in 2006. However, when considering participation in university education only, Indigenous persons are significantly underrepresented. Only 5%

of the Australian Indigenous population held bachelor's degrees in 2006 compared with 20% of the non-Indigenous population.³⁷

While the proportion of Australian Indigenous males and females aged 25-64 with non-school qualifications is equal (26%), Indigenous women were more likely than their male counterparts to have university qualifications, while Indigenous males were more likely than females to hold vocational education and training qualifications. Although more Indigenous women than men have higher education qualifications Indigenous men are still more likely to study engineering and related technologies, and architecture and building.³⁸

Education and income

Labour force participation and income are closely linked to highest level of educational attainment. Males with qualifications generally earn more than females with the same level of qualification, even after accounting for women's greater representation in part time work (refer Table 3.5). The only exceptions to this trend are amongst those part time workers whose highest educational qualifications are either year 11 or a graduate certificate or diploma, with females recording higher average weekly earnings than their male counterparts. The most pronounced difference in average weekly earnings for males and females with the same level of qualification was for those full time workers with a Certificate I or II, with female's average weekly earnings only 63% of those for males with this type of qualification. Despite the pay gap between men and women, income levels generally increased for both sexes as the level of non-school qualification increased.³⁹

Table 3.5
Average usual weekly earnings, by level of highest educational attainment^(a), by gender, Queensland, 2005

Level of highest educational attainment	Full Time Average Weekly Earnings (\$)		Female earnings as a % of male earnings	Part Time Average Weekly Earnings (\$)		Female earnings as a % of male earnings
	Males	Females		Males	Females	
Postgraduate degree	1,711	1,370	80	873	769	88
Graduate diploma/graduate certificate	1,491	1,102	74	372	572	154
Bachelor's degree	1,352	998	74	568	440	77
Advanced diploma/diploma	1,045	770	74	527	430	82
Certificate III/IV	980	671	68	438	374	85
Certificate I/II	1,042	661	63	-	296	N/A
Year 12	840	663	79	290	265	91
Year 11	917	608	66	325	371	114
Year 10 or below	802	691	86	349	305	87

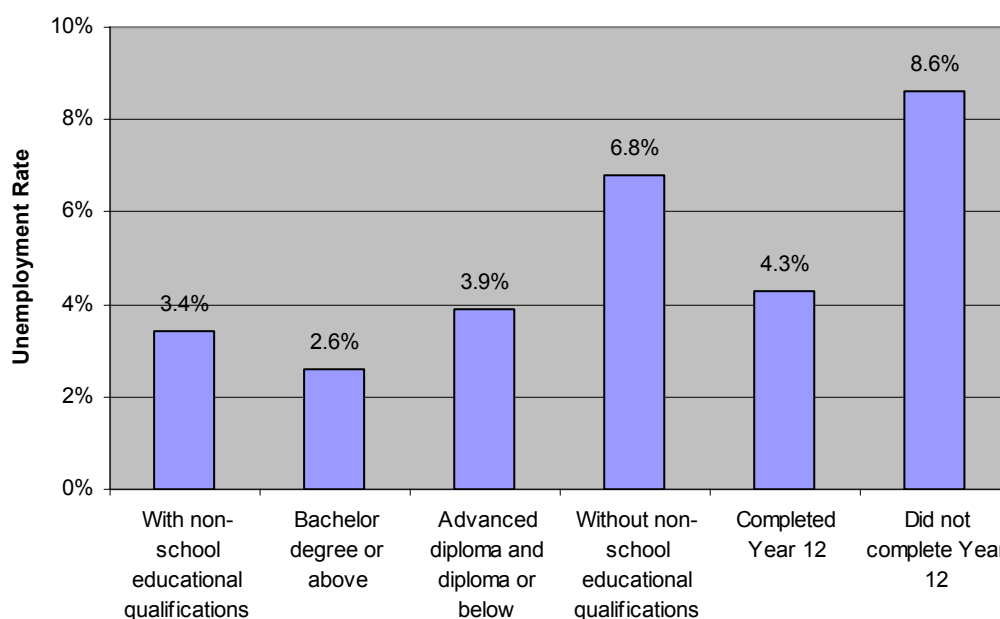
^(a) Educational attainment levels are in accordance with the Australian Standard Classification of Education (ASCED).

Note: Data relates to persons aged 15 years and over, excluding owner-managers of incorporated enterprises.

Source: Australian Bureau of Statistics, 2006, *Education and Training Experience, Australia, 2005*, 'Table 12. Employees Excluding Owner Managers of Incorporated Enterprises aged 15 years and over not at school: Mean usual weekly earnings in current main job, Weighted estimates - Queensland - 2005', data cube: Excel Spreadsheet, Cat. no. 6278.0, viewed 9 February 2009, [http://www.ausstats.abs.gov.au/ausstats/ABS@Archive.nsf/o/83F71277753B8936CA2571E7001F2AC5/\\$File/62780_qld.xls](http://www.ausstats.abs.gov.au/ausstats/ABS@Archive.nsf/o/83F71277753B8936CA2571E7001F2AC5/$File/62780_qld.xls)

Examination of the unemployment rates of persons with varying levels of educational attainment reveals that there is a negative correlation between unemployment rates and attainment of school and non-school qualifications (see Figure 3.3), with unemployment decreasing as educational attainment increases.⁴⁰

Figure 3.3
Unemployment rates by educational attainment, Australia, 2007



Source: Australian Bureau of Statistics, 2007, *Australian Social Trends 2007*, Cat. no. 4102.0, viewed 9 February 2009, [http://www.ausstats.abs.gov.au/ausstats/subscriber.nsf/0/51EE403E951E7FDACA25732F001CAC21/\\$File/41020_2007.pdf](http://www.ausstats.abs.gov.au/ausstats/subscriber.nsf/0/51EE403E951E7FDACA25732F001CAC21/$File/41020_2007.pdf)

¹ Australian Bureau of Statistics, 2004, *Schools, Australia, 2003*, Cat. no. 4221.0, viewed 5 February 2008, [http://www.ausstats.abs.gov.au/ausstats/subscriber.nsf/0/0B1AE25F1CD8FD0FCA256E430075FC2B/\\$File/42210_2003.pdf](http://www.ausstats.abs.gov.au/ausstats/subscriber.nsf/0/0B1AE25F1CD8FD0FCA256E430075FC2B/$File/42210_2003.pdf)

² id., 2008, *Schools, Australia, 2007*, Cat. no. 4221.0, viewed 5 February 2008, [http://www.ausstats.abs.gov.au/ausstats/subscriber.nsf/0/91CC63D5C3277132CA2573FD0015D0EF/\\$File/42210_2007.pdf](http://www.ausstats.abs.gov.au/ausstats/subscriber.nsf/0/91CC63D5C3277132CA2573FD0015D0EF/$File/42210_2007.pdf)

³ ibid.

⁴ Queensland Government Department of Education Training and the Arts, 2008, *Queensland State School Secondary Student Enrolments - Count of Full and part time Students by Year Level, August 2007*, unpublished data.

⁵ id., *Senior Board Subjects offered in Queensland State Schools, 2007*, unpublished data.

⁶ ibid.

⁷ Education Queensland, 2002, *Final results and post-school outcomes*, viewed 4 February 2008, <http://education.qld.gov.au/students/advocacy/equity/gender-sch/trouble/part-final.html>

⁸ The Programme for International Student Assessment (PISA), 2007, *PISA 2006 Science Competencies for Tomorrow's World*, viewed 5 February 2009, http://www.pisa.oecd.org/document/2/0,3343,en_32252351_32236191_39718850_1_1_1_1,00.html

⁹ Australian Bureau of Statistics, 2008, *Education and Work, Australia, May 2008*, 'Table 23 Survey of Education and Work, Populations—by Sex', data cube: Excel spreadsheet, Cat. no. 6227.0, viewed 5 February 2009, <http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/6227.0May%202008?OpenDocument>

¹⁰ id., 2008, *Education and Work, Australia, May 2008*, 'Table 18 Starters, Level and main field of education of current study for a qualification—by age and sex', data cube: Excel spreadsheet, Cat. no. 6227.0, viewed 5 February 2009, <http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/6227.0May%202008?OpenDocument>

¹¹ id., 2008, *Education and Work, Australia, May 2008*, 'Table 3 Persons Enrolled in a Course of Study for a Qualification, Level of education of current study—by age and sex', data cube: Excel spreadsheet, Cat. no. 6227.0, viewed 5 February 2009, <http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/6227.0May%202008?OpenDocument>

¹² Queensland Tertiary Admissions Centre (QTAC), *Statistical Reports 2007-2008*, viewed 5 February 2009, <http://www.qtac.edu.au/Statistics/2007-2008.htm>

- ¹³ Australian Bureau of Statistics, 2008, *Education and Work, Australia, May 2008*, 'Table 1 Persons Enrolled in a Course of Study, Selected characteristics—by state or territory of usual residence', data cube: Excel spreadsheet, Cat. no. 6227.0, viewed 5 February 2009, <http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/6227.0May%202008?OpenDocument>
- ¹⁴ id., 2008, *Education and Work, Australia, May 2008*, 'Table 13 All Persons, Level of highest educational attainment—by state or territory of usual residence and sex', data cube: Excel spreadsheet, Cat. no. 6227.0, viewed 5 February 2009, <http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/6227.0May%202008?OpenDocument>
- ¹⁵ id., 2004, *Education and Work, Australia, May 2003*, Cat. no. 6227.0, viewed 5 February 2009, [http://www.ausstats.abs.gov.au/ausstats/subscriber.nsf/0/6A9FoFE4FoD3C2F1CA256DF200712C68/\\$File/62270_may%202003.pdf](http://www.ausstats.abs.gov.au/ausstats/subscriber.nsf/0/6A9FoFE4FoD3C2F1CA256DF200712C68/$File/62270_may%202003.pdf)
- ¹⁶ ibid.
- ¹⁷ id., 2008, *Education and Work, Australia, May 2008*, 'Table 4 Persons Enrolled in a Course of Study for a Qualification, Main field of education of current study—by age and sex', data cube: Excel spreadsheet, Cat. no. 6227.0, viewed 5 February 2009, <http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/6227.0May%202008?OpenDocument>
- ¹⁸ id., 2004, *Education and Work, Australia, May 2003*, Cat. no. 6227.0, viewed 5 February 2009, [http://www.ausstats.abs.gov.au/ausstats/subscriber.nsf/0/6A9FoFE4FoD3C2F1CA256DF200712C68/\\$File/62270_may%202003.pdf](http://www.ausstats.abs.gov.au/ausstats/subscriber.nsf/0/6A9FoFE4FoD3C2F1CA256DF200712C68/$File/62270_may%202003.pdf)
- ¹⁹ id., 2008, *Education and Work, Australia, May 2008*, 'Table 4 Persons Enrolled in a Course of Study for a Qualification, Main field of education of current study—by age and sex', data cube: Excel spreadsheet, Cat. no. 6227.0, viewed 5 February 2009, <http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/6227.0May%202008?OpenDocument>
- ²⁰ Department of Education Science and Training, 2006, *Selected Higher Education Statistics*, unpublished data.
- ²¹ Australian Bureau of Statistics, 2008, *Year Book 2008*, Cat. no. 1301.0, viewed 9 February 2009, <http://www.abs.gov.au/AUSSTATS/abs@.nsf/bb8db737e2af84b8ca2571780015701e/C280D93D00F45E46CA2573D200107D9B?opendocument>
- ²² ibid.
- ²³ id., 2008, *Australian Labour Statistics, January 2008*, Cat. no. 6105.0, viewed 9 February 2009, <http://www.abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/A40DA9DB8D248DD4CA257420000D7E1E?opendocument>
- ²⁴ id., 2006, *Employee Earnings and Hours, Australia, May 2006*, 'Table 1a. Average Weekly Cash Earnings and Hours Paid For, Full time non-managerial adult employees - Detailed occupation (ANZSCO)', data cube: Excel spreadsheet, viewed 10 February 2009, [http://www.ausstats.abs.gov.au/ausstats/subscriber.nsf/0/1D492667CDF1BE94CA25728F0016A0F9/\\$File/6306001a.xls](http://www.ausstats.abs.gov.au/ausstats/subscriber.nsf/0/1D492667CDF1BE94CA25728F0016A0F9/$File/6306001a.xls)
- ²⁵ Queensland Studies Authority, 2008, *2007 Subject Enrolments and Levels of Achievement by Syllabus Advisory Committee and Sex*, viewed 5 February 2009, http://www.qsa.qld.edu.au/downloads/about/stats_sen_subjects_2007.pdf
- ²⁶ Department of Science, Education and Training, 2001-2006, *Higher Education Statistics Collections*, viewed 10 February 2009, http://www.dest.gov.au/sectors/higher_education/publications_resources/statistics/publications_higher_education_statistics_collections.htm
- ²⁷ Queensland Studies Authority, 2008, *2007 Subject Enrolments and Levels of Achievement by Syllabus Advisory Committee and Sex*, viewed 5 February 2009, http://www.qsa.qld.edu.au/downloads/about/stats_sen_subjects_2007.pdf
- ²⁸ ibid.
- ²⁹ Department of Science, Education and Training, loc. cit.
- ³⁰ ibid.
- ³¹ ibid.
- ³² Australian Bureau of Statistics, 2006, *Education and Training Experience, Australia, 2005*, 'Table 31 Persons aged 15-69 years not at school: Barriers to study and training, Weighted estimates - Queensland - 2005', data cube: Excel spreadsheet, Cat. no. 6278.0, viewed 5 February 2009, [http://www.ausstats.abs.gov.au/ausstats/ABS@Archive.nsf/0/83F71277753B8936CA2571E7001F2AC5/\\$File/62780_qld.xls](http://www.ausstats.abs.gov.au/ausstats/ABS@Archive.nsf/0/83F71277753B8936CA2571E7001F2AC5/$File/62780_qld.xls)
- ³³ id., 2008, *Schools, Australia, 2007*, Cat. no. 4221.0, viewed 5 February 2009, [http://www.ausstats.abs.gov.au/ausstats/subscriber.nsf/0/91CC63D5C3277132CA2573FD0015DoEF/\\$File/42210_2007.pdf](http://www.ausstats.abs.gov.au/ausstats/subscriber.nsf/0/91CC63D5C3277132CA2573FD0015DoEF/$File/42210_2007.pdf)
- ³⁴ ibid.
- ³⁵ id., 2008, *The Health and Welfare of Australia's Aboriginal and Torres Strait Islander Peoples, 2008*, Cat. no. 4704.0, viewed 9 February 2009, <http://www.abs.gov.au/AUSSTATS/abs@.nsf/39433889d406eeb9ca2570610019e9a5/649A8316859C2BD7CA2574390014A031?opendocument>
- ³⁶ ibid.
- ³⁷ id., 2009, *A Picture of the Nation: the Statistician's Report on the 2006 Census*, Cat. no. 2070.0, viewed 9 February 2009, <http://www.abs.gov.au/ausstats/abs@.nsf/mf/2070.0?OpenDocument>
- ³⁸ id., 2008, *The Health and Welfare of Australia's Aboriginal and Torres Strait Islander Peoples, 2008*, Cat. no. 4704.0, viewed 9 February 2009, <http://www.abs.gov.au/AUSSTATS/abs@.nsf/39433889d406eeb9ca2570610019e9a5/649A8316859C2BD7CA2574390014A031?opendocument>
- ³⁹ id., 2006, *Education and Training Experience, Australia, 2005*, 'Table 12. Employees Excluding Owner Managers of Incorporated Enterprises aged 15 years and over not at school: Mean usual weekly earnings in current main job, Weighted estimates - Queensland - 2005', data cube: Excel Spreadsheet, Cat. no. 6278.0, viewed 9 February 2009, [http://www.ausstats.abs.gov.au/ausstats/ABS@Archive.nsf/0/83F71277753B8936CA2571E7001F2AC5/\\$File/62780_qld.xls](http://www.ausstats.abs.gov.au/ausstats/ABS@Archive.nsf/0/83F71277753B8936CA2571E7001F2AC5/$File/62780_qld.xls)
- ⁴⁰ id., 2007, *Australian Social Trends 2007*, Cat. no. 4102.0, viewed 9 February 2009, [http://www.ausstats.abs.gov.au/ausstats/subscriber.nsf/0/51EE403E951E7FDACA25732F001CAC21/\\$File/41020_2007.pdf](http://www.ausstats.abs.gov.au/ausstats/subscriber.nsf/0/51EE403E951E7FDACA25732F001CAC21/$File/41020_2007.pdf)