GOS
graduate outcomes survey

QILT
quality indicators for learning and teaching

2016 Graduate Outcomes Survey

National Report

NOVEMBER 2016

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For more information on the conduct and results of the QILT survey program see the Quality Indicators for Learning and Teaching (QILT) website. The QILT team can be contacted by email at qilt@srcentre.com.au

Executive summary

From 2016, the Graduate Outcomes Survey (GOS) replaces the Australian Graduate Survey (AGS) and its associated suite of surveys and publications previously administered by Graduate Careers Australia. Those surveys included: the Graduate Destination Survey (GDS) conducted since 1974 measuring the labour market outcomes of graduates; the Course Experience Questionnaire (CEQ), conducted since 1993, measuring graduate satisfaction with their coursework experience; and, the Postgraduate Research Experience Questionnaire (PREQ), conducted since 1999, measuring satisfaction with postgraduate research experience.

The GOS departs from the GDS in that it conforms to the conceptual framework of the standard labour force statistics model used by the Australian Bureau of Statistics (ABS). With the growth of female and part-time employment in recent years in both the wider and graduate labour market, it is appropriate to move beyond a focus on full-time employment. This report shows measures of the proportion of graduates in full-time employment, overall employment and their labour force participation rate, consistent with ABS labour force definitions.

The 2016 GOS was primarily conducted as a national online survey among 96 higher education institutions including all 40 Table A and B universities and 56 Non-University Higher Education Institutions (NUHEIs). A total of 104,208 valid survey responses were collected across all study levels, representing a response rate of 39.7 per cent.

70.9%
undergraduates in full-time employment

86.4%
undergraduates employed overall

National results

In 2016, 70.9 per cent of undergraduates were in full-time employment four months after completing their degree, up from 68.8 per cent on the previous year. Notwithstanding changes in survey methodology, the slight increase in the full-time employment rate would appear consistent with the modest improvement in the overall labour market over the period.

The overall employment rate for undergraduate was 86.4 per cent in 2016, down from 89.5 per cent a year earlier as measured by the 2015 AGS. Given improvement to the overall labour market, this change is more likely due to a change in survey methodology rather than a genuine reduction in the overall employment rate. For a more substantive discussion of the comparability of estimates derived from the AGS and GOS see Section 2 in the main body of the report and Appendix 3.

Table 1 **Graduate employment and study outcomes, by study level, 2015 and 2016**

	Undergraduate		Postgraduate coursework		Postgraduate research	
	2015	2016	2015	2016	2015	2016
In full-time employment (as a proportion of those available for full time work) (%)	68.8	70.9	82.7	85.1	73.0	80.1
Overall employed (as a proportion of those available for any work) (%)	89.5	86.4	92.7	92.4	89.9	90.3
Labour force participation rate (%)	93.7	92.0	94.4	95.7	92.0	93.0
Median salary, employed full-time ($)	54,000	57,900	80,000	80,000	82,000	85,000
In full-time study (%)	19.7	21.8	5.4	7.3	4.7	6.8

Further study, on average, confers additional benefits in the labour market, more so for postgraduate coursework graduates. The proportion of postgraduate coursework graduates in full-time employment in 2016 was 85.1 per cent. In addition, 92.4 per cent were in overall employment while their labour force participation rate was 95.7 per cent. Labour market outcomes for postgraduate research graduates were similarly higher than for bachelor graduates with 80.1 per cent in full-time employment, 90.3 per cent in overall employment and a labour force participation rate of 93.0 per cent.

Since the Global Financial Crisis (GFC), graduates have taken longer to gain a foothold in the labour market. For example, the full-time employment rate among undergraduates fell from 85.2 per cent in 2008 to 70.9 per cent in 2016. Similarly, the full-time employment rate among postgraduate coursework graduates has fallen from 90.1 per cent in 2008 to 85.1 per cent in 2016 and among postgraduate research graduates it has fallen from 87.6 per cent to 80.1 per cent over the same period. The 2016 Graduate Outcomes Survey-Longitudinal (GOS-L) shows that graduates do succeed over time with many more graduates in work three years after graduation. In 2013, 70.9 per cent of graduates were in full-time employment immediately upon graduation. Three years later, 88.4 per cent of the same cohort of graduates had found full-time work.

Figure A **Full-time employment rate**

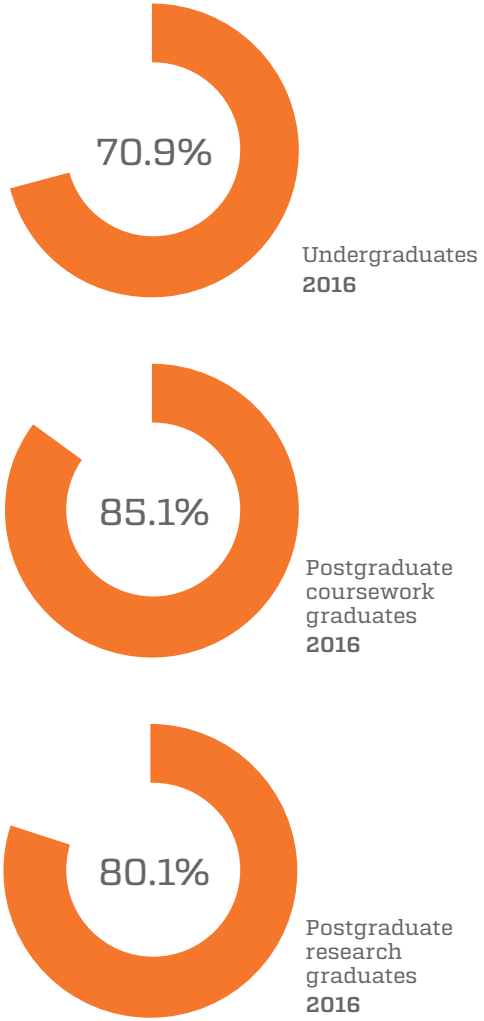
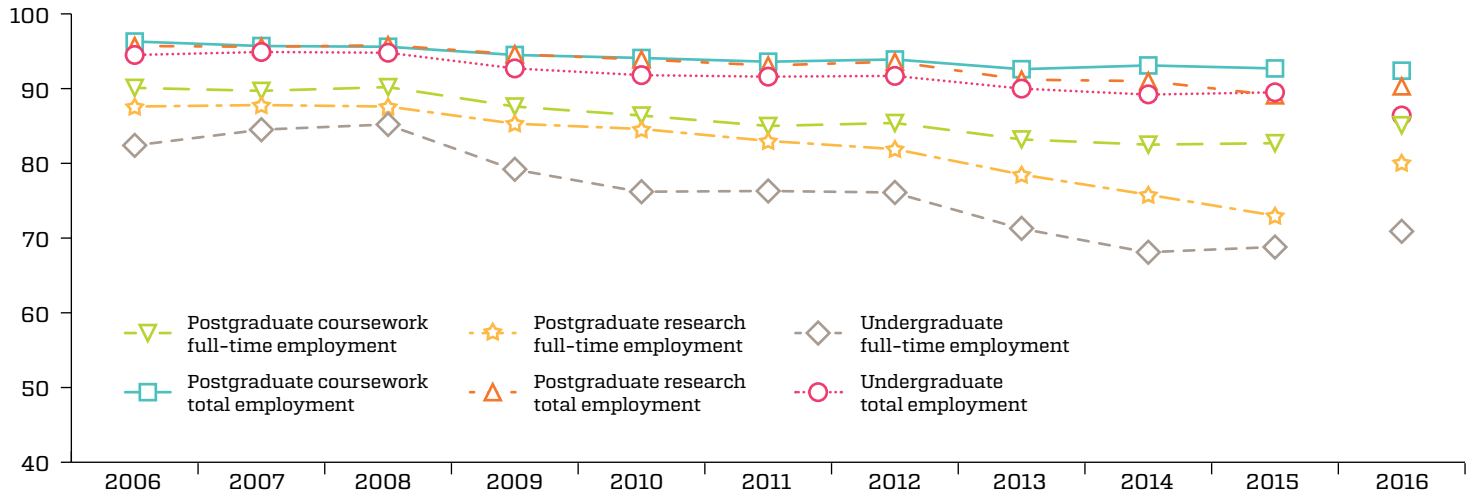


Figure 1 **Full-time and overall employment rates, by study level, 2006–2016 (%)**



Undergraduates from more vocationally oriented study areas tend to have greater success in the labour market immediately upon graduation. In 2016, Medicine, Pharmacy and Veterinary science graduates had the highest rates of full-time employment at 98.2, 96.3 and 89.8 per cent respectively. However, note that some study areas traditionally have high employment rates immediately upon graduation arising from professional registration requirements.

Conversely, undergraduates with more generalist degrees can take longer to gain a foothold in the labour market immediately upon graduation. Study areas with the lowest rates of full-time employment in 2016 were Creative arts, Agriculture and environmental studies (mainly due to outcomes for Environmental studies graduates), Communications, Psychology, Science and mathematics and, Humanities, culture and social science which all had full-time employment rates of less than 62 per cent. Similar patterns in overall employment and labour force participation rates are observed by study area.

As noted above, the 2016 Graduate Outcomes Survey-Longitudinal (GOS-L) shows that three years after graduation, many more graduates find work and this is especially the case among graduates with more generalist degrees. For example, study areas with the lowest full-time employment rate immediately upon graduation in 2013 included Creative arts and Science and mathematics at 49.2 per cent and 53.5 per cent respectively. Three years later, their full-time employment rate had increased appreciably to 80.1 per cent and 82.0 per cent respectively.

In 2016, 71.2 per cent of university undergraduates were in full-time employment immediately upon graduation and 86.5 per cent in overall employment. By way of comparison, 63.0 per cent of non-university higher education institution (NUHEIs) undergraduates were in full-time employment and 83.1 per cent in overall employment. However, it is important to note these comparisons of employment outcomes by sector take no account of the different characteristics of students in each sector such as the different proportions of graduates by study area or level of education. For example, NUHEIs have a higher proportion of sub-bachelor graduates and these graduates tend to have lower employment outcomes than bachelor graduates.

Skills utilisation

In 2016, 38.4 per cent of employed undergraduates were working part-time. The rate of involuntary part-time employment, as measured by the proportion of employed undergraduates seeking more hours of work, was 21.4 per cent. The main reasons that undergraduates are working in involuntary part-time employment are because they were studying, 21.4 per cent, because there are no suitable jobs in their area of expertise, 19.9 per cent, or because there are no jobs with a suitable number of hours, 17.1 per cent. On the other hand, the majority, 54.8 per cent, of undergraduates working in voluntary part-time employment, do so because they are engaged in further study.

The proportion of undergraduates working in managerial and professional occupations is one measure of skills utilisation. These occupations are defined by the ABS as being commensurate with requiring bachelor level or higher qualifications. In 2016, four months after graduation, 72.3 per cent of undergraduates employed full-time were working in managerial or professional occupations. Undergraduates employed part-time were less likely to be employed in managerial and professional occupations as 59.2 per cent of all employed undergraduates were working in these occupations four months after graduation.

Graduates were also asked to indicate whether or not they believed that they were working in a job that allowed them to fully use their skills or education. This provides a benchmark of the underutilisation of skills, and as such, it will be important to monitor changes in this measure over time. 29.1 per cent of undergraduates employed full-time in 2016 and 42.1 per cent of overall employed undergraduates reported that they were not fully using their skills or education in their current position.

Around a quarter of employed undergraduates, 25.8 per cent, said they were not fully utilising their skills or education because there were no suitable jobs in their area of expertise and a further 15.4 per cent said this was because there were no suitable jobs in their local area. Graduates employed part-time were more likely to state that they did not use their skills or education in their current job because they were engaging in further study. 23.9 per cent of all employed graduates stated this reason in comparison with 8.4 per cent of graduates employed full-time.

Employed undergraduates with a degree in Psychology were most likely to report that their skills and education were not being fully used in their current job, 66.8 per cent, followed by Humanities, culture and social sciences, 60.5 per cent and, Science and mathematics undergraduates, 58.1 per cent. Between one fifth and one quarter of persons in each of these three study areas said that the main reason their skills were not fully utilised was because there were no suitable jobs in their area of expertise.

In 2016, 71.1 per cent of university undergraduates and 63.0 per cent of non-university higher education institution (NUHEIs) undergraduates were in full-time employment four months after graduation

Salaries

The median salary of all undergraduates employed full-time in 2016 was $57,900, for postgraduate coursework graduates it was $80,000 and for postgraduate research graduates it was $85,000, as shown in Table 1. Reporting of graduate salaries in the 2016 GOS has been extended to all graduates employed full-time. Previously, the graduate median salary reported in the 2015 AGS of $54,000, referred to bachelor graduates employed full-time aged 25 or less and in their first full-time employment. The inclusion of older graduates and graduates with an ongoing relationship with an employer is likely to increase the estimate of the median salary of graduates in 2016 in comparison with 2015, all other things being equal.

Female undergraduates earn significantly less than male undergraduates, $56,400 and $60,000 respectively. In 2016, the gender gap in undergraduate median salaries was $3,600 or 6.4 per cent. The gender gap in salaries is explained, in part, by the fact that females are more likely to graduate from study areas which receive lower levels of remuneration. However, it is also the case that females generally earn less than their male counterparts within most study areas. Computing and information systems and Psychology are the exceptions where female undergraduate median salaries are higher than for their male counterparts. This demonstrates that beyond subject choice, the gender gap in median graduate salaries persists due to a range of other factors such as occupation, age, experience, personal factors and possible inequalities within workplaces.

Further study

21.8 per cent of undergraduates were engaged in further full-time study, four months after graduation in 2016. Health was the most popular area for further full-time study following an undergraduate degree, with 26.6 per cent of those proceeding to further study selecting this area.

Satisfaction

Overall satisfaction and satisfaction with generic skills among undergraduates remained high in 2016, being 80.6 per cent and 82.1 per cent respectively. Satisfaction with the quality of teaching was lower at 63.0 per cent.

Similarly, postgraduate coursework graduates overall satisfaction and satisfaction with generic skills was high at 82.5 per cent and 78.3 per cent respectively. Satisfaction with the quality of teaching was lower at 68.3 per cent.

In 2016, 85.5 per cent of postgraduate research graduates expressed overall satisfaction with their degree. Postgraduate research graduates were more satisfied with their skills development, 94.1 per cent, setting of goals and expectations, 91.2 per cent, and supervision, 81.2 per cent. They were less satisfied with the intellectual climate, 60.7 per cent, infrastructure, 75.6 per cent and thesis examination, 77.9 per cent.

Figure B **Median salary employed full-time**

57.9k
undergraduates

80.0k
postgraduate coursework graduates

85.0k
postgraduate research graduates

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1 Introduction

The 2016 Graduate Outcomes Survey (GOS) measures the destinations and satisfaction of recent higher education graduates. As such, it measures key outcomes providing assurance about the quality of Australia's higher education sector. The GOS has been included as part of the Quality Indicators for Learning and Teaching (QILT) survey suite. The QILT are independently and centrally administered by the Social Research Centre on behalf of the Australian Government Department of Education and Training.

From 2016, the GOS replaces the Australian Graduate Survey (AGS) and its associated suite of surveys and publications previously administered by Graduate Careers Australia. The GOS, in replacing the Graduate Destination Survey (GDS), continues the long tradition established since 1974 of measuring the labour market experience and destinations of recent higher education graduates. The GOS also encompasses the Course Experience Questionnaire (CEQ) measuring graduate satisfaction with their coursework experience since 1993. It also encompasses the Postgraduate Research Experience Questionnaire (PREQ) measuring satisfaction with postgraduate research experience since 1999.

The 2016 GOS was primarily conducted as a national online survey among 96 higher education institutions including all 40 Table A and B universities and 56 Non-University Higher Education Institutions (NUHEIs). A total of 104,208 valid survey responses were collected across all study levels, representing a response rate of 39.7 per cent. Further information on survey methodology and response rates is included in Appendix 1. All data presented in the main body of the report refer to all institutions. Data for universities and NUHEIs are presented in Appendix 7.

2 Comparison of AGS and GOS estimates

Improvements in the administration of the 2016 GOS have resulted in a break in time series between AGS and GOS survey estimates. The GOS departs from the AGS in that it conforms to the conceptual framework of the standard labour force statistics model used by the Australian Bureau of Statistics (ABS). In addition to changes in the survey instrument, there are changes in the construction of the survey population and mode of administration. Caution should therefore be used when comparing results over time. For further information on the comparability of surveys and time series see Appendix 3.

In recent decades, some of the more noted trends in the labour market have been the growth of female and part-time employment, not unrelated events. These trends are also evident in the graduate labour market. Previous reporting of graduate employment has focused on the ability of graduates to secure full-time employment. While full-time employment enables graduates to gain significant benefit from their qualifications, a pre-eminent focus on full-time employment to the exclusion of other outcomes is to ignore the flexibility and dynamism of the graduate labour market.[1]

Key indicators reported from the 2016 GOS are the proportion of graduates in full-time employment, the proportion of graduates in overall employment, the graduate labour force participation rate and the median salary of graduates employed full-time. These indicators have been selected to reflect the diversity of higher education graduates and their labour market activities and are calculated in accordance with ABS labour force definitions. Appendix 2 provides a summary of key labour market definitions used in this report. Note that indicators presented in this report based on data up to the 2015 AGS have retained the definitions used for previous AGS publications.

Previously in the AGS, graduates' further full-time study was considered as a mutually exclusive category to participation in the labour market. That is, if graduates were engaged in further full-time study they were excluded from survey estimates of full-time employment, overall employment, labour force participation and median graduate salaries. This longstanding practice ignores the significant changes that have evolved in the labour market over time with both students and graduates increasingly combining full-time study and participation in the labour market. For example in 2016, around three quarters of graduates studying full-time were also active in the labour market. Put another way, this means that among all recent undergraduates, 16.3 per cent were both studying full-time and engaged in the labour market (see Appendix 3, Table 4). In order to capture the experiences of these graduates, all labour market indicators reported in the 2016 GOS refer to all graduates who responded to the survey stating they were employed or actively seeking work, regardless of whether they were also engaged in further full-time study. This means the 2016 GOS records the labour market activities of an additional one in six (16.3 per cent) of graduates than would have been the case under previous AGS reporting conventions.

1 *Full-time employment* refers to those graduates who worked 35 hours or more, or usually work 35 hours or more, in the week prior to the survey. The *full-time employment rate* refers to those graduates employed full-time, as a proportion of those available for full-time work. *Overall employment* refers to graduates employed in any capacity, either full-time or part-time. The *overall employment rate* refers to those graduates in any kind of employment as a proportion of those available for employment. See Appendix 2 for further detail.

It should be noted that graduates engaged in further full-time study tend to have lower employment outcomes than graduates who are not studying – see Table 35 for further details. Therefore, the inclusion of graduates in full-time study would have the effect of decreasing estimates of full-time employment and overall employment rates in the 2016 GOS. For example, the undergraduate full-time employment rate of 70.9 per cent reported in the 2016 GOS would have been 72.7 per cent if full-time students were not considered as part of the labour force, as occurred in previous AGS publications. The change in the full-time employment rate in 2016, if the previous AGS methodology were to be used, would be an increase of 3.9 percentage points. This movement is of the same broad order of magnitude as declines in the full-time employment rate of 4.8 percentage points and 3.2 percentage points recorded in 2013 AGS and 2014 AGS respectively.

Graduate salaries are an indicator of the demand for graduates and potential earning capacity of graduates. This report shows the median salaries of all graduates employed full-time. This approach is consistent with reporting of graduate salaries data on the QILT website. However, this represents a break from previous practice under the AGS, which chiefly reported undergraduate salaries on the basis of graduates 'aged less than 25, in first full-time employment'. In 2015, only 52 per cent of recent bachelor level graduates employed full-time fell into this category. This reflects changing patterns of participation in higher education and paid employment in recent decades in Australia. Reporting graduate salaries across the broad range of graduates employed full-time is considered a more appropriate indicator of the demand for graduates and their potential earning capacity.

Graduates work part-time for a number of demand and supply side reasons, as discussed in Section 3.4. Working hours for graduates employed part-time vary from just a few hours of work up to 34 hours per week and this adds to the complexity of measuring graduate salaries. For these reasons, salaries are not reported for graduates employed part-time in the 2016 GOS, only for graduates employed full-time.

A key use of data from the GOS is its presentation on the QILT website – see www.qilt.edu.au. This website presents indicators on graduate labour market outcomes pooled across multiple years, to increase the reliability of the data.

Graduates work part-time for a number of demand and supply side reasons

To evaluate the impact of changes in methodology between the 2015 AGS and the 2016 GOS, correlations between the results of the two surveys were calculated for key indicators of graduate outcomes and graduate satisfaction. Correlations were calculated for undergraduate level graduates, at the institution by study area level, as used on the QILT website.[2]

The correlations for the graduate outcome indicators were 0.781 for the full time employment indicator, 0.803 for median salary of those employed full-time and 0.862 for full-time study. These correlations are relatively high suggesting that relative performance at the institution by study area level is largely unaffected by changes in survey methodology. On this basis, it is considered appropriate to pool 2014 and 2015 AGS data with 2016 GOS data for graduate outcomes indicators on the QILT website.

Correlations for the graduate satisfaction indicators were lower, including 0.564 for the Overall Satisfaction Indicator, a relatively high 0.663 for the Good Teaching Scale, and 0.458 for the Generic Skills Scale. These results suggest the changes in survey methodology have had more impact on the graduate satisfaction indicators than on the graduate outcomes measures.

As a data quality measure, the QILT website does not publish results based on fewer than 25 survey responses. Data is pooled across multiple years on the QILT website, in part, to maximise the number of institution by study area strata which meet this requirement. For this reason, it has been decided to continue with the practice of pooling graduate satisfaction indicators over two years of data for presentation on the QILT website, in this instance pooling 2015 AGS data with 2016 GOS data, while noting that changes in survey methodology appear to have had greater impact on these indicators.

2 For the purposes of calculating correlations, indicators have been based on the current website definitions for AGS data and on GOS definitions for GOS data.

3 Undergraduate employment

At the undergraduate level,[1] the full-time employment rate measured by the 2016 GOS was 70.9 per cent, a slight improvement, 2.1 percentage points, on the 68.8 per cent recorded by the 2015 AGS. Notwithstanding changes to survey methodology, the slight increase in the full-time employment rate would appear to be consistent with the modest improvement in the overall labour market over the period. The overall employment rate declined from 89.5 per cent to 86.4 per cent and the labour force participation rate from 93.7 per cent to 92.0 per cent. However, these changes are more likely due to changes in indicator methodology rather than a genuine reduction in the overall employment rate and labour force participation rate.
For a more substantive discussion of the comparability of estimates derived from the AGS and GOS see Appendix 3.
Labour market outcomes at the broad level were generally very similar for males and females as shown by Table 2.

Employment outcomes by sector are shown in Tables F and K in Appendix 6. In 2016, 71.2 per cent of university undergraduates were in full-time employment immediately upon graduation and 86.5 per cent in overall employment. By way of comparison, 63.0 per cent of non-university higher education institution (NUHEIs) undergraduates were in full-time employment and 83.1 per cent in overall employment. However, it is important to note that these comparisons of employment outcomes by sector take no account of the different characteristics of students in each sector such as the different proportions of graduates by study area or level of education.
For example, NUHEIs have a higher proportion of sub-bachelor graduates and these graduates tend to have lower employment outcomes than bachelor graduates.
For further information on the destinations of university and NUHEIs graduates, see Appendix 6.

1 As per standard AGS procedure, 2015 undergraduate figures are for graduates at the bachelor and other three-year undergraduate levels only.

Table 2 **Undergraduate employment outcomes, 2015 and 2016 (%)**

	2015			2016		
	Male	**Female**	**Total**	**Male**	**Female**	**Total**
Full-time employment	68.4	69.1	68.8	70.1	71.5	70.9
Overall employment	87.3	90.8	89.5	83.3	88.1	86.4
Labour force participation rate	93.9	93.6	93.7	91.1	92.5	92.0

3.1 Employment outcomes by study area

Graduates from more vocationally oriented study areas tend to have greater success in the labour market immediately upon graduation. In 2016, Medicine, Pharmacy and Veterinary science undergraduates had the highest rate of full-time employment at 98.2, 96.3 and 89.8 per cent respectively. However, note that some study areas traditionally have high employment rates immediately upon graduation arising from professional registration requirements. Medicine, Pharmacy and Rehabilitation undergraduates had the highest rates of overall employment, while Nursing, Dentistry and Rehabilitation undergraduates had the highest labour force participation rates, as shown by Table 3.

Conversely, graduates with more generalist degrees can take longer to gain a foothold in the labour market immediately upon graduation. Study areas with the lowest rates of full-time employment in 2016 were Creative arts, Agriculture and environmental studies, Communications, Psychology, Science and mathematics and, Humanities, culture and social science which all had full-time employment rates of less than 62 per cent. These study areas also tended to be among the study areas with the lowest overall employment and labour force participation rates.

The 2016 Graduate Outcomes Survey-Longitudinal (GOS-L) shows that three years after graduation, many more graduates find work and this is especially the case among graduates with more generalist degrees. For example, study areas with the lowest full-time employment rate immediately upon graduation in 2013 included Creative arts and Science and mathematics at 49.2 per cent and 53.5 per cent respectively. Three years later, their full-time employment rate had increased appreciably to 80.1 per cent and 82.0 per cent respectively.

Note that there can be considerable variation in employment outcomes within each study area. Undergraduate outcomes are presented at more detailed level for 45 study areas in Appendix 7.

Figure C **Study areas full-time employment**

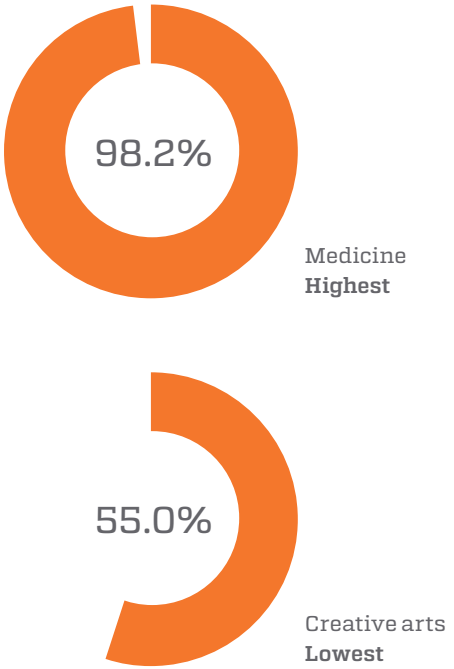


Table 3 **Undergraduate employment outcomes by study area, 2015 and 2016 (%)**

	Full-time employment		Total employment		Labour force participation rate	
Study area	**2015**	**2016**	**2015**	**2016**	**2015**	**2016**
Science and mathematics	49.5	61.0	82.1	81.5	91.0	82.3
Computing and information systems	67.0	72.5	83.2	82.5	93.9	94.4
Engineering	73.9	76.4	85.7	83.9	95.3	95.1
Architecture and built environment	75.4	75.2	89.3	85.8	95.6	94.6
Agriculture and environmental studies	58.1	59.8	84.0	84.2	94.4	93.0
Health services and support	67.9	70.9	91.9	90.1	95.5	93.6
Medicine	96.3	98.2	98.7	97.4	94.1	95.2
Nursing	78.7	82.5	95.1	93.3	95.8	97.7
Pharmacy	95.6	96.3	97.6	96.0	97.4	94.9
Dentistry	86.9	82.3	95.6	94.1	91.4	97.7
Veterinary science	84.9	89.8	93.0	89.4	94.4	88.3
Rehabilitation	87.4	84.0	96.1	95.2	97.3	97.4
Teacher education	71.7	80.3	94.4	94.3	95.7	95.8
Business and management	72.7	75.5	90.1	87.1	94.6	96.1
Humanities, culture and social sciences	59.3	61.8	86.6	83.5	88.1	88.4
Social work	71.2	66.7	87.7	85.5	93.0	94.2
Psychology	55.4	60.8	86.4	85.0	91.7	87.0
Law and paralegal studies	73.0	72.6	89.8	84.3	92.3	95.0
Creative arts	47.0	55.0	85.4	81.4	90.7	90.3
Communications	53.1	60.7	85.4	83.0	91.6	93.6
Tourism, hospitality, personal services, sport and recreation	57.8	68.1	92.4	92.5	96.0	94.6
All study areas*	**68.8**	**70.9**	**89.5**	**86.4**	**93.7**	**92.0**
Standard deviation (percentage points (pp))	**14.4**	**12.2**	**5.0**	**5.3**	**2.4**	**3.9**

*For 2016, where a graduate completes combined degrees across two study areas, their outcomes are included in both study areas. 'All study areas' figures count each graduate once only.

3.2 Employment outcomes by demographic group

Older undergraduates and undergraduates that studied externally were more likely to be in full-time employment in 2016, 73.2 per cent and 81.0 per cent respectively, as shown by Table 4. This is generally associated with their being more likely to have an ongoing relationship with an employer while studying. 74.5 per cent of Indigenous undergraduates were in full-time employment and 86.0 per cent in overall employment in 2016, compared with equivalent rates for non-Indigenous undergraduates of 70.9 per cent and 86.4 per cent respectively.

On the other hand, undergraduates from disadvantaged groups such as those whose home language was a language other than English had a lower rate of full-time employment in 2016 of 55.0 per cent in comparison with the 71.5 per cent for undergraduates whose home language was English. Similarly, undergraduates with a reported disability had a full-time employment rate of 60.9 per cent which was lower than the 71.5 per cent for undergraduates who reported no disability.

Table 4 **Undergraduate employment outcomes by demographic group, 2015 and 2016 (%)**

		Full-time employment (%)		Overall employment (%)		Labour force participation rate (%)	
		2015	2016	2015	2016	2015	2016
Age	30 years or under	68.1	70.5	89.8	86.4	94.3	92.3
	Over 30 years	72.6	73.2	88.1	86.1	90.6	90.3
Indigenous	Indigenous	80.6	74.5	90.6	86.0	92.2	90.1
	Non Indigenous	68.8	70.9	89.5	86.4	93.7	92.0
Home language	English	70.3	71.5	90.7	86.8	94.1	92.1
	Language other than English	60.6	55.0	83.0	73.6	91.5	89.5
Disability	Reported disability	56.2	60.9	77.5	79.5	84.4	87.0
	No disability	69.2	71.5	89.9	86.8	94.2	92.3
Study mode	Internal and mixed mode	67.5	69.7	89.2	85.8	93.9	91.8
	External	81.9	81.0	92.2	91.0	93.6	93.8
Total undergraduate		**68.8**	**70.9**	**89.5**	**86.4**	**93.7**	**92.0**

3.3 Employment over time

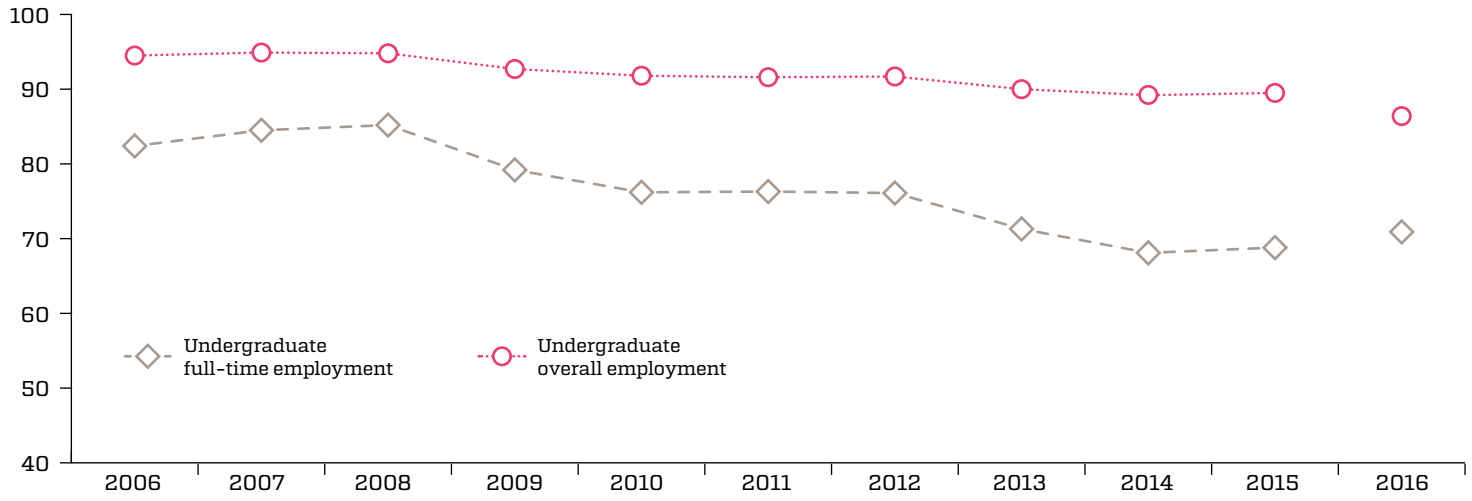
Since the Global Financial Crisis (GFC), graduates have taken longer to establish a foothold in the labour market. The full-time employment rate for undergraduates peaked at 85.2 per cent in 2008 and fell by 17.1 percentage points to 68.1 per cent in 2014 as measured by the previous AGS. Since 2014, there has been a slight improvement in undergraduate employment with the full-time employment rate increasing to 68.8 per cent in 2015, as measured by the AGS, and 70.9 per cent in 2016, as measured by the GOS. This is consistent with a modest improvement in overall labour market conditions with the overall unemployment rate falling from 5.9 per cent in May 2014 to 5.7 per cent in May 2016.[2]

The 2016 Graduate Outcomes Survey-Longitudinal (GOS-L) shows that graduates do succeed over time with many more graduates in work three years after graduation. In 2013, 70.9 per cent of graduates were in full-time employment immediately upon graduation. Three years later, 88.4 per cent of the same cohort of graduates had found full-time work.

Employment outcomes over time by study area are presented in Appendix 7.

2 ABS, Labour Force, 6202.0, seasonally adjusted data.

Figure 2 **Undergraduate full-time and overall employment, 2006–2016 (%)**



3.4 Part-time employment

In 2016, 38.4 per cent of employed undergraduates were working part-time as shown by Table 5. More than half of employed undergraduates in the study areas of Creative arts, Psychology, Science were working part-time. There is frequent commentary to the effect that part-time jobs are 'inferior' in some senses to full-time jobs, and especially in the context of graduates entering the labour market. However, undergraduates may have bona fide reasons for working part-time, for example, combining further study with part-time employment (data on reasons for working part-time are shown in Table 6 below). The rate of involuntary and voluntary part-time employment, as measured by the proportion of part-time employees seeking more hours of work or not seeking more hours of work, as a proportion of all employed graduates, are shown below in Table 5. Overall, more employed undergraduates were involuntarily working in part-time employment immediately upon graduation, 20.5 per cent, than were working in voluntary part-time employment, 14.1 per cent. Female undergraduates were more likely to engage in voluntary part-time employment than male undergraduates, 16.0 per cent and 10.5 per cent respectively. Undergraduates with the highest rates of involuntary part-time employment seeking more hours of work were Creative arts, Psychology and Agriculture and environmental studies undergraduates, 31.8 per cent, 28.1 per cent and 27.6 per cent respectively.

Graduates work in part-time employment for a range of personal and labour market related reasons and these are shown in Table 6. The main reasons that undergraduates were working in involuntary part-time employment were because they were studying, 21.4 per cent, because there were no suitable jobs in their area of expertise, 19.9 per cent, or because there were no jobs with a suitable number of hours, 17.1 per cent. On the other hand, the majority, 54.8 per cent, of undergraduates working in voluntary part-time employment do so because they were engaged in further study.

Figure D **Employed undergraduates working in part-time employment**

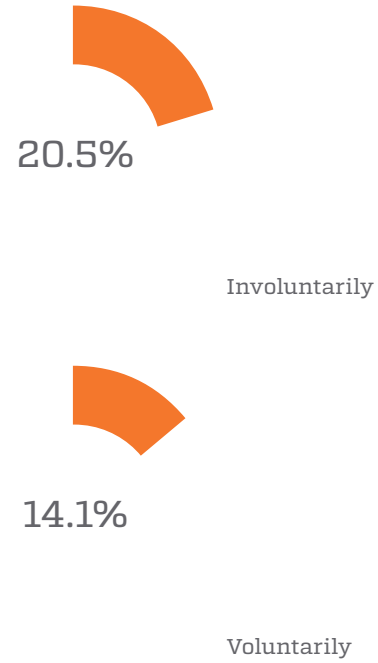


Table 5 **Part-time employment, by study area and gender, as a proportion of all employed graduates, 2016 (%)**[3]

Study area	Total employed part-time*			Seeking more hours			Not seeking more hours		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Science and mathematics	53.2	54.2	53.8	25.9	25.7	25.8	22.1	22.5	22.4
Computing and information systems	21.2	26.8	22.2	13.8	16.5	14.3	4.1	n/a	4.6
Engineering	17.0	14.5	16.6	10.8	7.5	10.2	4.6	5.7	4.8
Architecture and built environment	21.5	36.5	28.5	12.4	17.5	14.8	7.6	15.0	11.0
Agriculture and environmental studies	36.5	48.7	43.9	23.5	30.4	27.6	n/a	15.8	12.8
Health services and support	41.1	45.9	44.5	24.1	25.7	25.3	12.3	16.4	15.2
Medicine	n/a	6.2	5.4	n/a	n/a	n/a	n/a	n/a	n/a
Nursing	28.5	40.7	39.5	11.9	14.3	14.1	13.4	23.3	22.3
Pharmacy	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Dentistry	36.1	38.3	37.7	n/a	24.6	24.3	n/a	n/a	10.5
Veterinary science	n/a	22.9	23.6	n/a	n/a	n/a	n/a	n/a	n/a
Rehabilitation	19.4	22.1	21.5	n/a	15.4	14.5	n/a	5.1	5.6
Teacher education	26.2	33.8	32.6	15.6	17.9	17.6	8.5	12.6	12.0
Business and management	22.8	25.7	24.5	13.9	16.6	15.5	6.6	6.9	6.8
Humanities, culture and social sciences	47.5	51.4	50.3	24.8	26.3	25.9	17.0	19.6	18.9
Social work	25.8	40.7	38.8	n/a	22.3	21.7	n/a	15.7	14.4
Psychology	56.7	58.0	57.8	30.0	27.7	28.1	20.9	25.8	25.0
Law and paralegal studies	23.3	27.7	26.1	14.6	16.5	15.8	7.5	8.7	8.3
Creative arts	56.3	59.1	58.3	33.1	31.2	31.8	14.1	19.4	17.7
Communications	48.6	40.8	43.1	30.9	25.6	27.1	11.0	11.1	11.0
Tourism, hospitality, personal services, sport and recreation	54.1	40.7	46.3	n/a	n/a	27.2	n/a	n/a	n/a
All study areas**	**32.8**	**41.1**	**38.4**	**18.7**	**21.4**	**20.5**	**10.5**	**16.0**	**14.1**

* Includes graduates employed part-time where preference for additional hours is unknown

**Where a graduate completes combined degrees across two study areas, their outcomes are included in both study areas. 'All study areas' figures count each graduate once only.

3 Throughout this report, results are not published where they are based on fewer than 25 survey responses since results from such small samples could be misleading. Where cells in a table have been suppressed for this reason, they are annotated as 'n/a'. Consequential suppression may also have been applied. Blank cells indicate that no relevant data was collected.

Table 6 **Main reason for seeking or not seeking more hours of work, of those employed part-time, by preference for more hours, 2016 (%)**

	Seeking more hours			Not seeking more hours		
	Male	**Female**	**Total**	**Male**	**Female**	**Total**
Studying	23.4	20.5	21.4	68.4	50.1	54.8
Short-term illness or injury	n/a	n/a	0.8	n/a	n/a	0.5
Long-term health condition or disability	n/a	n/a	0.4	n/a	1.8	1.5
Caring for children	n/a	3.5	2.6	n/a	14.5	11.3
Caring for family member with a health condition or disability	n/a	1.1	0.9	n/a	1.5	1.3
Subtotal – personal factors	**25.8**	**26.5**	**26.3**	**71.9**	**68.4**	**69.3**
No suitable jobs in my area of expertise	21.8	19.0	19.9	3.8	2.2	2.6
No suitable jobs in my local area	11.5	11.7	11.6	n/a	2.1	1.9
Considered to be too young by employers	2.1	2.0	2.0	n/a	n/a	n/a
Considered too old by employers	2.2	1.4	1.7	n/a	n/a	n/a
No jobs with a suitable number of hours	17.7	16.8	17.1	2.8	1.5	1.8
Subtotal – labour market factors	**55.3**	**51.0**	**52.3**	**8.6**	**6.6**	**7.1**
Other	18.9	22.5	21.4	19.4	24.5	23.3
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

3.5 Occupation level

The distribution of undergraduates in full-time and overall employment by occupation is shown in Table 7. Managerial and professional occupations, at Skill Level 1 in the ANZSCO classification, have a level of skill commensurate with a bachelor degree or higher.[4] In 2016, four months after graduation, 72.3 per cent of graduates employed full-time were working in managerial or professional occupations. Graduates employed part-time were less likely to be employed in managerial and professional occupations as 59.2 per cent of all employed undergraduates were working in these occupations four months after graduation. The proportion of male and female undergraduates working in managerial or professional occupations immediately upon graduation does not differ markedly.

The distribution of employed undergraduates across occupations by study area is shown in Table 8. Undergraduates with more vocationally oriented degrees, for example, Engineering, Medicine, Nursing, Pharmacy, Rehabilitation and Teacher education graduates were more likely to be working in managerial or professional occupations. In 2016, four months after completing their degree, over three quarters of employed graduates from each of these study areas were working in these occupations. On the other hand, undergraduates with more generalist degrees were less likely to be working in managerial or professional occupations. For example, only 38.3 per cent of employed Agriculture and environmental studies graduates, 40.0 per cent of Humanities, culture and social science graduates and 40.9 per cent of employed Psychology graduates were working in managerial and professional occupations.

4 Occupations at Skill Level 1 have a level of skill commensurate with a bachelor degree or higher qualification. At least five years of relevant experience may substitute for the formal qualification. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification. ABS, Australian and New Zealand Standard Classification of Occupations (ANZSCO), 1220.0, 2013.

Figure E **In 2016, percentage of undergraduates employed full-time working in managerial or professional occupations**

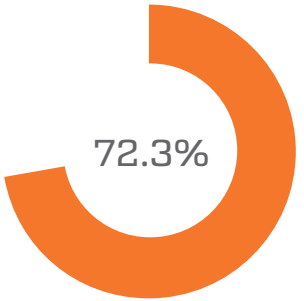


Table 7 **Undergraduate employment outcomes by occupation, 2016 (%)**

	Employed full-time (%)			Overall employed (%)		
Occupation group	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**
Managers	9.3	6.3	7.4	7.3	4.6	5.6
Professionals	63.0	66.0	64.9	53.0	53.8	53.6
Technicians and trades workers	5.8	2.1	3.5	5.7	2.3	3.4
Community and personal service workers	6.2	7.1	6.8	9.7	12.5	11.6
Clerical and administrative workers	8.0	12.8	11.0	8.2	13.0	11.4
All other occupations	7.8	5.6	6.4	16.0	13.7	14.5
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Table 8 **Undergraduate employment by occupation and study area, 2016 (%)**

Study area	Occupation group						
	Managers	Professionals	Technicians & trade	Community & personal service	Clerical & administrative	All other occupations	All employed
Science and mathematics	3.0	41.9	8.4	14.2	10.0	22.6	100.0
Computing and information systems	6.1	68.3	7.9	2.2	5.3	10.2	100.0
Engineering	7.5	68.0	7.2	3.6	3.8	9.8	100.0
Architecture and built environment	9.7	44.8	15.5	5.8	11.3	13.0	100.0
Agriculture and environmental studies	7.4	30.9	11.1	12.6	11.3	26.7	100.0
Health services and support	2.9	44.6	2.2	26.0	9.1	15.1	100.0
Medicine	n/a	93.8	n/a	n/a	n/a	n/a	100.0
Nursing	n/a	88.7	n/a	7.2	1.1	2.1	100.0
Pharmacy	n/a	96.3	n/a	n/a	n/a	n/a	100.0
Dentistry	n/a	53.6	n/a	43.0	n/a	n/a	100.0
Veterinary science	n/a	68.2	n/a	n/a	n/a	n/a	100.0
Rehabilitation	n/a	86.7	n/a	5.9	n/a	n/a	100.0
Teacher education	3.4	82.2	n/a	6.2	2.6	5.2	100.0
Business and management	12.2	47.7	1.3	5.9	18.9	14.0	100.0
Humanities, culture and social sciences	4.9	35.1	2.2	16.6	21.2	19.9	100.0
Social work	4.6	57.2	n/a	20.5	10.0	n/a	100.0
Psychology	5.5	35.4	2.0	18.2	17.0	21.8	100.0
Law and paralegal studies	5.1	46.8	n/a	n/a	27.1	10.4	100.0
Creative arts	4.6	42.4	4.2	13.7	9.1	26.1	100.0
Communications	7.5	41.8	3.4	11.3	14.2	21.8	100.0
Tourism, hospitality, personal services, sport and recreation	n/a	24.0	n/a	25.3	n/a	24.0	100.0
All study areas*	**5.6**	**53.6**	**3.4**	**11.6**	**11.4**	**14.5**	**100.0**

*Where a graduate completes combined degrees across two study areas, their outcomes are included in both study areas. 'All study areas' figures count each graduate once only.

3.6 Skills formation and utilisation

Almost 60 per cent of undergraduates who were employed full-time felt that their qualification was 'very important' or 'important' for their current employment, as shown by Table 9. Part-time graduates were less likely to report that their qualification was 'very important' or 'important for their current employment, with fewer than half of all employed graduates reporting that this was the case.

The extent to which a graduate's qualification prepared them for their current employment is shown in Table 10. Undergraduates who were employed full-time were more likely than undergraduates employed part-time to report that they were 'very well' or 'well' prepared' for employment. 78.2 per cent of undergraduates employed full-time stated they were prepared for employment, in comparison with 68.5 per cent of all employed undergraduates.

Graduates were also asked to indicate whether or not they believed that they were working in a job that allowed them to fully use their skills or education – see Appendix 4 for the derivation of this measure. This provides a benchmark of the underutilisation of skills, and as such, it will be important to monitor changes in this measure over time. Of those who were employed full-time in 2016, 29.1 per cent felt that they were not fully using their skills or education in their current position, as shown by Table 11. Undergraduates working part-time were more likely to report that they were not fully using their skills or education given that 42.1 per cent of undergraduates in overall employment reported that their skills and education were not fully utilised.

Table 9 **Importance of qualification for undergraduates current employment, 2016 (%)**

	Employed full-time	Overall employed
Very important	44.3	36.1
Important	14.2	12.1
Fairly important	14.4	13.2
Not that important	13.1	14.3
Not at all important	13.9	24.3
Total	**100.0**	**100.0**

Table 10 **Extent to which qualification prepared undergraduate for employment, 2016 (%)**

	Employed full-time	Overall employed
Very well	32.8	28.2
Well	45.4	40.3
Not well	8.2	8.1
Not at all	7.3	12.7
Unsure	6.3	10.7
Total	**100.0**	**100.0**

Younger undergraduates and undergraduates that studied internally or by mixed mode were more likely to report that they believed they were not fully using their skills or education in their current position. For example, 44.0 per cent of overall employed undergraduates aged 30 years or under reported this to be the case in comparison, with 33.1 per cent of older undergraduates. Similarly, 42.9 per cent of employed internal and mixed mode undergraduates claimed their skills or education were not

being fully used in comparison with 36.6 per cent of external undergraduates. Older undergraduates are more likely to have studied externally and are also more likely to have an ongoing relationship with an employer and be established in their career while studying. This might account for their reporting they were more likely to use their skills and education in their current position. Undergraduates with a reported disability were also more likely to report that they were not fully using their skills or education, 45.0 per cent of these undergraduates in overall employment in comparison with 42.0 per cent of undergraduates who reported no disability.

The main reason provided by undergraduates for working in a job in which they considered they did not fully use their skills or education is shown in Table 12. Reasons are grouped according to whether they could be considered a personal choice or labour market factor. The most commonly cited reason for working in a job that did not fully use their skills or education was that there were no suitable jobs in their area of expertise with a quarter, 25.8 per cent, of employed undergraduates stating this was the case. A further 15.4 per cent said they were not fully using their skills and education in their current position because there were no suitable jobs in their local area. Undergraduates employed part-time were more likely to state that they did not use their skills or education in their current job because they were engaging in further study. 23.9 per cent of all employed graduates stated this reason in comparison with 8.4 per cent of graduates employed full-time.

Figure F **In 2016, percentage of undergraduates employed full-time who were not fully using their skills or education in their current job**

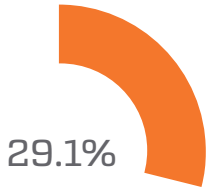


Table 11 **Undergraduate reporting job does not fully use my skills or education, 2016 (%)**

		Employed full-time (%)	Overall employed (%)
Gender	Male	30.7	43.0
	Female	28.2	41.7
Age	30 years or under	29.2	44.0
	Over 30 years	28.4	33.1
Indigenous	Indigenous	24.0	31.3
	Non Indigenous	29.2	42.3
Home language	English	29.2	42.2
	Language other than English	26.6	39.7
Disability	Reported disability	32.2	45.0
	No disability	29.0	42.0
Study mode	Internal and mixed mode	28.7	42.9
	External	31.9	36.6
Total undergraduate		**29.1**	**42.1**

Table 12 **Undergraduates main reason for working in a job that doesn't fully use my skills or education, 2016 (%)**

	Employed full-time (%)	Overall employed (%)
Studying	8.4	23.9
I'm satisfied with my current job	3.6	2.6
I have skills that are not required in my current job	3.2	1.9
Changing jobs/careers	3.5	2.6
Entry level job/career stepping stone	5.2	2.6
Caring for children or family member	2.2	2.2
Subtotal – personal factors	**26.1**	**35.8**
No suitable jobs in my area of expertise	26.8	25.8
No suitable jobs in my local area	17.6	15.4
Considered to be too young by employers	8.2	4.8
Not enough work experience	4.5	3.1
No jobs with a suitable number of hours	2.3	3.5
Cannot find a job	1.9	1.6
My job is temporary/casual	0.9	0.9
Subtotal – labour market factors	**62.2**	**55.1**
Other	11.7	9.1
Total	**100.0**	**100.0**

Employed undergraduates with a degree in Psychology were most likely to report that their skills and education were not being fully used in their current job, 66.8 per cent, followed by Humanities, culture and social sciences undergraduates, 60.5 per cent, and Science and mathematics graduates, 58.1 per cent, as shown by Table 13. Between one fifth and one quarter of persons in each of these three study areas said that the main reason their skills were not fully utilised was because there were no suitable jobs in their area of expertise.

Table 13 **Undergraduates reporting they did not fully use their skills or education and main reason being no suitable jobs in my area of expertise, by study area, 2016 (%)**

	Extent to which skills and education not fully used		Main reason – no suitable jobs in my area of expertise*	
Study area	**Employed full-time**	**Overall employed**	**Employed full-time**	**Overall employed**
Science and mathematics	37.9	58.1	34.1	25.8
Computing and information systems	26.9	34.0	17.7	21.1
Engineering	25.5	33.6	36.5	37.0
Architecture and built environment	21.3	33.2	32.1	29.5
Agriculture and environmental studies	40.2	57.8	29.3	31.9
Health services and support	25.7	43.2	29.4	27.6
Medicine	5.0	8.8	n/a	n/a
Nursing	7.8	12.0	17.9	22.9
Pharmacy	4.6	7.6	n/a	n/a
Dentistry	5.5	9.5	n/a	n/a
Veterinary science	10.8	24.9	n/a	n/a
Rehabilitation	11.7	19.9	n/a	31.9
Teacher education	11.7	17.2	14.8	15.1
Business and management	34.9	43.6	22.9	24.9
Humanities, culture and social sciences	44.9	60.5	30.6	25.7
Social work	32.6	43.1	20.1	18.0
Psychology	54.4	66.8	26.8	21.0
Law and paralegal studies	35.5	45.3	27.3	28.4
Creative arts	40.7	52.6	28.2	31.6
Communications	39.9	54.7	28.9	30.5
Tourism, hospitality, personal services, sport and recreation	36.5	50.4	n/a	n/a
All study areas*	**29.1**	**42.1**	**26.8**	**25.8**
Standard deviation (pp)	**15.1**	**18.9**	**9.1**	**8.2**

* As a proportion of those reporting skills and education not fully used.
**Where a graduate completes combined degrees across two study areas, their outcomes are included in both study areas. 'All study areas' figures count each graduate once only.

4 Postgraduate employment

Further study enables postgraduates to secure higher employment outcomes. In 2016, the full-time employment rate for postgraduate coursework graduates was 85.1 per cent and 80.1 per cent for postgraduate research graduates, as shown by Table 14. This compares favourably with the 70.9 per cent full-time employment rate for undergraduates as shown earlier. In 2016, the overall employment rate for postgraduate coursework graduates was 92.4 per cent and 90.3 per cent for postgraduate research graduates in comparison with 86.4 per cent for undergraduates.

4.1 Employment outcomes by study area

Postgraduates in health courses generally have greater success in the labour market immediately upon graduation, though like undergraduate employment outcomes, once again this may be associated with professional registration requirements. In 2016, postgraduate coursework Medicine, Nursing and Rehabilitation graduates had the highest rate of full-time employment at 94.2 per cent, 93.6 per cent and 93.5 per cent respectively, as shown by Table 15. At the postgraduate research level, Nursing had the highest rate of full-time employment at 95.9 per cent, followed by Law and paralegal studies at 93.0 per cent, as shown by Table 16. However, while some postgraduate study areas have weaker employment outcomes, the gap in employment outcomes is narrower at postgraduate level than at undergraduate level. This is shown by the reduction in the standard deviation of full-time employment outcomes across study areas, from 12.2 percentage points for undergraduates (see Table 3) to 6.8 percentage points for postgraduate coursework graduates and 9.2 percentage points for postgraduate research graduates.

Table 14 **Postgraduate employment outcomes, 2015 and 2016**

	2015			2016		
Postgraduate coursework	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**
Full-time employment (%)	84.6	81.3	82.7	86.8	84.0	85.1
Overall employed (%)	92.5	92.9	92.7	91.7	92.9	92.4
Labour force participation rate (%)	95.7	93.7	94.4	96.2	95.4	95.7
Postgraduate research						
Full-time employment (%)	73.0	73.0	73.0	80.0	80.2	80.1
Overall employed (%)	89.3	90.4	89.9	89.3	91.1	90.3
Labour force participation rate (%)	92.8	91.3	92.0	93.3	92.8	93.0

Table 15 **Postgraduate coursework employment outcomes by study area, 2015 and 2016**

	Full-time employment (%)		Overall employment (%)		Labour force participation rate (%)	
Study area	**2015**	**2016**	**2015**	**2016**	**2015**	**2016**
Science and mathematics	75.9	77.3	88.5	87.9	94.8	92.3
Computing and Information Systems	82.9	80.9	89.1	85.7	94.7	96.1
Engineering	83.9	83.6	89.7	88.1	96.0	96.4
Architecture and built environment	80.3	85.4	91.1	91.4	95.9	97.7
Agriculture and environmental studies	71.9	73.9	85.5	87.2	95.8	94.3
Health services and support	83.4	84.1	93.9	93.2	95.5	96.3
Medicine	94.8	94.2	98.1	96.8	84.1	97.1
Nursing	93.6	93.6	98.8	97.9	97.3	98.3
Pharmacy	93.2	88.0	95.7	93.9	97.2	98.3
Dentistry	86.8	87.6	98.5	97.6	88.2	99.2
Veterinary science	91.7	91.9	96.1	93.9	89.5	94.3
Rehabilitation	92.6	93.5	98.3	96.9	96.3	98.7
Teacher education	76.0	82.5	92.8	93.3	94.6	95.7
Business and management	88.3	89.7	92.9	92.9	96.0	96.7
Humanities, culture and social sciences	79.2	81.6	91.8	91.3	89.6	91.4
Social work	77.2	78.6	89.5	89.2	92.0	95.0
Psychology	76.5	83.0	91.7	92.8	92.6	91.6
Law and paralegal studies	85.6	85.5	93.0	90.6	94.4	96.8
Creative arts	63.9	69.7	87.2	89.3	87.3	93.8
Communications	69.0	74.4	85.0	88.8	91.0	95.0
Tourism, hospitality, personal services, sport and recreation	69.0.	80.8	96.5	93.8	94.4	92.8
All study areas*	**82.7**	**85.1**	**92.7**	**92.4**	**94.4**	**95.7**
Standard deviation (pp)	**8.7**	**6.8**	**4.2**	**3.5**	**3.6**	**2.3**

*For 2016, where a graduate completes combined degrees across two study areas, their outcomes are included in both study areas. 'All study areas' figures count each graduate once only.

Table 16 **Postgraduate research employment outcomes by study area, 2015 and 2016**

	Full-time employment (%)		Overall employment (%)		Labour force participation rate (%)	
Study area	**2015**	**2016**	**2015**	**2016**	**2015**	**2016**
Science and mathematics	74.0	77.7	88.6	87.7	95.6	94.9
Computing and Information Systems	67.8	81.8	86.0	90.4	87.7	94.3
Engineering	66.6	75.5	84.2	84.2	93.9	96.2
Architecture and built environment	84.8	76.5	91.2	90.2	89.1	97.6
Agriculture and environmental studies	67.5	71.9	78.7	88.6	93.7	94.6
Health services and support	84.9	90.9	92.7	94.3	89.3	97.2
Medicine	86.7	84.9	93.7	91.7	87.8	95.6
Nursing	89.8	95.9	95.1	98.4	95.3	96.9
Pharmacy	n/a	90.9	92.3	94.1	96.3	100.0
Dentistry	n/a	n/a	n/a	n/a	n/a	n/a
Veterinary science	n/a	n/a	n/a	91.2	n/a	97.1
Rehabilitation	n/a	n/a	97.1	n/a	97.1	n/a
Teacher education	85.8	86.5	95.1	93.8	89.8	93.5
Business and management	71.0	85.0	92.3	94.7	97.6	95.4
Humanities, culture and social sciences	60.3	73.4	89.1	89.4	86.7	83.8
Social work	n/a	n/a	n/a	n/a	88.0	n/a
Psychology	85.2	81.1	95.2	92.8	95.5	95.7
Law and paralegal studies	84.8	93.0	94.9	95.9	88.6	94.2
Creative arts	62.5	81.0	91.2	91.9	90.3	89.8
Communications	58.0	67.2	91.0	84.3	87.0	89.7
Tourism, hospitality, personal services, sport and recreation	n/a	n/a	n/a	n/a	100.0	n/a
All study areas*	**73.0**	**80.1**	**89.9**	**90.3**	**92.0**	**93.0**
Standard deviation (pp)	**11.6**	**9.2**	**5.1**	**5.0**	**4.0**	**3.9**

*For 2016, where a graduate completes combined degrees across two study areas, their outcomes are included in both study areas. 'All study areas' figures count each graduate once only.

4.2 Employment outcomes by demographic group

Older and external postgraduate coursework graduates were more likely to be in full-time employment in 2016, 87.1 per cent and 89.6 per cent respectively, as shown by Table 17. Once again this is likely to be because they have an ongoing relationship with an employer while studying. Postgraduate coursework graduates who were Indigenous, whose home language was other than English and those reporting a disability had lower labour force outcomes than their counterparts. For example, full-time employment rates for these disadvantaged groups in 2016 were 83.7 per cent, 71.3 per cent and 73.8 per cent in comparison with 85.1 per cent for all postgraduate coursework graduates.

Older and external postgraduate research graduates were also more likely to be in full-time employment in 2016, 81.5 per cent and 82.6 per cent respectively in comparison with 80.1 per cent for all postgraduate research graduates, as shown by Table 18. Postgraduate research graduates whose home language was other than English and those reporting a disability had much lower employment outcomes, with their full-time employment rates in 2016 being 68.2 per cent and 71.3 per cent respectively.

Table 17 **Postgraduate coursework employment outcomes by demographic group, 2015 and 2016 (%)**

		Full-time employment (%)		Overall employment (%)		Labour force participation rate (%)	
		2015	2016	2015	2016	2015	2016
Age	30 years or under	77.5	82.6	92.4	92.0	94.7	96.3
	Over 30 years	86.3	87.1	93.0	92.8	94.2	95.2
Indigenous	Indigenous	87.7	83.7	94.6	91.9	94.9	94.9
	Non Indigenous	82.5	85.1	92.7	92.4	94.5	95.7
Home language	English	84.2	85.8	93.9	92.9	94.9	95.7
	Language other than English	73.2	71.3	85.1	82.6	91.7	94.9
Disability	Reported disability	71.2	73.8	85.7	85.3	86.1	89.2
	No disability	83.0	85.5	92.9	92.7	94.8	96.0
Study mode	Internal and mixed mode	78.4	82.9	90.9	91.4	93.9	95.5
	External	89.8	89.6	95.7	94.5	95.6	96.1
Total postgraduate coursework		**82.7**	**85.1**	**92.7**	**92.4**	**94.4**	**95.7**

Table 18 **Postgraduate research employment outcomes by demographic group, 2015 and 2016 (%)**

		Full-time employment (%)		Overall employment (%)		Labour force participation rate (%)	
		2015	2016	2015	2016	2015	2016
Age	30 years or under	73.1	77.8	90.9	89.5	95.2	95.3
	Over 30 years	73.0	81.5	89.5	90.7	90.7	91.8
Indigenous	Indigenous	n/a	n/a	n/a	n/a	n/a	n/a
	Non Indigenous	73.2	80.1	90.0	90.3	92.2	93.1
Home language	English	76.6	81.3	92.4	91.2	92.7	92.9
	Language other than English	64.9	68.2	83.5	80.5	90.4	93.5
Disability	Reported disability	64.9	71.3	81.4	85.3	81.1	81.9
	No disability	73.2	80.5	90.1	90.5	92.5	93.5
Study mode	Internal and mixed mode	70.7	79.9	88.9	90.3	92.2	93.0
	External	86.9	82.6	95.3	90.6	91.3	92.9
Total postgraduate coursework		**73.0**	**80.1**	**89.9**	**90.3**	**92.0**	**93.0**

Older and external postgraduate coursework and postgraduate research graduates were more likely to be in full-time employment in 2016

4.3 Employment over time

Like undergraduates, since the Global Financial Crisis (GFC), postgraduate coursework graduates and postgraduate research graduates have taken longer to secure employment immediately upon graduation, as shown by Figure 3. Since 2008, the full-time employment rate for postgraduate coursework graduates has fallen from 90.1 per to 82.7 per cent in 2015, a decline of 7.4 percentage points, as measured by the previous AGS. Among postgraduate research graduates, the full-time employment rate has fallen more sharply by 14.6 percentage points, from 87.6 per cent in 2008 to 73.0 per cent in 2015. The 2015 Beyond Graduation Survey shows that postgraduates do succeed over time with many more graduates in work three years after graduation.

4.4 Occupation level

Managerial and professional occupations at Skill Level 1 in the ANZSCO classification, as noted above, have a level of skill commensurate with a bachelor degree or higher. Postgraduates are more likely to be working in managerial and professional occupations, as shown by Table 19. In 2016, 87.7 per cent of postgraduate coursework graduates employed full-time and 93.7 per cent of postgraduate research graduates were working in managerial and professional occupations in comparison with 72.3 per cent of undergraduates. Note that among postgraduate coursework graduates employed full-time, males were more likely to be working in managerial occupations than females, 25.1 per cent and 14.5 per cent respectively. On the other hand, female postgraduate coursework graduates were more likely to be working in professional occupations than males, 73.4 per cent and 62.3 per cent respectively.

Figure 3 **Postgraduate full-time and overall employment, 2006–2016 (%)**

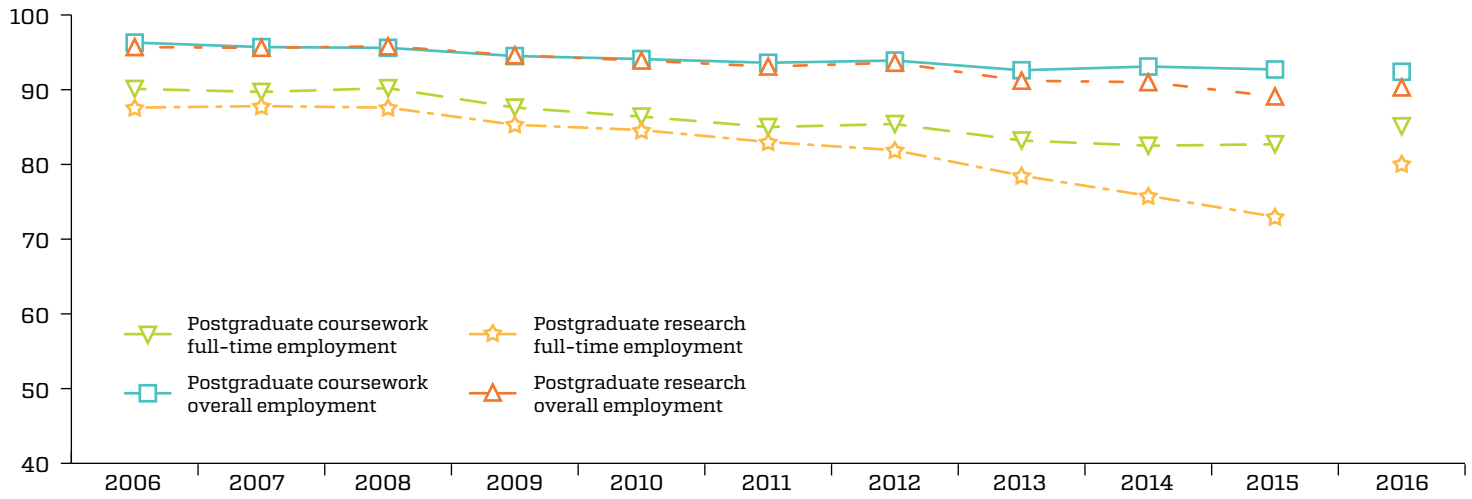


Table 19 **Postgraduate employment outcomes by gender and occupation, 2016 (%)**

	Employed full-time			Overall employed		
	Male	**Female**	**Total**	**Male**	**Female**	**Total**
Postgraduate coursework						
Managers	25.1	14.5	18.8	22.7	11.8	15.7
Professionals	62.3	73.4	68.9	62.6	73.0	69.2
Technicians and trades workers	2.1	0.8	1.3	2.2	0.8	1.3
Community and personal service workers	2.6	2.2	2.4	3.4	3.6	3.6
Clerical and administrative workers	5.3	7.8	6.8	5.4	8.0	7.1
All other occupations	2.5	1.3	1.8	3.7	2.7	3.1
Total postgraduate coursework	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Postgraduate research						
Managers	9.8	10.1	10.0	8.2	8.7	8.5
Professionals	85.5	82.2	83.7	85.5	81.5	83.2
Technicians and trades workers	n/a	n/a	1.4	n/a	1.6	1.4
Community and personal service workers	n/a	n/a	n/a	n/a	n/a	1.2
Clerical and administrative workers	n/a	4.3	3.1	2.1	5.2	3.9
All other occupations	n/a	n/a	n/a	1.9	1.8	1.8
Total postgraduate research	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

4.5 Skills formation and utilisation

Postgraduate coursework graduates tend to report a lower fit between their qualification and job, as shown by Tables 20 and 21, which is perhaps surprising given the general perception that postgraduate coursework studies are more vocationally oriented. For example, among full-time employees, 44.7 per cent of postgraduate coursework graduates stated their qualification was 'very important' or 'important' for their current position in comparison with 58.5 per cent of undergraduates and 57.3 per cent postgraduate research graduates. Similarly, among full-time employees, 76.2 per cent of postgraduate coursework graduates reported their qualification prepared them 'very well or 'well' for their employment in comparison with 78.2 per cent of undergraduates and 81.4 per cent of postgraduate research graduates.

Table 20 **Importance of qualification for postgraduates' current employment, 2016 (%)**

	Employed full-time	Overall employed
Postgraduate coursework		
Very important	26.3	26.9
Important	18.4	17.7
Fairly important	20.1	18.9
Not that important	21.3	20.5
Not at all important	13.9	15.9
Total postgraduate coursework	**100.0**	**100.0**
Postgraduate research		
Very important	38.9	35.0
Important	18.4	19.0
Fairly important	14.0	15.0
Not that important	15.8	16.4
Not at all important	12.9	14.6
Total postgraduate research	**100.0**	**100.0**

Table 21 **Extent to which qualification prepared postgraduate for employment, 2016 (%)**

	Employed full-time	Overall employed
Postgraduate coursework		
Very well	31.3	30.9
Well	44.9	43.2
Not well	6.7	6.7
Not at all	8.0	8.9
Unsure	9.1	10.2
Total postgraduate coursework	**100.0**	**100.0**
Postgraduate research		
Very well	44.7	41.5
Well	36.7	37.2
Not well	4.3	4.3
Not at all	6.2	7.7
Unsure	8.1	9.4
Total postgraduate research	**100.0**	**100.0**

Postgraduate research graduates employed full-time were less likely to report that they were not fully utilising their skills or education in their job, 27.1 per cent, in comparison with 29.1 per cent of undergraduates and 29.9 per cent of postgraduate coursework graduates, as shown by Table 22 – see Appendix 4 for the derivation of these results. However, among those reporting they were not fully utilising their skills or education, postgraduate research graduates were much more likely to claim this was due to their being no suitable jobs in their area of expertise, 45.0 per cent, in comparison with 26.8 per cent of undergraduates and 25.5 per cent of postgraduate coursework graduates, as shown by Tables 23 and 24.

Table 22 **Postgraduates reporting job does not fully use my skills or education, 2016 (%)**

	Employed full-time	Overall employed
Postgraduate coursework	29.9	32.4
Postgraduate research	27.1	30.7

Table 23 **Postgraduate coursework graduates main reason for working in a job that doesn't fully use my skills and education, 2016 (%)**

	Employed full-time (%)	Overall employed (%)
Studying	5.0	8.1
I'm satisfied with my current job	6.2	5.4
I have skills that are not required in my current job	5.7	5.1
Changing jobs/careers	3.5	3.0
Entry level job/career stepping stone	4.0	3.3
Caring for children or family member	4.6	6.4
Subtotal – personal factors	**29.0**	**31.3**
No suitable jobs in my area of expertise	25.5	25.4
No suitable jobs in my local area	20.3	19.3
Considered to be too young by employers	7.1	5.5
Not enough work experience	2.9	2.8
No jobs with a suitable number of hours	2.4	3.7
Cannot find a job	n/a	1.6
My job is temporary/casual	n/a	0.4
Subtotal – labour market factors	**60.3**	**58.6**
Other	10.7	10.1
Total	**100.0**	**100.0**

Table 24 **Postgraduate research graduates main reason for working in a job that doesn't fully use my skills and education, 2016 (%)**

	Employed full-time (%)	Overall employed (%)
Studying	n/a	3.9
I'm satisfied with my current job	6.6	6.0
I have skills that are not required in my current job	5.3	4.5
Changing jobs/careers	n/a	3.4
Entry level job/career stepping stone	n/a	n/a
Caring for children or family member	n/a	3.3
Subtotal – personal factors	**21.8**	**23.0**
No suitable jobs in my area of expertise	45.0	43.7
No suitable jobs in my local area	19.0	18.8
Considered to be too young by employers	n/a	n/a
Not enough work experience	n/a	n/a
No jobs with a suitable number of hours	n/a	3.2
Cannot find a job	n/a	n/a
My job is temporary/casual	n/a	n/a
Subtotal – labour market factors	**71.1**	**69.9**
Other	7.1	7.1
Total	**100.0**	**100.0**

Communications, Agriculture and environmental studies and, Science and mathematics postgraduate coursework graduates were more likely to report that they were not using their skills or education in their current job, 48.7 per cent, 45.5 per cent and 42.4 per cent respectively, as shown by Table 25. Among those stating they were not using their skills or education in their current position, those in Agriculture and environmental studies and Creative arts were most likely to state this was because there were no suitable jobs in their area of expertise at 40.7 per cent and 40.4 per cent respectively.

Veterinary science, Communications and Humanities, culture and social sciences postgraduate research graduates were more likely to report that they were not using their skills or education in their current position, 45.2 per cent, 41.8 per cent and 40.5 per cent respectively, as shown by Table 26. Note that there were too few responses to analyse the reasons for skills under-utilisation at the postgraduate research level.

Table 25 **Postgraduate coursework graduates reporting they did not fully use their skills or education and main reason being no suitable jobs in my area of expertise, by study area, 2016**

	Extent to which skills and education not fully used		Main reason – no suitable jobs in my area of expertise	
Study area	**Employed full-time**	**Overall employed**	**Employed full-time**	**Overall employed**
Science and mathematics	33.3	42.4	37.0	34.2
Computing and information systems	38.4	39.9	22.4	23.3
Engineering	32.5	34.5	31.6	34.7
Architecture and built environment	21.5	25.8	n/a	28.6
Agriculture and environmental studies	37.4	45.5	39.8	40.7
Health services and support	27.7	29.6	29.7	29.8
Medicine	9.5	13.8	n/a	n/a
Nursing	16.3	17.7	21.2	22.4
Pharmacy	13.8	15.5	n/a	n/a
Dentistry	5.6	7.6	n/a	n/a
Veterinary science	8.9	9.8	n/a	n/a
Rehabilitation	11.4	12.5	n/a	n/a
Teacher education	21.4	24.7	19.5	18.8
Business and management	39.5	41.0	22.9	22.7
Humanities, culture and social sciences	35.6	41.1	27.6	27.2
Social work	33.1	35.6	19.4	16.6
Psychology	29.4	35.9	23.2	19.1
Law and paralegal studies	32.6	35.3	33.9	33.4
Creative arts	39.0	41.0	36.5	40.4
Communications	43.1	48.7	31.1	32.7
Tourism, hospitality, personal services, sport and recreation	35.0	43.1	n/a	n/a
All study areas*	**29.9**	**32.4**	**25.5**	**25.4**

*Where a graduate completes combined degrees across two study areas, their outcomes are included in both study areas. 'All study areas' figures count each graduate once only.

Table 26 **Postgraduate research level graduates reporting occupation does not fully use skills and education, by study area, 2016 (%)**

	Extent to which skills and education not fully used	
Study area	**Employed full-time**	**Overall employed**
Science and mathematics	21.5	27.0
Computing and information systems	31.1	35.2
Engineering	23.9	27.4
Architecture and built environment	n/a	25.7
Agriculture and environmental studies	37.5	38.7
Health services and support	22.5	23.1
Medicine	17.2	23.1
Nursing	30.4	33.3
Pharmacy	17.9	23.3
Dentistry	n/a	n/a
Veterinary science	n/a	45.2
Rehabilitation	n/a	n/a
Teacher education	34.8	36.1
Business and management	32.2	30.7
Humanities, culture and social sciences	36.9	40.5
Social work	n/a	n/a
Psychology	24.8	26.1
Law and paralegal studies	12.8	20.0
Creative arts	30.8	32.8
Communications	44.4	41.8
Tourism, hospitality, personal services, sport and recreation	n/a	n/a
All study areas*	**27.1**	**30.7**

*Where a graduate completes combined degrees across two study areas, their outcomes are included in both study areas. 'All study areas' figures count each graduate once only.

5 Undergraduate salaries

The median salary of all undergraduates employed full-time in 2016 was $57,900, as shown by Table 27. Reporting of graduate salaries time series data for earlier periods prior to 2016 is consistent with data published from the previous AGS, as shown in Table 27 and Figure 4 below. The graduate median salary in 2015 of $54,000 refers to bachelor graduates employed full-time aged 25 or less and in their first full-time employment. Table 27 shows that older undergraduates and external undergraduates reported higher salaries than their counterparts in 2016. The inclusion of older graduates and graduates with an ongoing relationship with an employer is likely to increase the estimate of the median salary of undergraduates in 2016 in comparison with 2015, all other things being equal.

Previously, it was shown that high level undergraduate labour market outcomes are broadly similar for males and females. However, the notable exception is that female undergraduates earn significantly less than male undergraduates, $56,400 and $60,000 respectively. In 2016, the gender gap in undergraduate median salaries was $3,600 or 6.4 per cent. Previous research suggests that one of the key factors contributing to the gender gap in graduate salaries is that females tend to graduate from fields of education that achieve lower salaries e.g. humanities, whereas males tend to graduate from more highly remunerated fields e.g. engineering.[1] However, female graduates often earn less than their male graduates within the same field of education and this issue is explored below.

In 2016, Indigenous undergraduates earned more than their non-Indigenous counterparts immediately upon graduation, with median salaries of $59,200 and $57,900 respectively. On the other hand, undergraduates whose home language was a language other than English had a lower median salary of $55,000 in comparison with $58,000 for graduates whose home language was English. Similarly, undergraduates with a reported disability received a median salary of $57,500 which was lower than the median salary of $57,700 for graduates who reported no disability.

1 Graduate Careers Australia (2014), *An analysis of the gender wage gap in the Australian graduate labour market, 2013*

Table 27 **Undergraduate median full-time salaries by demographic group, 2015 and 2016 ($)**

		Male		Female		Total	
		2015*	2016	2015*	2016	2015*	2016
Age	30 years or under	55,000	59,000	53,000	55,000	54,000	56,200
	Over 30 years	60,000**	70,000	55,300**	63,000	57,000**	65,000
Indigenous	Indigenous	58,000	55,800	57,000	60,000	57,000	59,200
	Non Indigenous	55,000	60,000	53,000	56,400	54,000	57,900
Home language	English	55,000	60,000	53,000	56,400	54,000	58,000
	Language other than English	55,000	57,500	50,000	52,900	52,000	55,000
Disability	Reported disability	54,000	58,400	52,000	57,400	52,000	57,700
	No disability	55,000	60,000	53,000	56,400	54,000	57,900
Study mode	Internal and mixed mode	55,000	59,500	53,000	55,300	54,000	57,000
	External	57,800	72,600	54,000	62,600	55,000	64,000
Total undergraduate		**55,000**	**60,000**	**53,000**	**56,400**	**54,000**	**57,900**

*Graduates aged less than 25 and in first full-time employment, unless otherwise noted.
** Aged 25 years or over and in first full-time employment.

5.1 Salaries by study area

Notwithstanding that females tend to graduate from fields of education with lower salary levels, female undergraduates within fields of education or study areas still generally earn less than their male counterparts immediately upon graduation, as shown by Table 28. There are a few exceptions to this general rule, immediately upon graduation females in Computing and information systems, and Psychology earned more than their male counterparts, while starting salaries were equal among Communications graduates.

On the whole, however, the study area results demonstrate that beyond subject choice, the gender gap in median undergraduate salaries persists due to a range of other factors such as occupation, age, experience, personal factors and possible inequalities within workplaces.[2]

2 Graduate Careers Australia (2014), *An analysis of the gender wage gap in the Australian graduate labour market, 2013*

Table 28 **Undergraduate median full-time salaries by study area, 2015 and 2016**

Study area	Male ($)		Female ($)		Total ($)	
	2015*	2016	2015*	2016	2015*	2016
Science and mathematics	54,000	60,000	51,000	54,000	52,000	55,200
Computing and Information Systems	53,000	59,500	57,000	60,000	55,000	60,000
Engineering	60,000	62,600	63,000	62,300	60,000	62,600
Architecture and built environment	50,000	59,000	45,000	50,000	45,000	55,000
Agriculture and environmental studies	50,000	57,000	48,000	53,500	49,000	55,000
Health services and support	55,000	64,000	56,000	58,200	56,000	59,500
Medicine	65,000	70,000	64,000	68,200	65,000	69,200
Nursing	55,500	60,500	53,000	58,400	53,000	58,400
Pharmacy	40,500	43,800	42,000	43,600	42,000	43,800
Dentistry	n/a	84,000	76,500	82,800	80,000	83,500
Veterinary science	n/a	n/a	49,500	50,000	50,000	50,000
Rehabilitation	59,000	60,700	58,000	59,000	59,000	60,000
Teacher education	61,000	63,600	60,300	62,600	61,000	62,900
Business and management	50,000	57,000	49,500	53,000	50,000	55,000
Humanities, culture and social sciences	52,000	57,400	50,000	54,800	50,000	55,000
Social work	n/a	60,500	55,500	60,000	55,500	60,000
Psychology	51,500	54,000	50,000	54,800	50,000	54,800
Law and paralegal studies	55,500	63,000	55,000	57,400	55,000	60,000
Creative arts	42,000	50,000	40,000	47,000	40,000	48,000
Communications	47,000	48,000	45,000	48,000	45,000	48,000
Tourism, hospitality, personal services, sport and recreation	n/a	n/a	n/a	51,400	40,000	52,200
All study areas**	**55,000**	**60,000**	**53,000**	**56,400**	**54,000**	**57,900**
Standard deviation (pp)	**8,600**	**8,300**	**8,200**	**8,400**	**8,900**	**8,300**

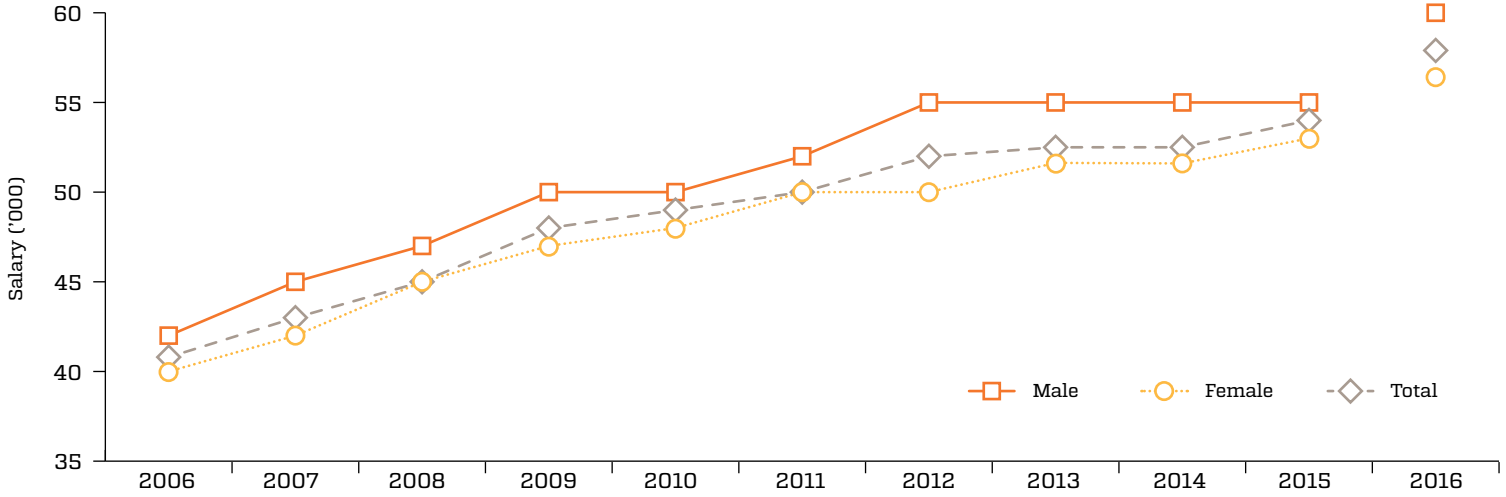
*Graduates aged less than 25 and in first full-time employment.
**For 2016, where a graduate completes combined degrees across two study areas, their outcomes are included in both study areas. 'All study areas' figures count each graduate once only

5.2 Salaries over time

Figure 4 shows the gender gap in graduate salaries has persisted over time. In 2006, female graduates earned $40,000, which was $2,000 or 4.8 per cent less than male graduates. As noted above, in 2016, the gender gap in undergraduate median salaries was $3,600 or 6.4 per cent.

The gender gap in graduate salaries has persisted over time . . . in 2016, the gender gap in undergraduate median salaries was 6.4 per cent

Figure 4 **Undergraduate median starting salaries, 2006–2016* ($)**



*2006 to 2015 based on graduates aged less than 25 and in first full-time employment.

6 Postgraduate salaries

Further study leads to improved salary outcomes in addition to improved employment outcomes. In 2016, the median salary of undergraduates employed full-time was $57,900 in comparison with $80,000 earned by postgraduate coursework graduates and $85,000 earned by postgraduate research graduates, as shown by Tables 29 and 30 respectively.

The gender gap in graduate salaries is more marked at the postgraduate coursework level than the postgraduate research level. In 2016, the gender gap in median salaries was $14,300 or 18.9 per cent among postgraduate coursework graduates in comparison with $5,000 or 6.0 per cent among postgraduate research graduates and $3,600 or 6.4 per cent among undergraduates.

In 2016, demographic groups displayed the same pattern of median salaries among postgraduate coursework and research graduates as occurred among undergraduates. For example, Indigenous postgraduate coursework graduates median salary was $82,200 in comparison with $80,000 for non-Indigenous graduates. Older and external graduates and those whose home language was English and those not reporting a disability received higher median salaries than their counterparts among postgraduate coursework and research graduates.

Table 29 **Postgraduate coursework median full-time salaries by demographic group, 2015 and 2016 ($)**

		Male		Female		Total	
		2015	2016	2015	2016	2015	2016
Age	30 years or under	65,000	70,000	63,000	65,000	64,000	67,000
	Over 30 years	100,000	106,000	85,000	89,200	90,000	95,000
Indigenous	Indigenous	77,000	85,000	73,500	77,500	75,000	82,200
	Non Indigenous	90,000	90,000	72,000	75,700	80,000	80,000
Home language	English	90,000	90,130	74,000	76,000	80,000	80,400
	Language other than English	80,000	73,100	68,000	66,000	72,000	70,000
Disability	Reported disability	85,000	80,000	69,000	69,000	74,000	73,100
	No disability	90,000	90,700	73,000	76,000	80,000	80,000
Study mode	Internal and mixed mode	85,000	85,000	68,000	71,500	73,000	76,000
	External	95,000	100,000	80,000	82,500	85,000	88,000
Total postgraduate coursework		**90,000**	**90,000**	**73,000**	**75,700**	**80,000**	**80,000**

In 2016, demographic groups displayed the same pattern of median salaries among postgraduate coursework and research graduates as occurred among undergraduates

Table 30 **Postgraduate research median full-time salaries by demographic group, 2015 and 2016 ($)**

		Male		Female		Total	
		2015	2016	2015	2016	2015	2016
Age	30 years or under	75,000	80,000	75,000	76,100	75,000	78,200
	Over 30 years	87,000	97,200	89,000	90,000	88,000	93,000
Indigenous	Indigenous	n/a	n/a	n/a	85,000	n/a	95,000
	Non Indigenous	83,000	88,000	80,000	83,100	82,000	85,000
Home language	English	85,500	89,000	83,000	83,500	84,400	86,000
	Language other than English	79,700	80,000	77,000	78,100	78,000	79,200
Disability	Reported disability	n/a	83,000	n/a	80,000	84,500	80,000
	No disability	83,000	89,000	80,000	83,500	82,000	85,000
Study mode	Internal and mixed mode	81,000	87,000	80,000	82,100	80,000	85,000
	External	100,000	100,000	92,000	95,000	96,000	95,100
Total postgraduate research		**84,000**	**88,300**	**80,300**	**83,300**	**82,000**	**85,000**

6.1 Salaries by study area

In 2016, postgraduate coursework graduates from Business and management, Dentistry and Engineering received the highest median salaries of $102,300, $100,000 and $95,000 respectively, as shown by Table 31. Similarly, postgraduate research graduates from Business and management, Law and paralegal studies and Teacher education received the highest median salaries of $100,000, $99,500 and $98,000 respectively, as shown by Table 32. It is interesting to observe that the variation in median salaries across study areas increases at higher education levels. The standard deviation in median salaries among undergraduates was $8,300, but was $13,200 among postgraduate coursework graduates and $10,100 among postgraduate research graduates. This contrasts with the lower variation in full-time employment rates by study area at higher levels of education as noted above. That is, at higher education levels, variation in employment rates is being replaced by greater variation in salaries. A similar phenomenon is observed when tracking graduates over time, as shown in the 2016 Graduate Outcomes Survey-Longitudinal report. As graduates acquire greater experience in the workforce, variation in employment rates is replaced by greater variation in salaries at the study area level.

The gender gap in salaries among postgraduates persists across most study areas. The only exceptions are at postgraduate coursework level where female Creative arts graduates median salaries are $63,400 in comparison with $60,500 for their male counterparts. Repeating the point made earlier, while some of the gender gap in postgraduate salaries is due to the tendency for females to graduate from lower paying study areas, nevertheless the gender gap in salaries persists due to a range of other factors such as occupation, age, experience, personal factors and possible inequalities within workplaces.

As graduates acquire greater experience in the workforce, variation in employment rates is replaced by greater variation in salaries

Table 31 **Postgraduate coursework median full-time salaries by study area, 2015 and 2016 ($)**

	Male		Female		Total	
Study area	**2015**	**2016**	**2015**	**2016**	**2015**	**2016**
Science and mathematics	90,000	85,100	74,000	73,200	80,000	78,700
Computing and Information Systems	90,000	88,000	80,500	75,100	90,000	85,000
Engineering	100,000	98,600	80,000	85,000	100,000	95,000
Architecture and built environment	60,000	62,000	55,000	56,400	58,000	60,000
Agriculture and environmental studies	76,500	78,300	70,000	70,000	75,000	73,100
Health services and support	98,000	95,000	75,000	76,900	82,000	80,000
Medicine	70,000	86,500	67,000	78,000	68,000	80,000
Nursing	78,000	83,000	75,000	78,900	75,400	79,300
Pharmacy	66,500	n/a	60,000	58,700	60,000	58,400
Dentistry	100,000	106,200	n/a	95,000	92,000	100,000
Veterinary science	n/a	n/a	52,000	50,100	53,500	52,100
Rehabilitation	70,000	69,700	63,000	65,000	65,000	66,800
Teacher education	70,000	75,000	69,000	73,000	69,000	73,100
Business and management	107,000	112,000	87,000	91,300	100,000	102,300
Humanities, culture and social sciences	80,000	83,000	73,000	73,900	75,000	77,000
Social work	69,400	73,100	67,000	64,900	68,000	65,400
Psychology	75,000	80,000	74,000	74,700	74,000	75,500
Law and paralegal studies	80,000	76,600	69,000	70,000	73,000	72,000
Creative arts	65,000	60,500	60,000	63,400	61,000	63,000
Communications	67,000	62,300	65,000	60,000	65,000	60,900
Tourism, hospitality, personal services, sport and recreation	62,500	n/a	n/a	n/a	58,000	72,500
All study areas*	**90,000**	**90,000**	**73,000**	**75,700**	**80,000**	**80,000**
Standard deviation (pp)	**13,000**	**15,200**	**8,600**	**15,800**	**12,600**	**13,200**

*For 2016, where a graduate completes combined degrees across two study areas, their outcomes are included in both study areas. 'All study areas' figures count each graduate once only

Table 32 **Postgraduate research median full-time salaries by study area, 2015 and 2016 ($)**

	Male		Female		Total	
Study area	**2015**	**2016**	**2015**	**2016**	**2015**	**2016**
Science and mathematics	79,800	80,000	75,000	78,000	76,000	79,000
Computing and Information Systems	82,000	100,000	n/a	n/a	82,000	84,900
Engineering	82,800	85,000	76,700	82,000	80,000	85,000
Architecture and built environment	n/a	n/a	n/a	n/a	86,900	n/a
Agriculture and environmental studies	80,000	85,200	n/a	69,000	78,500	78,400
Health services and support	92,000	106,000	90,000	88,200	90,000	90,200
Medicine	93,000	91,000	81,500	85,300	84,000	87,000
Nursing	n/a	n/a	93,000	94,000	97,000	94,000
Pharmacy	n/a	n/a	n/a	n/a	n/a	80,000
Dentistry	n/a	n/a	n/a	n/a	n/a	n/a
Veterinary science	n/a	n/a	n/a	n/a	n/a	n/a
Rehabilitation	n/a	n/a	n/a	n/a	n/a	n/a
Teacher education	95,000	100,000	97,000	95,000	95,600	98,000
Business and management	90,000	100,000	90,000	95,000	90,000	100,000
Humanities, culture and social sciences	80,000	85,000	81,000	80,000	81,000	82,000
Social work	n/a	n/a	n/a	n/a	n/a	n/a
Psychology	85,000	n/a	80,000	80,000	80,000	80,000
Law and paralegal studies	n/a	n/a	n/a	n/a	n/a	99,500
Creative arts	70,000	80,000	n/a	65,200	70,000	70,000
Communications	n/a	n/a	n/a	n/a	n/a	n/a
Tourism, hospitality, personal services, sport and recreation	n/a	n/a	n/a	n/a	n/a	n/a
All study areas*	**84,000**	**88,300**	**80,300**	**83,300**	**82,000**	**85,000**
Standard deviation (pp)	**12,500**	**13,800**	**16,300**	**10,000**	**11,600**	**10,100**

*For 2016, where a graduate completes combined degrees across two study areas, their outcomes are included in both study areas. 'All study areas' figures count each graduate once only.

6.2 Salaries over time

Trends in median salaries of postgraduate coursework graduates among males and females are shown in Figure 5 below. In 2006, the median salary of female postgraduate coursework graduates was $55,000, which was $15,000 or 21.4 per cent less than for male graduates. In 2015, the median salary of female postgraduate coursework graduates was $73,000 or 18.9 per cent less than for male graduates, as measured by the AGS. The gender gap in postgraduate coursework graduate salaries was somewhat less as measured by the GOS in 2016, with the median salary for females being $75,700, $14,300 or 18.9 per cent less than the median salary for males. Part of the growth in the gender gap as measured by the GOS maybe on account of the expanded definition of median salaries to incorporate all graduates employed full-time. The inclusion of older and external postgraduate coursework graduates may favour male graduates who have an ongoing relationship with an employer in comparison with female graduates who have more interrupted job histories and lower salaries as a result.

Trends in median salaries of postgraduate research graduates are shown in Figure 6 below. In general, the gap between female and male postgraduate research graduate median salaries tends to be much less than among postgraduate coursework graduates. For example, in 2006 the median salaries of female and male postgraduate research graduates were $60,000 and $63,000 respectively. In 2015, the median salary of female graduates was $80,300, $3,700 or 4.6 per cent less than male graduates, as measured by the AGS. The gender gap in postgraduate research graduate salaries was larger as measured by the GOS, with the median salary for females being $83,300 in 2016, $5,000 or 6.0 per cent less than the median salary for males. Once again, part of the growth in the gender gap as measured by the GOS may be on account of the expanded definition of median salaries to incorporate all graduates employed full-time.

In general, the gap between female and male postgraduate research graduate median salaries tends to be much less than among postgraduate coursework graduates

Figure 5 **Postgraduate coursework level median starting salaries, 2006–2016 ($)**

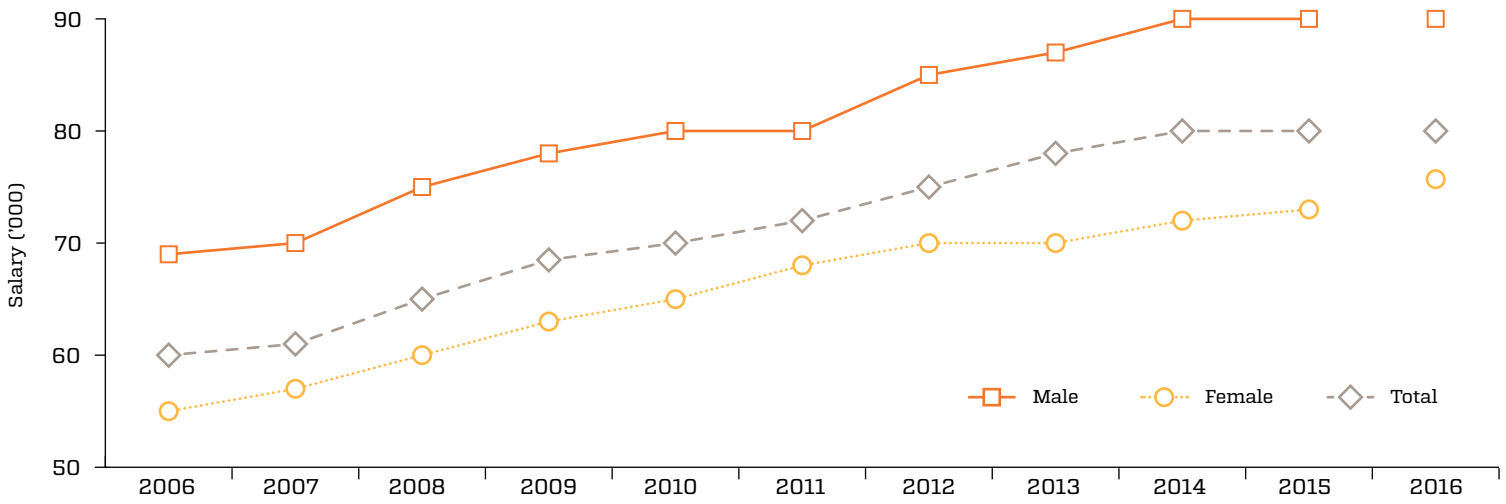
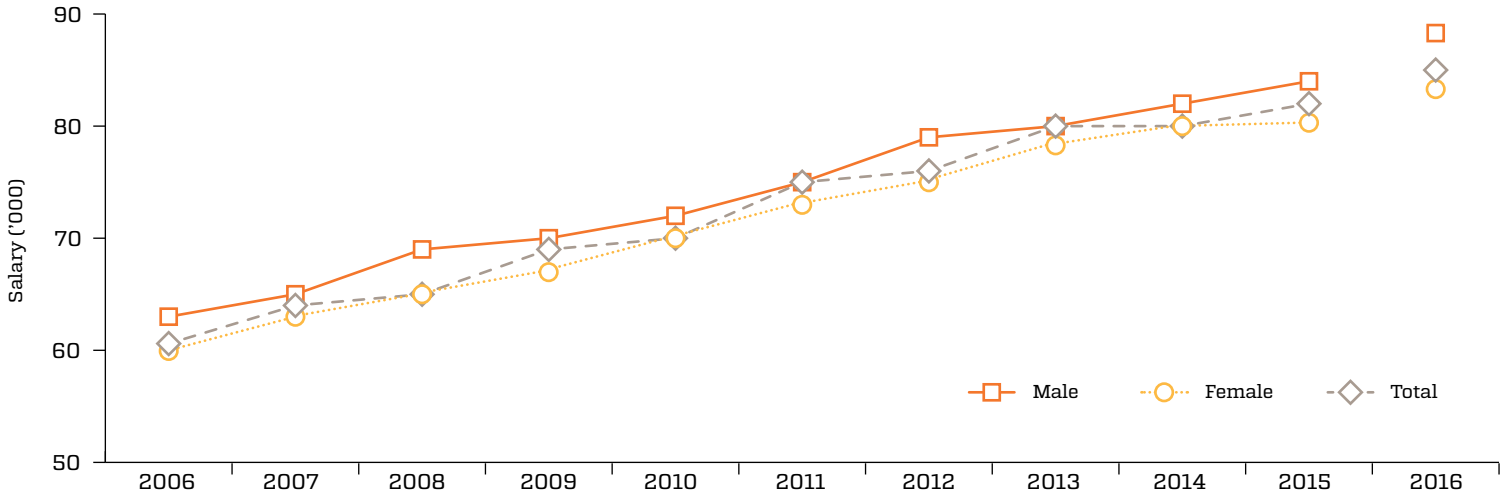


Figure 6 **Postgraduate research level median starting salaries, 2006–2016 ($)**



7 Undergraduate further study

The following section focuses on the destinations of undergraduates who were engaged in further full-time study four months after completion of their degree. In 2016, four months after graduation, 21.8 per cent of graduates were engaged in further full-time study, as shown by Table 33. Study areas with the highest proportion of students in full-time study in 2016 included Science and mathematics, 44.7 per cent, Psychology, 37.7 per cent and, Humanities, culture and social work, 32.0 per cent. Undergraduate study areas with a strong vocational orientation tended, not surprisingly, to be less likely to proceed on to further full-time study in 2016. These included Nursing, 3.8 per cent, and Rehabilitation, 5.4 per cent.

Younger undergraduates and those that studied internally and by mixed mode were more likely to engage in further full-time study, as shown by Table 34. For example, 23.6 per cent of undergraduates 30 years or under went on to further full-time study in comparison with 13.5 per cent of those aged over 30 years. 23.2 per cent of internal and mixed mode undergraduates went on to further full-time study in comparison with 10.2 per cent of undergraduates who studied externally. Similarly, males, Indigenous, undergraduates with a home language other than English and those who reported a disability were more likely to engage in further full-time study.

Undergraduates proceeding to further full-time study in 2016 were, not unsurprisingly, less likely to be in full-time employment, as shown by Table 35. The full-time employment rate for those engaging in further full-time study was 48.7 per cent in comparison with 72.6 per cent for those not engaging in further full-time study. Also, undergraduates proceeding to further full-time study had a lower overall employment rate, labour force participation rate and median full-time salary than their counterparts.

The broad field of education of undergraduates undertaking further full-time study in 2016 is shown in Table 36. Health was the most popular area for further full-time study following an undergraduate degree, with 26.6 per cent of those proceeding to further study selecting this area. Other popular areas for further study were Society and culture, 21.0 per cent, Natural and physical sciences, 13.1 per cent, and Education, 11.6 per cent.

Table 33 **Undergraduate further full-time study status in 2016, by original field of study (%)**

Study area	In full-time study in 2016			Not in full-time study in 2016		
	Male	Female	Total	Male	Female	Total
Science and mathematics	47.1	42.9	44.7	52.9	57.1	55.3
Computing and information systems	12.2	10.7	12.0	87.8	89.3	88.0
Engineering	13.6	14.0	13.6	86.4	86.0	86.4
Architecture and built environment	21.4	21.9	21.6	78.6	78.1	78.4
Agriculture and environmental studies	18.0	20.7	19.6	82.0	79.3	80.4
Health services and support	27.1	22.3	23.7	72.9	77.7	76.3
Medicine	7.8	12.2	10.5	92.2	87.8	89.5
Nursing	n/a	3.8	3.8	96.1	96.2	96.2
Pharmacy	n/a	n/a	11.3	80.9	91.4	88.7
Dentistry	n/a	n/a	n/a	87.7	93.0	91.4
Veterinary science	n/a	25.9	28.9	n/a	74.1	71.1
Rehabilitation	n/a	4.3	5.4	90.9	95.7	94.6
Teacher education	9.0	8.0	8.1	91.0	92.0	91.9
Business and management	13.0	11.0	11.9	87.0	89.0	88.1
Humanities, culture and social sciences	32.8	31.6	32.0	67.2	68.4	68.0
Social work	n/a	9.9	10.3	86.8	90.1	89.7
Psychology	37.2	37.8	37.7	62.8	62.2	62.3
Law and paralegal studies	19.1	20.1	19.7	80.9	79.9	80.3
Creative arts	25.3	26.9	26.4	74.7	73.1	73.6
Communications	16.5	16.6	16.6	83.5	83.4	83.4
Tourism, hospitality, personal services, sport and recreation	n/a	n/a	28.5	67.2	74.7	71.5
All study areas*	**23.0**	**21.2**	**21.8**	**77.0**	**78.8**	**78.2**

*Where a graduate completes combined degrees across two study areas, their outcomes are included in both study areas. 'All study areas' figures count each graduate once only.

Table 34 **2016 full-time study status by demographic group (%)**

		In full-time study in 2016	Not in full-time study in 2016
All undergraduates		**21.8**	**78.2**
Gender	Male	23.0	77.0
	Female	21.2	78.8
Age	30 years or under	23.6	76.4
	Over 30 years	13.5	86.5
Indigenous	Indigenous	23.6	76.4
	Not Indigenous	21.8	78.2
Home language	English	21.8	78.2
	Language other than English	23.9	76.1
Disability	Reported disability	24.9	75.1
	No disability	21.6	78.4
Study mode	Internal and mixed mode	23.2	76.8
	External	10.2	89.8

Figure G **Undergraduate overall satisfaction by demographic group**

30 years or under
2016

Over 30 years
2016

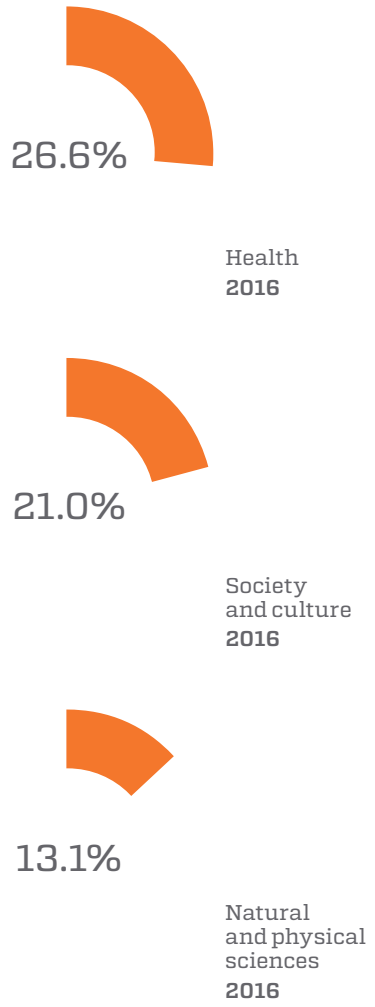
Table 35 **Labour market outcomes of undergraduates, by 2016 full-time study status**

	In full-time study in 2016			Not in full-time study in 2016		
	Male	**Female**	**Total**	**Male**	**Female**	**Total**
In full-time employment %	45.5	50.7	48.7	71.9	73.1	72.6
Overall employed %	74.8	81.2	78.9	84.5	89.1	87.5
Labour force participation rate %	70.4	77.1	74.6	97.4	96.7	97.0
Median full-time salary ($)	52,000	51,500	51,500	60,000	56,800	58,000

Table 36 **Study area of undergraduates in further full-time study in 2016 (%)**

Field of education	**Further study 2016**
Natural and physical sciences	13.1
Information technology	2.0
Engineering and related technologies	5.1
Architecture and building	2.6
Agriculture, environmental and related studies	1.7
Health	26.6
Education	11.6
Management and commerce	6.8
Society and culture	21.0
Creative arts	7.5
Food, hospitality and personal services	0.3
All fields	**100.0**

Figure H **Study area of undergraduates in further full-time study**



8 Postgraduate further study

Not surprisingly, further full-time study is less commonplace after postgraduate studies. In 2016, 7.3 per cent of postgraduate coursework graduates and 6.8 per cent of postgraduate research graduates proceeded to further full-time study in comparison with 21.8 per cent of undergraduates, as shown by Table 37.

In 2016, demographic groups displayed the same patterns of further study among postgraduate coursework and research graduates as occurred among undergraduates. Younger postgraduates and those that studied internally and by mixed mode were more likely to engage in further full-time study, as shown by Table 37. Similarly, males, Indigenous, postgraduates with a home language other than English and those who reported a disability were more likely to engage in further full-time study.

Table 37 **Graduates in further full-time study in 2016, by initial postgraduate study level, by demographic profile (% of all graduates)**

		Postgraduate coursework initial study	Postgraduate research initial study
All postgraduate level graduates in further full-time study		**7.3**	**6.8**
Gender	Male	7.9	7.5
	Female	7.0	6.2
Age	30 years or under	8.8	9.1
	Over 30 years	6.2	5.6
Indigenous	Indigenous	13.6	n/a
	Not Indigenous	7.3	6.8
Home language	English	7.2	6.7
	Language other than English	9.0	n/a
Disability	Reported disability	8.6	n/a
	No disability	7.3	6.5
Study mode	Internal and mixed mode	7.9	7.0
	External	6.0	n/a

Postgraduate level graduates are more likely to be combining full-time study and full-time work than their undergraduate level counterparts. In 2016, the full-time employment rate of postgraduate coursework graduates engaged in further full-time study was 74.5 per cent and for postgraduate research graduates it was 79.5 per cent in comparison with 48.7 per cent for undergraduates, as shown by Table 38. Undergraduates are more likely to combine further full-time study with part-time employment. This is shown by the overall employment rate for undergraduates in further full-time study of 78.9 per cent being much closer to the overall employment rate for postgraduate coursework graduates in further full-time study of 85.1 per cent and for postgraduate research graduates of 87.7 per cent.

Table 38 **Labour market outcomes of postgraduates, by 2016 full-time study status**

	In full-time study in 2016			Not in full-time study in 2016		
Postgraduate coursework initial study	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**
In full-time employment %	72.1	76.3	74.5	87.6	84.4	85.7
Overall employed %	82.3	86.9	85.1	92.3	93.2	92.9
Labour force participation rate %	83.3	84.3	83.9	97.2	96.2	96.6
Median full-time salary ($)	86,000	77,200	80,000	90,000	75,700	80,000
Postgraduate research initial study						
In full time employment %	79.4	79.7	79.5	80.0	80.2	80.1
Overall employed %	84.4	90.7	87.7	89.6	91.1	90.4
Labour force participation rate %	83.3	84.3	83.9	97.2	96.2	96.6
Median full-time salary ($)	83,700	86,500	85,000	88,600	83,000	85,000

9 Undergraduate coursework graduate satisfaction

The Course Experience Questionnaire (CEQ), administered since 1993, invites graduates four months after completing their course to express agreement or disagreement on a five point scale with statements about various aspects of their course that have been shown to influence student learning. Core questions cover teaching, generic skills and overall satisfaction. Responses to points four and five on the scale are reported in the tables below and also on the QILT website.

Changes in survey methodology appear to have impacted on both CEQ and PREQ survey estimates derived from the 2016 GOS. For example, the Overall Satisfaction Indicator for undergraduate students, which consists of one question in the CEQ and is reported as such on the QILT website, declined from 83.4 per cent in 2015 to 80.6 per cent in 2016, as shown by Table 39. Note that apparently small changes in survey methodology can have a potentially large impact on CEQ survey estimates. In 2010, a change in the CEQ survey methodology where the mid-point of the 5 point scale was changed from unlabelled to 'neither agree nor disagree' resulted in a large 12 percentage point increase in the Overall Satisfaction Indicator.

Satisfaction with generic skills in 2016, like overall satisfaction, was high at 82.1 per cent, but satisfaction with the quality of teaching in 2016 was lower at 63.0 per cent. Note that changes in the calculation of scale scores for the CEQ and PREQ reported in the 2016 GOS bring these into line with the reporting of results on the QILT website, but differ from the previous methodology used to calculate scale scores in the AGS. These changes impact on comparison of CEQ and PREQ scale scores between the 2015 AGS and 2016 GOS. In Table 39, 2015 scale scores have been calculated using the AGS methodology, with 2016 scores calculated using the GOS methodology. For a more substantive discussion of the comparability of CEQ and PREQ estimates derived from the AGS and GOS see Appendix 3.

Table 39 **Undergraduate satisfaction, 2015 and 2016 (% agreement)**

Overall satisfaction		Good teaching scale		Generic skills scale	
2015	2016	2015	2016	2015	2016
83.4	80.6	68.0	63.0	79.6	82.1

9.1 Satisfaction by study area

One of the key factors influencing CEQ scores is study area. For example in 2016, overall satisfaction among undergraduates ranged from a high of 88.1 per cent in Rehabilitation and 87.0 per cent in Social work, down to 74.2 per cent in Architecture and built environment, and 74.6 per cent in Creative arts, as shown by Table 40. Similarly, for good teaching, satisfaction ranged from 75.2 per cent in Humanities, culture and social sciences down to 47.4 per cent in Medicine. For generic skills, satisfaction ranged from 88.8 per cent in Rehabilitation down to 77.1 per cent in Creative arts. The variation in satisfaction across institutions and study areas indicates there is scope for improvement in the interactions between institutions and their students.

Table 40 **Undergraduate satisfaction by study area, 2015 and 2016 (% agreement)**

	Overall satisfaction		Good teaching scale		Generic skills scale	
Study area	**2015**	**2016**	**2015**	**2016**	**2015**	**2016**
Science and mathematics	86.9	84.0	71.4	66.7	82.2	84.9
Computing and Information Systems	80.2	75.9	64.3	58.6	76.7	77.5
Engineering	78.9	75.4	56.7	49.1	81.5	84.0
Architecture and built environment	77.1	74.2	65.8	62.5	78.0	78.0
Agriculture and environmental studies	86.1	85.5	72.4	69.0	83.3	87.9
Health services and support	82.6	81.4	69.4	67.6	80.5	84.4
Medicine	82.8	79.4	62.1	47.4	80.9	79.1
Nursing	82.2	80.1	67.0	59.2	81.4	83.1
Pharmacy	86.2	86.6	70.6	67.5	80.3	85.1
Dentistry	80.0	77.2	65.6	60.3	78.3	82.0
Veterinary science	88.6	86.3	69.3	67.1	85.8	85.6
Rehabilitation	88.8	88.1	75.9	72.9	86.7	88.8
Teacher education	81.8	78.7	66.9	60.8	77.7	78.6
Business and management	83.0	79.0	65.0	56.6	78.5	79.4
Humanities, culture and social sciences	87.3	85.4	75.3	75.2	78.2	83.3
Social work	86.2	87.0	72.8	71.2	83.3	87.7
Psychology	85.5	80.8	68.4	63.4	81.5	84.7
Law and paralegal studies	84.4	82.6	64.3	56.4	80.9	84.7
Creative arts	78.8	74.6	72.4	70.1	74.3	77.1
Communications	82.7	80.1	71.3	70.4	77.9	80.9
Tourism, hospitality, personal services, sport and recreation	85.3	79.1	70.5	66.5	80.4	84.0
All study areas	**83.4**	**80.6**	**68.0**	**63.0**	**79.6**	**82.1**

9.2 Satisfaction by demographic group

Older undergraduates generally expressed higher satisfaction with their courses, as shown by Table 41. In 2016, 83.9 per cent of undergraduates over 30 years expressed overall satisfaction with their courses in comparison with 80.0 per cent of those aged 30 years or under. Older students were also more likely to express satisfaction with teaching, 68.7 per cent, than their younger counterparts, 61.9 per cent. However, younger undergraduates were slightly more satisfied with their generic skills, 82.2 per cent, than their older counterparts, 82.0 per cent. 83.5 per cent of undergraduates studying externally expressed overall satisfaction with their courses in comparison with 80.3 per cent of undergraduates who studied internally or by mixed mode. On the other hand, undergraduates studying internally and by mixed mode reported higher satisfaction with good teaching and generic skills than did undergraduates studying externally.

Indigenous and undergraduates whose home language was other than English expressed higher satisfaction with their courses, whereas undergraduates who reported a disability were generally less satisfied with their courses. Indigenous undergraduates overall satisfaction with their course was 81.6 per cent in comparison with 80.6 per cent for non-Indigenous undergraduates. Similarly, undergraduates whose home language was other than English overall satisfaction with their courses was 81.2 per cent in comparison with 80.5 per cent for undergraduates whose home language was English. Undergraduates reporting a disability overall satisfaction with their courses was 77.4 per cent in comparison with 80.8 per cent for undergraduates who did not report a disability. On the other hand, those reporting a disability expressed slightly higher satisfaction with the quality of their teaching, 63.5 per cent in comparison with 62.9 per cent for those not reporting a disability.

Figure I **Undergraduate overall satisfaction by demographic group**

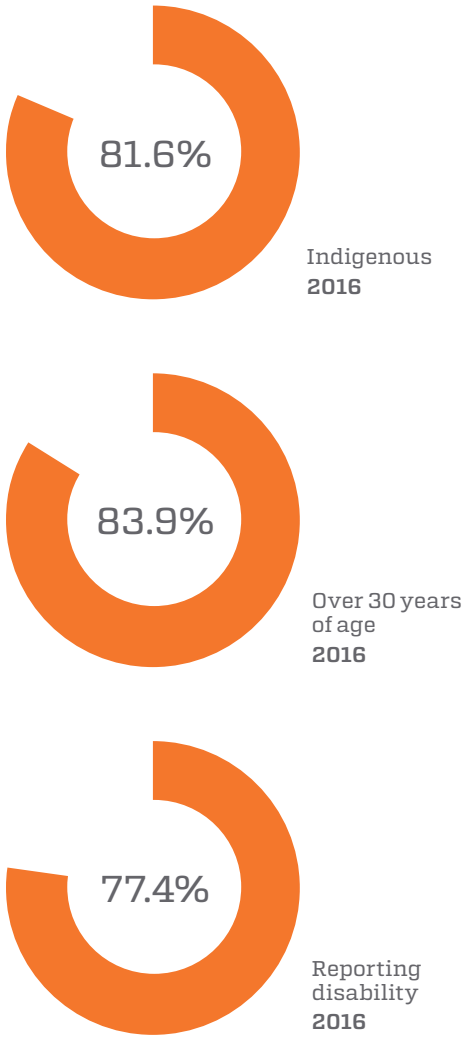


Table 41 **Undergraduate satisfaction by demographic group, 2016 (% agreement)**

		Overall satisfaction	Good teaching scale	Generic skills scale
Gender	Male	78.5	62.3	81.5
	Female	81.8	63.3	82.5
Age	30 years or under	80.0	61.9	82.2
	Over 30 years	83.9	68.7	82.0
Indigenous	Indigenous	81.6	66.9	85.1
	Not Indigenous	80.6	62.9	82.1
Home language	English	80.5	62.2	82.0
	Language other than English	81.2	70.0	83.5
Disability	Reported disability	77.4	63.5	79.7
	No disability	80.8	62.9	82.3
Study mode	Internal and mixed mode	80.3	63.1	82.3
	External	83.5	62.1	80.5
Total undergraduate		**80.6**	**63.0**	**82.1**

9.3 Satisfaction over time

The CEQ time series shown in Figure 7 indicates there has been improvement in undergraduate satisfaction over time (data are not shown prior to 2010 because of a change in survey methodology). In particular, satisfaction with the quality of teaching has increased more strongly from 62.4 per cent in 2010 to 68.0 per cent in 2015. Overall satisfaction with courses has remained high, increasing from 81.2 per cent in 2010 to 83.4 per cent in 2015. Similarly, satisfaction with generic skills has remained high increasing from 76.1 per cent in 2010 to 79.6 per cent in 2016.

9.4 International comparison

International benchmarking of results from the Course Experience Questionnaire (CEQ) with a similar survey from overseas shows that, in general, Australian students are less satisfied with their higher education experience than their counterparts in the United Kingdom. However, it is important to be aware that differences in results across international surveys may stem from methodological differences and different student populations rather than genuine differences in student experience and satisfaction.

Eighty-six per cent of United Kingdom final year students expressed overall satisfaction with their course, as measured by the 2015 National Survey of Student Experience (NSS) in comparison with 83.4 per cent of Australian undergraduates four months after completing their course, as measured by the 2015 Course Experience Questionnaire, as shown by Figure 8. Over time, there appears be a consistent gap where UK students express higher satisfaction with their courses than do Australian graduates. Note that NSS results for 2016 were not available at the time of publication of this report.

Figure 7 **Undergraduate satisfaction, 2010–2016 (% agreement)**

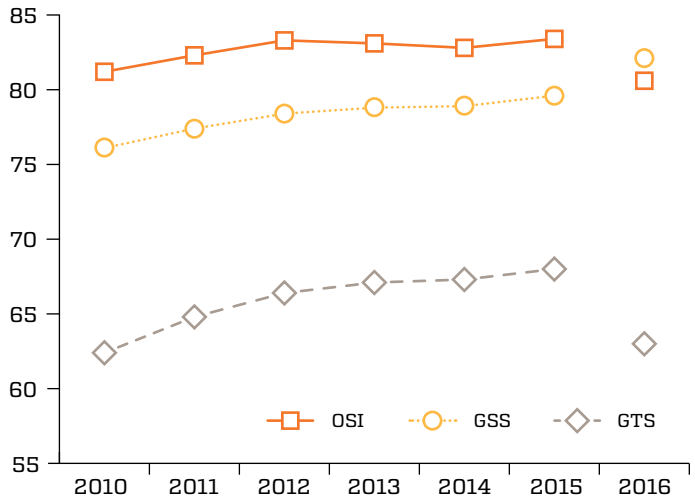
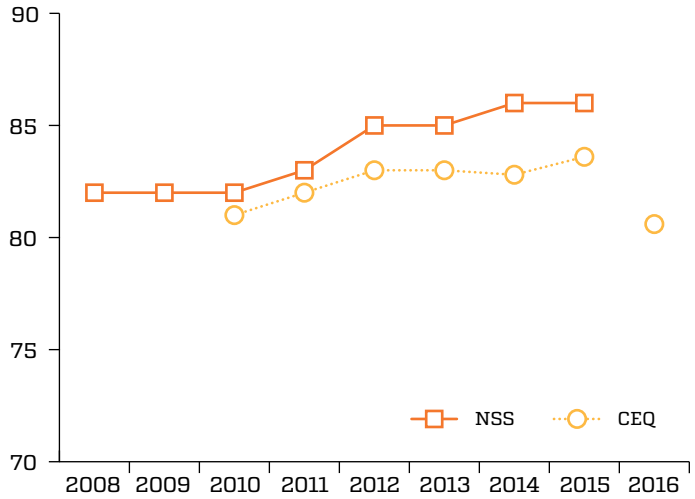


Figure 8 **Overall satisfaction of undergraduates, UK and Australia, 2010–2016 (% agreement)**



10 Postgraduate coursework satisfaction

Postgraduate coursework graduates are also invited to respond to the Course Experience Questionnaire to express satisfaction with key aspects of their course. In 2016, postgraduate coursework graduates expressed higher overall satisfaction with their course, 82.5 per cent, than did undergraduates, 80.6 per cent, as shown by Table 42. Similarly, postgraduate coursework graduates expressed higher satisfaction with the quality of teaching, 68.3 per cent, than did undergraduates, 63.0 per cent. On the other hand undergraduates were more satisfied with their generic skills, 82.1 per cent, than postgraduate coursework graduates, 78.3 per cent.

Table 42 **Postgraduate coursework satisfaction, 2015 and 2016 (% agreement)**

Overall satisfaction		Good teaching scale		Generic skills scale	
2015	2016	2015	2016	2015	2016
83.4	82.5	68.0	68.3	79.6	78.3

10.1 Satisfaction by study area

In 2016, overall satisfaction among postgraduate coursework graduates ranged from a high of 86.8 per cent in Humanities, culture and social sciences down to 75.7 per cent in Tourism, hospitality, personal services, sport and recreation, as shown by Table 43. Similarly for good teaching, satisfaction ranged from 77.2 per cent for Humanities, culture and social sciences down to 54.6 per cent in Medicine and for generic skills from 87.6 per cent in Veterinary science down to 72.7 per cent in Teacher education.

10.2 Satisfaction by demographic group

Female and older postgraduate coursework graduates expressed higher overall satisfaction than their male and younger counterparts and were more satisfied with the teaching they received, as shown by Table 44. Male and younger graduates, however, were more satisfied with the development of their generic skills. Indigenous graduates, those whose home language was a language other than English and those reporting a disability all expressed higher satisfaction with teaching than did their counterparts. Indigenous graduates and those reporting a disability were less satisfied with their generic skills while graduates whose home language was other than English were more satisfied with their generic skills than their counterparts.

Table 43 **Postgraduate coursework satisfaction by study area, 2015 and 2016 (% agreement)**

	Overall satisfaction		Good teaching scale		Generic skills scale	
Study area	**2015**	**2016**	**2015**	**2016**	**2015**	**2016**
Science and mathematics	83.1	83.2	70.3	73.3	75.5	79.7
Computing and Information Systems	82.1	80.3	70.7	69.1	78.0	81.6
Engineering	79.5	76.9	64.3	59.6	75.9	80.0
Architecture and built environment	78.1	78.3	67.2	65.6	75.5	79.2
Agriculture and environmental studies	86.6	82.5	74.0	75.6	78.0	81.8
Health services and support	84.7	85.2	70.4	70.7	74.9	80.0
Medicine	83.9	77.0	63.8	54.6	75.1	73.1
Nursing	83.2	81.9	68.5	66.5	76.0	78.1
Pharmacy	82.4	86.1	69.4	71.6	75.8	85.3
Dentistry	83.0	77.3	67.9	62.1	76.1	83.6
Veterinary science	91.0	86.5	79.9	68.5	79.0	87.6
Rehabilitation	86.6	82.2	75.7	63.7	83.1	82.2
Teacher education	80.4	81.9	69.1	68.5	69.7	72.7
Business and management	84.5	83.0	70.4	66.2	78.7	80.1
Humanities, culture and social sciences	86.5	86.8	76.0	77.2	74.0	79.0
Social work	85.4	84.7	74.6	72.9	75.3	79.9
Psychology	83.4	85.9	71.9	73.8	78.3	81.8
Law and paralegal studies	85.3	81.3	69.3	66.7	74.5	73.8
Creative arts	78.3	76.5	72.4	70.8	73.7	73.0
Communications	83.1	83.2	73.7	74.5	73.0	81.3
Tourism, hospitality, personal services, sport and recreation	89.3	75.7	73.5	63.1	79.6	82.5
All study areas	**83.2**	**82.5**	**70.2**	**68.3**	**75.6**	**78.3**

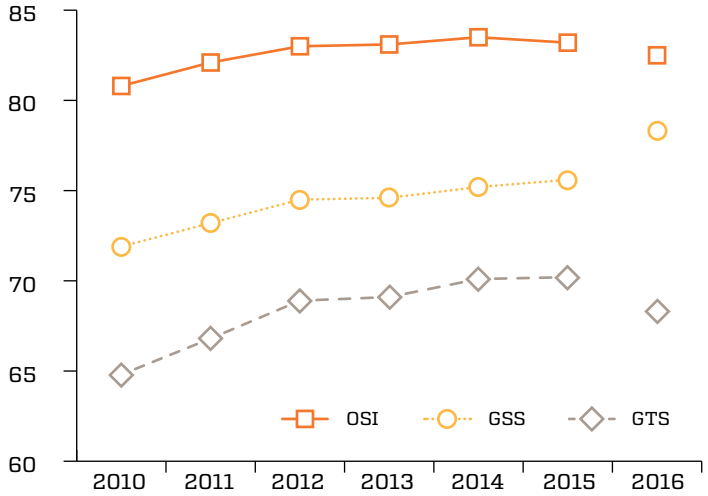
Table 44 **Postgraduate coursework satisfaction by demographic group, 2016 (% agreement)**

		Overall satisfaction	Good teaching scale	Generic skills scale
Gender	Male	81.6	67.8	79.2
	Female	83.2	68.7	77.8
Age	30 years or under	80.5	66.9	79.4
	Over 30 years	84.7	69.9	77.0
Indigenous	Indigenous	82.9	71.6	76.1
	Not Indigenous	82.6	68.3	78.4
Home language	English	82.6	67.4	76.6
	Language other than English	82.2	71.8	84.7
Disability	Reported disability	80.7	69.9	77.6
	No disability	82.6	68.3	78.4
Study mode	Internal and mixed mode	82.3	69.7	80.2
	External	83.5	64.3	73.2
Total postgraduate coursework		**82.5**	**68.3**	**78.3**

10.3 Satisfaction over time

The CEQ time series shown in Figure 9 indicates there has been a steady improvement in satisfaction among postgraduate coursework graduates over time. In particular, satisfaction with the quality of teaching has increased more strongly from 64.8 per cent in 2010 to 70.2 per cent in 2015. Overall satisfaction with courses has remained high increasing from 80.8 per cent in 2010 to 83.2 per cent in 2015. Satisfaction with generic skills has increased from 71.9 per cent in 2010 to 75.6 per cent in 2015.

Figure 9 **Postgraduate coursework satisfaction, 2010–2016 (% agreement)**



The CEQ time series shown in Figure 9 indicates there has been a steady improvement in satisfaction among postgraduate coursework graduates over time. In particular, satisfaction with the quality of teaching has increased

. . . and overall satisfaction with courses has remained high

11 Postgraduate research satisfaction

The Postgraduate Research Experience Questionnaire (PREQ), administered since 1999, invites postgraduate research graduates four months after completing their degree to express agreement or disagreement on a five point scale with statements about various aspects of their degree. These include overall satisfaction, supervision, intellectual climate, skills development, infrastructure, thesis examination and goals and expectations. Responses to points four and five on the scale, sometimes referred to as the 'narrow agreement' measure, are reported in the tables below and also on the QILT website.

In 2016, 85.5 per cent of postgraduate research graduates expressed overall satisfaction with their degree, as shown by Table 45. Postgraduate research graduates were more satisfied with their skills development, 94.1 per cent, and setting of goals and expectations, 91.2 per cent and supervision, 81.2 per cent. They were less satisfied with the intellectual climate, 60.7 per cent, infrastructure, 75.6 per cent and thesis examination, 77.9 per cent.

Table 45 **Postgraduate research satisfaction, 2015 and 2016 (% agreement)**

	2015	2016
Overall satisfaction	87.7	85.5
Supervision	81.7	81.2
Intellectual climate	68.0	60.7
Skills development	93.6	94.1
Infrastructure	80.2	75.6
Thesis examination	83.2	77.9
Goals and expectations	93.4	91.2

11.1 Satisfaction by study area

In 2016, overall satisfaction among postgraduate research graduates ranged from a high of 100.0 per cent in Rehabilitation and down to 78.0 per cent in Communications, as shown by Table 46. Similarly for supervision, satisfaction ranged from 96.4 per cent in Rehabilitation down to 70.0 per cent in Veterinary science. Communications also reported the lowest level of satisfaction with the intellectual climate, 37.8 per cent, ranging up to 67.2 per cent satisfaction among Pharmacy graduates.

Table 46 **Postgraduate research satisfaction by study area, 2015 and 2016 (% agreement)**

	Overall satisfaction		Supervision		Intellectual climate		Skills development		Infrastructure		Thesis examination		Goals and expectations	
Study area	**2015**	**2016**	**2015**	**2016**	**2015**	**2016**	**2015**	**2016**	**2015**	**2016**	**2015**	**2016**	**2015**	**2016**
Science and mathematics	89.4	85.9	79.7	79.0	71.8	65.2	94.5	95.2	83.8	81.4	82.2	77.7	93.7	93.0
Computing and Information Systems	87.4	84.8	85.1	81.8	70.2	66.7	92.4	92.7	83.9	80.5	84.3	81.8	93.7	92.1
Engineering	89.0	86.0	81.6	80.7	74.3	65.6	93.6	93.5	84.6	84.6	86.4	81.9	94.8	91.0
Architecture and built environment	90.2	83.0	82.8	74.1	68.4	64.2	95.6	96.2	80.1	75.5	82.9	77.4	97.2	90.7
Agriculture and environmental studies	84.1	85.8	82.1	78.0	64.7	56.0	97.1	93.5	80.5	77.4	84.5	72.0	95.9	92.2
Health services and support	89.1	85.3	83.5	81.1	66.2	60.6	94.2	94.4	79.9	72.8	85.5	77.4	93.2	90.3
Medicine	86.0	87.0	79.3	80.5	69.2	66.7	92.5	95.6	81.8	80.9	81.8	79.9	92.3	93.2
Nursing	87.0	84.9	83.3	86.3	68.7	54.8	92.9	93.2	80.6	67.1	82.7	74.0	93.0	97.3
Pharmacy	85.7	81.2	80.0	84.4	67.6	67.2	98.6	95.3	82.4	73.4	85.7	75.0	95.2	95.3
Dentistry	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Veterinary science	n/a	86.0	n/a	70.0	n/a	58.0	n/a	94.0	n/a	70.0	n/a	82.0	n/a	88.0
Rehabilitation	86.8	100.0	81.4	96.4	55.9	60.7	91.1	100.0	65.8	63.0	81.6	85.7	93.9	96.4
Teacher education	90.6	86.5	86.9	86.5	68.4	57.1	93.8	92.3	79.6	67.6	85.3	80.4	94.1	91.7
Business and management	88.7	85.9	82.9	85.9	70.9	62.7	92.4	93.2	82.4	80.3	84.6	80.3	93.5	90.7
Humanities, culture and social sciences	87.2	84.7	83.0	81.5	63.7	56.7	93.1	93.7	73.5	66.9	81.0	76.3	92.4	89.9
Social work	84.6	n/a	77.6	n/a	n/a	n/a	94.6	n/a	n/a	n/a	85.9	n/a	96.2	n/a
Psychology	83.3	84.3	78.6	81.4	58.3	50.2	92.5	92.8	77.9	77.4	81.8	76.7	92.6	87.7
Law and paralegal studies	87.7	86.4	85.0	83.3	66.9	53.3	92.0	94.9	85.5	62.7	86.3	76.7	94.2	90.0
Creative arts	79.3	84.2	80.2	82.0	58.1	55.4	91.2	95.7	69.3	59.2	79.5	71.2	90.5	85.8
Communications	83.7	78.0	80.4	78.0	58.6	37.8	94.8	92.6	70.4	57.3	78.4	72.0	88.5	89.0
Tourism, hospitality, personal services, sport and recreation	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
All study areas	**87.7**	**85.5**	**81.7**	**81.2**	**68.0**	**60.7**	**93.6**	**94.1**	**80.2**	**75.6**	**83.2**	**77.9**	**93.4**	**91.2**

11.2 Satisfaction by demographic group

Satisfaction levels of postgraduate research degree graduates varied somewhat by gender, with male graduates expressing higher satisfaction overall, and higher satisfaction with supervision, intellectual climate and infrastructure, as shown by Table 47. Female graduates, however, expressed slightly higher satisfaction with skills development and thesis examination. Older and external postgraduate research graduates generally expressed lower satisfaction with most aspects of their degree. On the other hand, older graduates were more satisfied with their thesis examination than their younger counterparts and external graduates expressed higher overall satisfaction and satisfaction with supervision than graduates who studied internally or by mixed mode. Graduates whose home language was other than English were in general more satisfied with most aspects of their postgraduate research experience. On the other hand, graduates reporting a disability were less satisfied with most aspects of their postgraduate research experience.

Table 47 **Postgraduate research satisfaction by demographic group, 2016 (% agreement)**

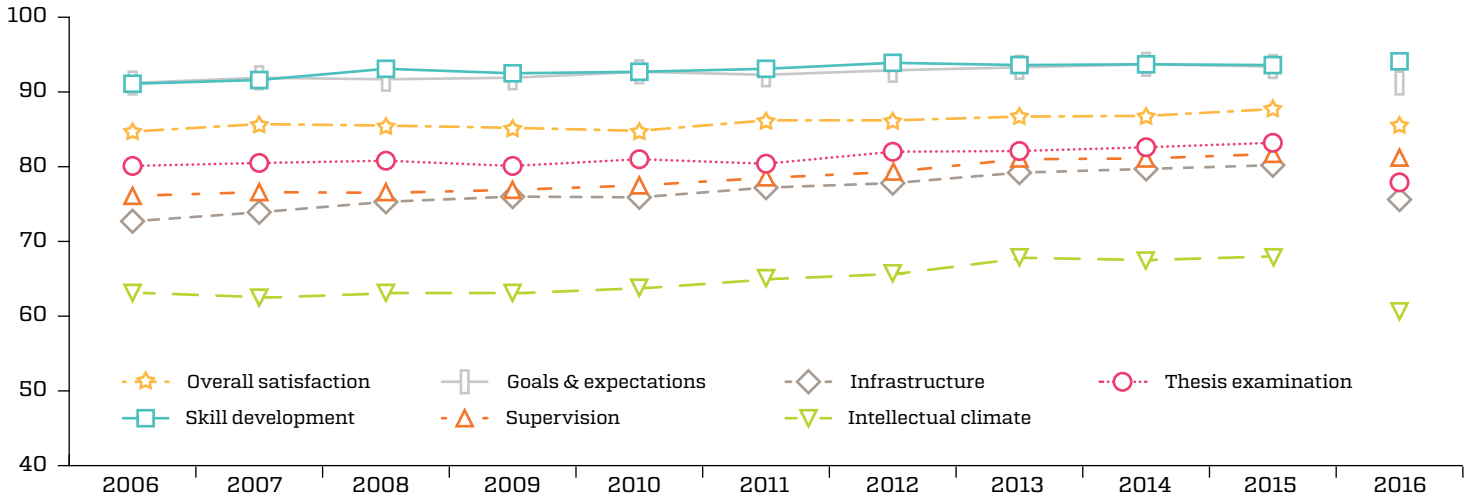
		Overall satisfaction	Supervision	Intellectual climate	Skills development	Infrastructure	Thesis examination	Goals and expectations
Gender	Male	86.8	83.4	64.0	93.8	78.6	77.5	91.2
	Female	84.4	79.3	57.9	94.4	73.1	78.1	91.2
Age	30 years or under	85.7	81.4	63.3	95.4	80.9	77.4	91.5
	Over 30 years	85.3	81.2	59.2	93.3	72.5	78.2	91.1
Indigenous	Indigenous	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Not Indigenous	85.5	81.3	60.8	94.1	75.6	77.8	91.2
Home language	English	84.3	80.7	57.2	93.5	72.0	76.5	90.0
	Language other than English	89.1	82.9	72.0	95.9	87.2	82.3	95.2
Disability	Reported disability	76.9	74.0	54.3	94.2	64.5	69.4	87.9
	No disability	85.8	81.5	61.0	94.1	76.1	78.1	91.3
Study mode	Internal and mixed mode	85.5	81.1	61.5	94.2	76.3	78.1	91.3
	External	86.3	83.5	46.7	92.9	63.4	73.7	89.8
Total postgraduate research		**85.5**	**81.2**	**60.7**	**94.1**	**75.6**	**77.9**	**91.2**

11.3 Satisfaction over time

The PREQ time series shown in Figure 10 indicates there has been a steady improvement in satisfaction among postgraduate research graduates over time. Overall satisfaction remains high increasing from 84.7 per cent in 2006 to 87.7 per cent in 2015.

Satisfaction with supervision has improved from 76.1 per cent in 2006 to 81.7 per cent in 2015. Similarly, satisfaction with the intellectual climate has improved from 63.1 per cent in 2006 to 68.0 per cent in 2015.

Figure 10 **Postgraduate research satisfaction, 2006–2016 (% agreement)**



Appendix 1 Survey methodology

Operational summary

The collection periods were November 2015 to February 2016 and May to June 2016, with a minor collection taking place in February 2016 to March 2016 to accommodate four institutions running an academic calendar of trimesters. For reporting purposes, the November and February collection period outcomes are reported together.

Table 1 **GOS 2016 collection summary**

	2015 November round[i]			2016 May			Total collection		
Project element	**University**	**NUHEIs**	**Total**	**University**	**NUHEIs**	**Total**	**University**	**NUHEIs**	**Total**
No. of participating institutions	40	32	72	40	52	92	40	56	96
No. of in-scope graduates[ii]	67,514	3,105	70,619	184,141	7,726	191,867	251,655	10,831	262,486
No. of completed surveys	24,440	1,157	25,597	75,418	3,193	78,611	99,858	4,350	104,208
Overall response rate (%)	36.2	37.3	36.2	41.0	41.3	41.0	39.7	40.2	39.7
Data collection period	4 Nov – 30 Nov[iii]			2 May – 30 May					
Data collection mode	Online			Online			Online		
Analytic unit[iv]	Course/Program			Course/Program			Course/Program		

i Includes February supplementary round outcomes
ii Excludes opt outs, disqualified or out of scope surveys
iii February data collection period took place 15 February to 14 March 2016
iv Analytic unit is course unless a course level major was provided by the institution or the student

All data included in this report was collected via an online survey that could be accessed directly by clicking the link in the email invitation or email reminders. The survey was also available via the GOS landing page on the QILT website (www.qilt.edu.au/surveys/graduate-outcomes-survey), where, after selecting the 'Start Survey' button, graduates were taken to a login page to enter the username and password provided in email correspondence. Postcards were sent to non-responders, including a login code to use when they clicked "I received a postcard" on the GOS website. This method also allowed graduates access to the survey via authentication if they entered their student ID along with the login code from the postcard.

Online survey presentation was informed by Australian Bureau of Statistics standards, accessibility guidelines and other relevant resources, with standard features including:

a. mobile device optimisation;
b. sequencing controls;
c. input controls and internal logic checks;
d. use of a progress bar;
e. tailored error messages, as appropriate;
f. no vertical scrolling required, with long statement batteries split over several screens, as necessary;
g. recording panels for free text responses commensurate with level of detail required in the response;
h. 'saving' with progression to the next screen; and
i. capacity to save and return to finish off at another time, resuming at the last question completed.

A copy of the generic survey instrument (i.e. excluding any department or institution specific items) and screenshots of the survey are included in the full methodology report.

Selected institutions undertook telephone non-response for a fee for service. There were two options on offer, the first being telephone reminders which involved calling graduates who had not completed nor opted out of the survey and reminding them to go online and complete the survey. The second option was Full Computer Assisted Telephone Interviewing (CATI) which involved calling graduates that had not responded or opted out and conducting the survey over the phone. Telephone activity was timed to begin two days after the survey had closed online. The data contained in this report excludes any surveys completed via Full CATI.

Survey programming

The GOS instrument was programmed into SPSS Dimensions in order to improve the ease of data capture, as well as facilitate the seamless use of follow up Computer Assisted Telephone Interviewing (CATI).

1800 and email helpdesk

The Social Research Centre established a GOS 1800 helpdesk to provide graduates an avenue to establish contact with the GOS team. This number was also available to international students (with an international dialling code), and remained operational for the duration of the fieldwork period. The helpdesk was staffed between 9:00 am and 8:30 pm on weekdays, and between 11:00 am and 5:00 pm on weekends. All out of hours callers were routed to a voicemail service, with calls returned within 24 hours.

The GOS helpdesk team was briefed on the GOS background, procedures and questionnaire to enable them to answer a wide range of queries. To further support the helpdesk, a database was made available to the team to enable them to look up caller information and survey links, as well as providing a method for logging all contacts.

All refusals and out of scopes were removed from the sample on a regular basis to avoid future contact via email or telephone. Sample contact details were updated before each reminder email for those requesting an update to their details.

Members of the GOS team were responsible for monitoring the GOS inbox and responded as appropriate to queries. The helpdesk 1800 number and email were provided in all written communications to graduates.

Incentivisation

The four week rolling prize draw as designed to encourage early completion by offering more chances to win the earlier the survey was submitted (e.g. if the survey was completed by the end of the first prize draw then the graduate would be entered into all prize draws). There were four prize draws in total for each collection period with three $1,000 prepaid Visa gift cards, five $500 prepaid Visa gift card and ten $250 prepaid Visa gift cards to be won each week. The $1,000 Visa gift cards were drawn nationally while the $500 prepaid Visa gift cards and $250 prepaid Visa gift cards were distributed evenly across the states and territories. The prize pool for the November and May collection periods was valued at $32,000.

Invitation and follow-up reminder strategy

A multi-pronged approach was used in the GOS response maximisation effort; using email, hardcopy postcard and SMS as methods of approaching and following up with graduates. Institutions had the option to provide mobile phone numbers allowing SMS reminder activity to be used on an as-needs basis.

Email activity and SMS

The Social Research Centre sent one email invitation, one or two non-response postcards, seven email reminders and one SMS over the course of the survey.

Social media campaign

The GOS social media campaign included a QILT Facebook page, Facebook paid advertising campaign, YouTube paid advertising, QILT Twitter and a Twitter paid campaign. The social media campaign aimed to build a national brand within the QILT survey suite and increase awareness of the GOS.

Response rates

The 2016 GOS was primarily conducted as a national online survey among 96 higher education institutions including all 40 Table A and B universities and 56 Non-University Higher Education Institutions (NUHEIs). A total of 104,208 valid online survey responses were collected across all study levels, representing a response rate of around 39.7 per cent overall, comprising 39.7 per cent for universities and 40.2 per cent for NUHEIs. The overall response rate for the November collection was 36.2 per cent, with an of improvement 3.8 percentage points in the May collection (41.0 per cent).

Table 2 **GOS 2016 response rates by institution, November 2015 and May 2016 rounds (%)**

Institution	Nov '15	May '16	Total	Institution	Nov '15	May '16	Total
Academy of Design Australia	–	60.9	60.9	Cambridge International College	27.4	28.6	28.0
Academy of Information Technology	21.4	28.6	23.2	Campion College Australia	–	53.8	53.8
Adelaide College of Divinity	–	80.0	80.0	Central Queensland University	37.9	39.4	38.7
Alphacrucis College	37.6	–	37.6	Charles Darwin University	44.5	52.6	50.4
Asia Pacific International College	–	26.6	26.6	Charles Sturt University	43.7	42.4	42.5
Australian Catholic University	34.0	40.7	40.4	Christian Heritage College	75.6	57.2	61.5
Australian College of Applied Psychology (Navitas Institute)	63.9	52.7	54.4	College of the Arts	–	35.0	35.0
Australian College of Christian Studies	100.0	85.7	87.5	Curtin University	52.6	45.1	45.7
Australian College of Physical Education	46.2	43.7	44.0	Deakin University	35.2	43.3	40.2
Australian College of Theology	49.2	50.3	49.5	Eastern College Australia	–	72.3	72.3
Australian Institute of Business	52.7	58.7	56.5	Edith Cowan University	50.4	45.3	45.4
Australian Institute of Management SA Division	40.9	32.1	36.1	Endeavour College	–	49.7	49.7
Australian Institute of Music	43.5	43.8	43.7	Excelsia College	40.7	62.8	55.9
Australian Institute of Professional Counsellors	0.0	24.1	21.9	Federation University Australia	51.2	37.1	39.6
Australian School of Management	50.0	36.4	42.1	Flinders University	46.4	43.3	43.4
Avondale College of Higher Education	–	48.2	48.2	Griffith University	37.3	37.8	37.6
Blue Mountains International Hotel Management School	10.7	26.4	19.1	Holmes Institute	27.0	23.7	25.6
Bond University	33.9	38.2	35.4	Holmesglen Institute	45.5	44.9	45.0
Box Hill Institute	–	39.1	39.1	International College of Management, Sydney	–	33.8	33.8

Institution	Nov '15	May '16	Total	Institution	Nov '15	May '16	Total
James Cook University	18.6	35.0	33.6	RMIT University	36.5	39.9	39.6
Jazz Music Institute	–	42.9	42.9	SAE Institute and Qantm College	40.6	50.0	46.2
Kaplan Business School	38.0	35.7	37.1	South Metropolitan TAFE	33.3	35.5	34.3
Kaplan Higher Education Pty Ltd trading as Murdoch Institute of Technology	43.3	53.7	53.7	Southern Cross University	44.9	43.1	43.5
La Trobe University	33.0	35.4	35.0	SP Jain School of Management	4.8	–	4.8
Macleay College	–	48.8	48.8	Study Group Australia	–	13.6	13.6
Macquarie University	32.3	38.7	37.4	Swinburne University of Technology	42.9	43.3	43.2
Melbourne Institute of Technology	33.3	32.6	33.1	Sydney Institute of Traditional Chinese Medicine	–	31.6	31.6
Melbourne Polytechnic	61.5	39.4	40.9	Tabor College of Higher Education	58.8	64.3	58.8
MIECAT	–	77.1	77.1	TAFE NSW	–	42.0	42.0
Monash University	40.6	46.7	44.3	TAFE Queensland	33.3	36.8	35.5
Montessori World Education Institute (Australia)	–	63.6	63.6	TAFE SA	45.7	–	45.7
Morling College	60.0	46.7	48.6	The Australian National University	35.1	42.6	39.3
Murdoch University	45.0	44.5	44.5	The Cairnmillar Institute School	–	60.0	60.0
Nan Tien Institute	–	43.8	43.8	The College of Law	–	30.5	30.5
National Art School	–	56.5	56.5	The Tax Institute	–	66.7	66.7
Paramount College of Natural Medicine	85.7	–	85.7	The University of Adelaide	36.3	50.3	45.6
Photography Studies College (Melbourne)	77.8	73.1	74.3	The University of Melbourne	43.2	40.3	40.7
Queensland University of Technology	26.7	29.1	28.7	The University of Notre Dame Australia	32.5	38.3	37.2
Raffles College of Design and Commerce	–	35.7	35.7	The University of Queensland	40.0	45.2	43.3

Institution	Nov '15	May '16	Total	Institution	Nov '15	May '16	Total
The University of Sydney	29.9	46.6	39.4	University of Tasmania	30.0	42.2	38.2
The University of Western Australia	35.7	34.9	35.2	University of Technology Sydney	26.9	26.5	26.7
University of Canberra	39.2	40.6	40.2	University of the Sunshine Coast	55.9	52.6	53.5
University of Divinity	66.7	51.9	52.4	University of Wollongong	29.2	37.3	36.5
University of New England	51.9	54.6	52.4	UOW College	25.0	43.8	31.8
University of New South Wales	35.6	45.0	41.9	Victoria University	29.1	35.0	35.0
University of Newcastle	44.3	47.4	46.6	Western Sydney University	25.2	40.2	34.8
University of South Australia	22.4	37.0	33.9	Whitehouse Institute	33.3	36.9	35.0
University of Southern Queensland	48.3	48.4	48.3	William Angliss Institute	–	22.4	22.4

Data representativeness

In terms of Total Survey Error, response rates are less important that the representativeness of the respondent profile. To investigate the extent to which those who responded to the GOS are representative of the in-scope population respondent characteristics are presented alongside population parameters in the table below.

In general, a number of the sample parameters closely match the respondent profile. Aboriginal and Torres Strait Islander status, combined course of study indicator, and course of study type are particularly well-matched within the university sample profile. There are a number of characteristics where there is a divergence of several percentage points. The largest of these is are the citizenship and language spoken at home indicators where international graduates and those who speak a language other than English are under-represented by around 6.3 and 4.6 per cent respectively. Consistent with the SES, males are under-represented compared with female respondents, however this gender difference is less pronounced in the GOS with 3.5 per cent than the SES with a difference of 8.8 per cent.

The sample closely matches the in-scope survey population in terms of study area, as shown in Table 3. The largest difference between the sample and population was in the Business and Management study area (4.8 percentage points).

Table 3 **GOS 2016 sample and response characteristics, by respondent type**

	Sample (n)	Sample (%)	Respondents (n)	Respondents (%)
Base*	262,486		104,208	
Study level				
Undergraduate	155,893	59.4	59,845	57.4
Postgraduate coursework	97,514	37.2	39,004	37.4
Postgraduate research	9,079	3.5	5359	5.1
Gender				
Male	110,175	42.1	40,098	38.6
Female	151,665	57.9	63,908	61.4
Combined course of study indicator				
Combined/double degree	15,312	5.8	6,174	5.9
Single degree	247,174	94.2	98,034	94.1
Aboriginal and Torres Strait Islander				
Indigenous	2,008	0.8	814	0.8
Non-Indigenous	259,840	99.2	103,197	99.2
Mode of attendance code				
Internal	196,890	75.6	75,400	72.9
External	31,114	11.9	14,853	14.4
Multi-modal	32,441	12.5	13,170	12.7

	Sample (n)	Sample (%)	Respondents (n)	Respondents (%)
Type of attendance code				
Full-time	182,832	69.8	71,554	68.8
Part-time	79,007	30.2	32,454	31.2
Main language spoken at home				
English	209,599	79.9	88,006	84.5
Language other than English	52,887	20.1	16,202	15.5
Citizen/resident indicator				
Domestic	196,001	74.9	84,492	81.2
International	65,847	25.1	19,519	18.8

* Components may not sum to base number, as records with unknown characteristics are not included in the sub-categories.

Table 4 **GOS 2016 sample and response characteristics, by study area**

	Sample (n)	Sample (%)	Respondents (n)	Respondents (%)
Science and mathematics	20,130	7.7	8,891	8.5
Computing and Information Systems	9,879	3.8	3,933	3.8
Engineering	16,876	6.4	6,683	6.4
Architecture and built environment	6,346	2.4	2,439	2.3
Agriculture and environmental studies	3,813	1.5	1,820	1.7
Health services and support	15,761	6.0	6,922	6.6
Medicine	5,227	2.0	2,189	2.1
Nursing	17,143	6.5	6,480	6.2
Pharmacy	1,781	0.7	664	0.6
Dentistry	1,090	0.4	464	0.4
Veterinary science	928	0.4	432	0.4
Rehabilitation	3,442	1.3	1,477	1.4
Teacher education	26,106	9.9	10,872	10.4
Business and management	66,860	25.5	21,534	20.7
Humanities, culture and social sciences	21,822	8.3	9,659	9.3
Social work	4,779	1.8	2,495	2.4
Psychology	8,823	3.4	4,592	4.4
Law and paralegal studies	13,500	5.1	5,041	4.8
Creative arts	9,627	3.7	4,097	3.9
Communications	7,677	2.9	3,221	3.1
Tourism, hospitality, personal services, sport and recreation	875	0.3	303	0.3
Total	**262,486**	**100.0**	**104,208**	**100.0**

Appendix 2
Labour market and graduate satisfaction definitions

The 2016 Graduate Outcomes Survey (GOS) uses labour force definitions which conform to the conceptual framework of the standard labour force statistics model used by the Australian Bureau of Statistics (ABS). Note that indicators in this report based on data from the Australian Graduate Survey (AGS), that is up to 2015, have retained the definitions used for the AGS. For further details on the differences in labour market and graduate satisfaction indicators between the GOS and the AGS, see Appendix 3.

Indicator/element	GOS 2016	AGS 2006–2015
Employed	Graduates who were usually or actually in paid employment for one or more hours in the week before the survey (including full-time, part-time or casual employment).	Graduates who were in paid work or who had accepted an offer of employment at the survey reference date (including full-time, part-time or casual employment). Excludes graduates in full-time study.
Employed full-time	Graduates who were usually or actually in paid employment for at least 35 hours per week, in the week before the survey.	Graduates who were in paid work, or who had accepted an offer of employment, of 35 hours or more per week, at the survey reference date. Excludes graduates in full-time study.
Available for employment	Graduates who were employed, looking for employment or waiting to start a job in the week prior to the survey.	Graduates who were employed or who were seeking employment at the survey reference date. Excludes graduates in full-time study.
Available for full-time employment	Graduates who were employed full-time or looking for full-time employment in the week prior to the survey.	Graduates who were employed full-time or who were seeking full-time employment at the survey reference date. Excludes graduates in full-time study.
Overall employment rate	Employed graduates (including in full-time, part-time or casual employment), as a proportion of those available for employment.	Employed graduates (including in full-time, part-time or casual employment), as a proportion of those available for employment. Excludes graduates in full-time study.
Full-time employment rate	Graduates employed full-time, as a proportion of those available for full-time work.	Graduates employed full-time, as a proportion of those available for full-time work. Excludes graduates in full-time study.

Indicator/element	GOS 2016	AGS 2006–2015
Labour market participation rate	Graduates available for employment, as a proportion of all graduates.	Graduates available for employment, as a proportion of all graduates. Excludes graduates in full-time study.
Median salary	The median annual salary of graduates employed full-time.	The median annual salary of graduates aged less than 25 years and in their first full-time employment.
Full-time study rate	Graduates who reported being in full-time study, as a proportion of all graduates.	Graduates who reported being in full-time study, as a proportion of all graduates.
Graduate satisfaction – overall satisfaction indicator	The proportion of graduates who 'agreed' or 'strongly agreed' that they were satisfied with the overall quality of their course or research program.	The proportion of graduates who 'agreed' or 'strongly agreed' that they were satisfied with the overall quality of their course or research program.
Graduate satisfaction – good teaching, generic skills, supervision and intellectual climate scales	Calculated from multiple survey items, representing the proportion of graduates who were satisfied. See Appendix 3 for further details.	Calculated from multiple survey items, representing the average percentage satisfaction of graduates. See Appendix 3 for further details.

Appendix 3 Comparison of AGS and GOS estimates

A key issue for the first release of results from the GOS is their comparability with data from the former AGS. The 2015 figures presented in Table 1 are as currently published from the AGS.[1]

Full-time employment rate

At the undergraduate level,[2] the 2015 AGS and 2016 GOS results for full-time employment show a modest increase in the full-time employment rate from 68.8 per cent to 70.9 per cent. The change in the full-time employment rate at postgraduate coursework level from 82.7 per cent to 85.1 per cent is of broadly similar magnitude. The change in the full-time employment rate among postgraduate research graduates from 73.0 per cent to 80.1 per cent is larger, though note that with a smaller number of survey responses, there are larger sampling errors associated with survey estimates for these graduates.

A major factor impacting on comparison of survey estimates from the AGS and GOS are changes in survey administration. The GOS questionnaire is different to the AGS in that it is based on ABS Labour Force Survey concepts. The Graduate Destination Survey (GDS) questionnaire was originally devised in the 1970s at a time when the labour market and the higher education sector were very different than they are today, though the questionnaire has been amended over time. Also, the GOS survey estimates are derived purely from online survey administration whereas the AGS was administered in multi-modal fashion, combining results from hard copy, online and telephone administration.

1 Full-time employment and median salary are included in AGS publications. The indicators for overall employed and labour force participation rate are not published, but can be calculated from published figures.

2 As per standard AGS procedure, 2015 undergraduate figures are for graduates at the bachelor and other three-year undergraduate levels only.

Table 1 **Graduate employment and study outcomes, by study level, 2015 and 2016**

	Undergraduate		Postgraduate coursework		Postgraduate research	
	2015	2016	2015	2016	2015	2016
In full-time employment (as a proportion of those available for full-time work) (%)	68.8	70.9	82.7	85.1	73.0	80.1
Overall employed (as a proportion of those available for any work) (%)	89.5	86.4	92.7	92.4	89.9	90.3
Labour force participation rate (%)	93.7	92.0	94.4	95.7	92.0	93.0
Median salary, employed full-time ($)	54,000*	57,900	80,000	80,000	82,000	85,000

*Graduates aged less than 25 and in first full-time employment.

Another significant factor impacting on survey administration was the changed method of constructing the population frame for the survey. For the GOS, the population frame is centrally determined based on completion records from the Higher Education Information Management System (HEIMS). Previously, the population frame for the AGS was independently established by each participating institution, based on a set of guidelines issued by Graduate Careers Australia (GCA).

A trial administration of the GOS was undertaken in conjunction with the November 2015 round of the AGS. The trial consisted of conducting the two instruments in parallel at each of three participating universities, with sample randomly split between the two instruments. Full-time employment as a proportion of graduates available for full-time work was recorded at 62.2 per cent by the GOS instrument and 59.7 per cent by the AGS instrument. Moreover, of the three participating institutions, two institutions recorded a higher proportion of graduates available for full-time employment using the GOS instrument, whereas one institution recorded the higher proportion using the AGS instrument, as shown by Table 3. Confidence intervals for estimates from the two instruments overlapped for two of the three institutions. Allowing for the small sample sizes in the trial, these results suggest the two instruments deliver broadly similar results, notwithstanding the differences in survey methodology.[3]

One of the main consequences of the GOS being based on ABS Labour Force Survey concepts is the inclusion of graduates in full-time study in labour force estimates. Previously in the AGS, further full-time study was considered as a mutually exclusive category to labour market participation. This ignores the significant changes that have evolved in the labour market over time with students and graduates combining full-time study and labour market participation.

3 Note that these indicators are calculated based on standard AGS definitions, meaning that differences in results are restricted to the impact of survey methodology alone, allowing for normal variability due to sampling.

Table 2 **Key GOS and AGS labour force results, AGS definitions (bachelor level), November round 2015 (%, confidence intervals in parentheses)**

	GOS outcomes n=2,058	AGS outcomes n=2,649
Graduates available for full-time employment	45.4 (±2.2)	47.9 (±1.9)
Graduates in full-time employment (of those available for full time employment)	62.2	59.7
Graduates in full-time study	41.7 (±2.1)	37.8 (±1.8)
Graduates in part-time or casual employment, not seeking full time employment	8.9 (±1.2)	10.1 (±1.1)

Table 3 **Graduates available for full-time employment, AGS definitions (bachelor level), November round 2015, by trial institutions (%, confidence intervals in parentheses)**

	Institution A		Institution B		Institution C	
	GOS n=532	AGS n=1,059	GOS n=956	AGS n=956	GOS n=570	AGS n=629
Graduates available for full-time employment	62.8 (±4.1)	66.2 (±2.8)	32.9 (±3.0)	31.9 (±3.0)	50.0 (±4.1)	41.3 (±3.8)

As shown in Table 4, 10.2 per cent of all recent undergraduates were combining further full-time study with part-time employment. A lesser proportion, 2.6 per cent, were combining working full-time with full-time study. A further 3.4 per cent were unemployed and looking for work while engaged in further full-time study. This means that the GOS records the labour market activities of an additional one in six graduates, 16.3 per cent, compared with the previous AGS which did not report the labour market activities of those combining full-time study with labour market participation. Another way of expressing this is that around three quarters of graduates studying full-time were also active in the labour market. Previously, the AGS did not report these labour market activities, merely recording these undergraduates as being engaged in further full-time study. The GOS, by adopting ABS labour force concepts, takes a more expansive view reflecting the lived experience of higher education graduates, many of whom combine study and work.

Moreover, there is a trend towards an increasing proportion of graduates combining study and work. Table 5 shows that in 2004, 11.2 per cent of all recent undergraduates combined employment and full-time study, compared with 12.9 per cent in 2016.

Once again, another way of expressing this is that just over 60 per cent of graduates in further full-time study were simultaneously active in the labour market in 2004, increasing to around 75 per cent in 2016.

As is to be expected, it is less common for recent postgraduates to be combining further full-time study and employment than it is for undergraduates. Nonetheless, as shown in Tables 6 and 7, around five per cent of all recent postgraduate coursework graduates and postgraduate research graduates were employed while studying full-time in 2016.

Since graduates in full-time study tend to have lower rates of employment than graduates not in full-time study, as shown by Tables 35 and 38 of the main report, the exclusion of graduates in full-time study would have the effect of increasing estimates of full-time employment and overall employment in the GOS, all other things being equal. For example, in 2016 the undergraduate full-time employment rate would have been 72.7 per cent if full-time students were not considered as part of the labour force, compared with 70.9 per cent when full-time students are taken into account.

Table 4 **Employment and further study status of recent undergraduate level graduates, 2016, as a proportion of all graduates (%)**

	Further study status		
Employment status	**In further full-time study**	**Not in further full-time study**	**Total**
Employed	12.9	66.3	79.2
Employed full-time	2.6	46.4	49.0
Employed part-time	10.2	19.9	30.1
Unemployed	3.4	9.5	12.9
In the labour force	16.3	75.8	92.1
Not in the labour force	5.6	2.4	7.9
Total	**21.8**	**78.2**	**100.0**

Table 5 **Employment and further study status of recent undergraduate level graduates, 2004, as a proportion of all graduates (%)**

	Further study status		
Employment status	**In further full-time study**	**Not in further full-time study**	**Total**
Employed	11.2	69.3	80.5
Employed full-time	2.3	54.2	56.4
Employed part-time	8.9	15.2	24.1
Unemployed	2.2	5.7	8.0
In the labour force	13.4	75.1	88.4
Not in the labour force	8.6	2.9	11.6
Total	**22.0**	**78.0**	**100.0**

Table 6 **Employment and further study status of recent postgraduate coursework level graduates, 2016, as a proportion of all graduates (%)**

	Further study status		
Employment status	**In further full-time study**	**Not in further full-time study**	**Total**
Employed	5.2	83.5	88.7
Employed full-time	3.1	65.6	68.8
Employed part-time	2.1	17.8	19.9
Unemployed	0.9	6.4	7.3
In the labour force	6.1	89.9	96.0
Not in the labour force	1.2	2.8	4.0
Total	**7.3**	**92.7**	**100.0**

Table 7 **Employment and further study status of recent postgraduate research level graduates, 2016, as a proportion of all graduates (%)**

	Further study status		
Employment status	**In further full-time study**	**Not in further full-time study**	**Total**
Employed	4.6	79.5	84.1
Employed full-time	2.8	59.8	62.7
Employed part-time	1.8	19.7	21.5
Unemployed	0.6	8.4	9.1
In the labour force	5.2	88.0	93.2
Not in the labour force	1.6	5.2	6.8
Total	**6.8**	**93.2**	**100.0**

Changes in the underlying labour market

Another major consideration in the comparison of results from the GOS and AGS is the change in underlying labour market conditions. Data from the ABS Labour Force Survey presented in Table 8 below suggests there was a modest improvement in labour market conditions in 2015–16 at the same time as the new Graduate Outcomes Survey was being introduced. Employment increased by 2.2 per cent in 2015–16 which was faster than estimated population growth of 1.4 per cent. In addition, the unemployment rate fell 0.3 percentage points to 5.9 per cent in 2015–16.

It is interesting to note that the improvement in labour market conditions was largely concentrated in the largest mainland states of New South Wales and Victoria with employment growth faster than average and the reduction in the unemployment rate greater than average in those states. Thus, the slight increase in the full-time employment rate from 68.8 per cent as measured by the 2015 AGS to 70.9 per cent as measured by the 2016 GOS would appear consistent with the modest improvement in labour market conditions over the period in question.

Table 8 **Labour market conditions, 2014–16 to 2015–16**

Employment ('000s)	**NSW**	**Vic**	**Qld**	**SA**	**WA**	**Tas**	**Australia**
2014–15	3,642	2,918	2,322	803	1,346	239	**11,609**
2015–16	3,778	2,986	2,360	807	1,350	239	**11,865**
Change	136.6	67.9	38.6	4.8	4.1	-0.4	**255.5**
Growth (%)	3.8	2.3	1.7	0.6	0.3	-0.2	**2.2**
Unemployment rate (per cent)							
2014–15	5.9	6.4	6.5	6.9	5.4	6.9	**6.2**
2015–16	5.4	5.9	6.2	7.3	6.0	6.5	**5.9**
Change (p.p.)	-0.5	-0.5	-0.3	0.3	0.6	-0.4	**-0.3**

Source: ABS Labour Force Survey. The data are derived from the ABS Labour Force Survey by taking the annual average of the seasonally adjusted monthly data to June of the respective year.

Overall employment

Estimates of the overall employment rate as measured by the 2015 AGS and 2016 GOS move in different directions according to the level of education, as shown in Table 1 above. For example, overall employment at the undergraduate level declined from 89.5 per cent to 86.4 per cent. On the other hand, among postgraduate research graduates, the overall employment rate increased from 89.9 per cent to 90.3 per cent as measured by the two different instruments. There was a slight fall in the overall employment rate among postgraduate coursework graduates from 92.7 per cent to 92.4 per cent over the period.

A change in the definition of employed persons is likely to have impacted in a negative manner on comparison of estimates of the overall employment rate between the AGS and GOS surveys. The GOS follows ABS Labour Force Survey concepts by considering people waiting to start work as unemployed, whereas previously the AGS treated people waiting to start work as employed. This definitional change lowers the overall employment rate as estimated by the GOS in comparison with the AGS, all other things being equal. Note, this definitional change does not impact on estimates of the full-time employment rate as those waiting to start work are unable to be allocated a full-time/part-time employment status and are therefore excluded from the calculation of this indicator.

Salaries

Reporting of graduate salaries in the 2016 GOS refers to the median salary of all graduates employed full-time, for a given study level. This is consistent with reporting of graduate salaries data on the QILT website – see www.qilt.edu.au.

Reporting of graduate salaries for graduates employed full-time is designed to show the demand and potential earning capacity of graduates. Graduates work part-time for a number of demand and supply side reasons (see Section 2.4 of the report). Working hours for graduates employed part-time vary from just a few hours of work up to 34 hours per week and this adds to the complexity of measuring graduate salaries. For these reasons, the GOS, like the AGS before it, reports the salaries of graduates employed full-time only.

A major change to the reporting of graduate median salaries in the 2016 GOS and on the QILT website is the inclusion of all graduates employed full-time. Previously, the AGS typically reported median salaries for bachelor graduates employed full-time aged 25 or less and in their first full-time employment. According to the AGS, in 2015 only 52 per cent of recent bachelor level graduates employed full-time fell into the 'aged less than 25, in first full-time employment' category. The inclusion of all graduates employed full-time in the reporting of median salaries reflects the trend towards greater diversity among higher education graduates, showing results for a much larger cohort of graduates. Older graduates and external graduates reported higher salaries than their counterparts in 2016, as shown in Table 25 above. Therefore the inclusion of older graduates and graduates with an ongoing relationship with an employer is likely to increase the estimate of the median salary of graduates as measured by the 2016 GOS in comparison with the 2015 AGS, all other things being equal.

Graduate satisfaction

Changes in survey methodology appear to have impacted on CEQ and PREQ survey estimates derived from the 2016 GOS, as shown by Table 9. For example, the Overall Satisfaction Indicator for undergraduate students, which consists of one question in the CEQ and is reported as such on the QILT website, declined from 83.4 per cent in 2015 to 80.6 per cent in 2016. Note that apparently small changes in survey methodology can have a potentially large impact on CEQ and PREQ survey estimates. For example, in 2010, a change in the CEQ survey methodology where the mid-point of the 5 point scale was changed from unlabelled to 'neither agree nor disagree' resulted in a large 12 percentage point increase in the Overall Satisfaction Indicator.

Changes in the calculation of scale scores for the CEQ and PREQ reported in the 2016 GOS bring these into line with the reporting of results on the QILT website, but differ from the previous methodology used to calculate scale scores in the AGS. These changes impact on comparison of CEQ and PREQ scale scores between the 2015 AGS and 2016 GOS and the reader is urged to exercise caution as a result.

Table 9 **Percentage satisfaction scores, CEQ and PREQ, 2015 and 2016, by study level**

	Overall satisfaction		Good teaching scale		Generic skills scale	
Study level	**2015**	**2016**	**2015**	**2016**	**2015**	**2016**
Undergraduate*	83.4	80.6	68.0	63.0	79.6	82.1
Postgraduate coursework**	83.4	82.5	68.0	68.3	79.6	78.3
	Overall satisfaction		**Supervisor**		**Intellectual climate**	
Postgraduate research**	87.7	85.5	81.7	81.2	68.0	60.7

* Study level for 2015 is AGS definition of bachelor degrees, 2016 is GOS definition of undergraduate degrees.
** Study level has been calculated according to proposed QILT practice for both 2015 and 2016. As a result, 2015 results may differ from published figures.

AGS publications have previously calculated scale scores based on the percentage of items in a scale to which a graduate responds positively, and then averaging this percentage across all respondents. It represents the average percentage satisfaction. The reporting of scale scores on the QILT website and 2016 GOS have been calculated on a different basis, whereby each respondent is judged to be either satisfied or not satisfied based on their average responses across the entire scale. The score is then calculated as the percentage of respondents who were satisfied. The QILT method for calculating scale scores is intuitively more appealing and is probably more able to be understood by the average user. This methodology has been used for reporting of CEQ indicators as well as Student Experience Survey (SES) indicators published on the QILT website.

For an example of the differences in the AGS and QILT scale calculation, consider the sample response to the good teaching scale for an individual graduate in Table 10.

Under the previous AGS methodology, the scale score for this graduate is equal to the number of items to which the graduate indicated agreement (in this case questions 1, 15, 16 and 27), divided by the total number of questions, that is 4/6 = 0.66, or 66.6 per cent. The equivalent score is calculated for each graduate, and the average score across all graduates is reported as the 'percentage agreement' for the scale.

Under the QILT methodology, the scale score for this graduate is equal to the average score for the individual items, that is (4 + 2 + 3 + 5 + 4 + 4)/6 = 3.66. Since the scale score is greater than 3.5, the graduate is considered to be satisfied with the teaching they received, and would count towards the total 'percentage satisfied' graduates for this scale.

Table 10 **Example of a set of student responses to the six good teaching items**

Survey question		Student response
1	The staff put a lot of time into commenting on my work	4 (agree)
3	The teaching staff normally gave me helpful feedback on how I was going	2 (disagree)
10	The teaching staff of this course motivated me to do my best work	3 (neither agree or disagree)
15	My lecturers were extremely good at explaining things	5 (strongly agree)
16	The teaching staff worked hard to make their subjects interesting	5
27	The staff made a real effort to understand difficulties I might be having with my work	4

QILT website

To evaluate the impact of changes in methodology between the 2015 AGS and the 2016 GOS, correlations between the results of the two surveys were calculated for key indicators of graduate outcomes and graduate satisfaction. Correlations were calculated for undergraduate level graduates, at the institution by study area level, as used on the QILT website.[4]

The correlations for the graduate outcome indicators were 0.781 for the full time employment indicator, 0.803 for median salary of those employed full-time and 0.862 for full-time study. These correlations are relatively high suggesting that relative performance at the institution by study area level is largely unaffected by changes in survey methodology. On this basis, it is considered appropriate to pool 2014 and 2015 AGS data with 2016 GOS data for graduate outcomes indicators on the QILT website.

Correlations for the graduate satisfaction indicators were lower, including 0.564 for the Overall Satisfaction Indicator, a relatively high 0.663 for the Good Teaching Scale, and 0.458 for the Generic Skills Scale. These results suggest the changes in survey methodology have had more impact on the graduate satisfaction indicators than on the graduate outcomes measures.

As a data quality measure, the QILT website does not publish results based on fewer than 25 survey responses. Data is pooled across multiple years on the QILT website, in part, to maximise the number of institution by study area strata which meet this requirement. For this reason, it has been decided to continue with the practice of pooling graduate satisfaction indicators over two years of data for presentation on the QILT website, in this instance pooling 2015 AGS data with 2016 GOS data, while noting that changes in survey methodology appear to have had greater impact on these indicators.

Conclusion

Improvements in the administration of the 2016 GOS have resulted in a break in time series between AGS and GOS survey estimates. Accordingly, readers are urged to exercise caution when comparing results from the 2016 GOS with earlier estimates derived from the AGS. Notwithstanding the changes in survey methodology, the slight improvement in the undergraduate full-time employment rate from 68.8 per cent as measured by the 2015 AGS to 70.9 per cent as measured by the 2016 GOS does appear consistent with the modest improvement in labour market conditions over the period.

4 For the purposes of calculating correlations, indicators have been based on the current website definitions for AGS data and on GOS definitions for GOS data.

Appendix 4
Self-assessed over-qualification

As the proportion of the workforce with higher education qualifications has increased, the issue of whether graduates fully utilise their skills in their employment has become a matter of public concern, both internationally and in Australia.[1] The GOS provides a measure of the subjective interpretation of over-qualification through the inclusion of the Scale of Perceived Over-Qualification (SPOQ).[2] The SPOQ has been included on the basis that it has been validated for use with higher education graduates and performed satisfactorily in the trial GOS.

The SPOQ provides an insight into over-qualification from the perspective of graduates themselves. It should be used in conjunction with information from the GOS on other aspects of graduates' potential under-employment or over-qualification, including the reasons given by graduates for working in part-time employment and the occupational profile of employed graduates.

The SPOQ provides a benchmark of the underutilisation of skills, and as such, it will be important to monitor changes in this measure over time. It is expected that this information will be used as part of continuous improvement programs of higher education institutions and practitioners, as well as in government quality assurance processes.

The SPOQ consists of the following eight questions about the extent to which employed graduates felt over qualified for their position:

1. My job requires less education than I have
2. I have more job skills than are required for this job
3. Someone with less education than myself could perform well on my job
4. My previous training is being fully utilised on this job
5. I have more knowledge than I need in order to do my job
6. My education level is above the level required to do my job
7. Someone with less work experience than myself could do my job just as well
8. I have more abilities than I need in order to do my job

Employed graduates respond on a five-point agreement scale. Each item receiving a score between 1 (strongly disagree) and 5 (strongly agree), with the response values reversed for item 7. A graduate is defined as perceiving themselves to be over-qualified, that is, they perceived themselves to be working in a job that did not allow them to fully utilise their skills or education, if they have an average scale score of 3.5 or higher. See the worked example for CEQ scales (QILT methodology) in Appendix 3 for further details on scale score calculation.

1 Useful surveys can be found in McGowan, M. A., & Andrews, D. (2015). *Skill mismatch and public policy in OECD countries*. OECD Economics Department Working Papers no. 1210; Li, I. W., & Miller, P. W. (2013). *The absorption of recent graduates into the Australian labour market*. The Australian Economic Review, vol. 46, no. 1, pp. 14–30, and McGuinness, S. (2006). *Overeducation in the labour market*. Journal of Economic Surveys, vol. 20, no. 3, pp. 387-418.

2 For development and validation of the scale, see Maynard, D. C., Joseph, T. A., & Maynard, A. M. (2006). *Underemployment, job attitudes, and turnover intentions*. Journal of Organizational Behaviour, 27(4), 509–536.

Appendix 5
2016 GOS item summary

Item label	Response scale	Base
Screening and confirmation		
Labour force		
Thinking about last week, the week starting <daystart>, <datestart> and ending last <dayend>, <dateend>.		
Last week, did you do any work at all in a job, business or farm?	Yes/No/Permanently unable to work/ Permanently not intending to work (65+)	(All)
Last week, did you do any work without pay in a family business?	Yes/No/Permanently not intending to work (65+)	(Not working)
Did you have a job, business or farm that you were away from because of holidays, sickness or any other reason?	Yes/No/Permanently not intending to work (65+)	(Not working without pay)
At any time during the last 4 weeks have you been looking for full-time work?	Yes/No/Permanently not intending to work (65+)	(Intending to work)
Have you been looking for part-time work at any time during the last 4 weeks?	Yes/No/Permanently not intending to work (65+)	(Intending to work)
If you had found a job, could you have started last week?	Yes/No	(Looking for full-time or part time work)
You mentioned that you didn't look for work during the last 4 weeks. Was that because you were waiting to start work you had already obtained?	Yes/No	(Not looking for work)
Did you have more than 1 job or business last week?	Yes/No	(Working or away from job)
The next few questions are about the job or business in which you usually work the most hours, that is, your main job.		Has more than one job
The next few questions are about the job or business in which you usually work the most hours		Has one job
Did you work for an employer, or in your own business?	Employer /Own business / Other or Uncertain	(Working or away from job)
Are you paid a wage or salary, or some other form of payment?	Wage or Salary/Other or Uncertain	(Working for an employer)

Item label	Response scale	Base
What are your <working/payment> arrangements?	• Unpaid voluntary work • Unpaid trainee or work placement • Contractor or Subcontractor • Own business or Partnership • Commission only • Commission with retainer • In a family business without pay • Payment in kind • Paid by the piece or item produced • Wage or salary earner • Other	(Other work arrangements)
How many hours did you actually work in your **main job** last week less time off but counting any extra hours worked]?	Enter hours	(More than one job or business)
How many hours do you usually work each week in your **main job**?	Enter hours	(More than one job or business)
How many hours did you **actually** work in all your jobs last week less time off but counting any extra hours worked (*or*): <in all your jobs>?	Enter hours	(Working or away from job)
How many hours do you **usually** work each week (*or*): <in all your jobs>?	Enter hours	(Working or away from job)
Would you prefer to work more hours than you usually work (*or*): <in all your jobs>?	Yes/No/Don't know	(Working or away from job)
How many hours a week would you like to work?	Enter hours	(Prefer work more hours)
Last week, were you available to work more hours than you usually work?	Yes/No	(Prefer to work more hours)
What is your occupation in your <main job/job/business>?	Enter occupation	(Working or away from job or waiting to start work)
What are your main tasks and duties?	Enter main tasks and duties	(Working or away from job or waiting to start work)
What kind of business or service is carried out by your <employer at the place where you work/business>?	Enter business or service	(Working or away from job or waiting to start work)
What is the name of your <employer/business>?	Enter employer/business name	(Working or away from job or waiting to start work)
In what sector are you wholly or mainly employed?	Public or government/Private/Not-for-profit	(Working or away from job or waiting to start work)
Are you working in Australia?	Yes/No/Not sure	(Working or away from job)

Item label	Response scale	Base
And what is the postcode of your <employer/business>?	Enter postcode/suburb/Not sure	(Working or away from job) and (working in Australia)
In which country is your <employer/business> based?	Country list (SACC)/Other (specify)	(Working or away from job) and (working outside Australia)
Have you worked <for your employer/in your business> for 12 months or more?	Yes, more than 12 months/No, less than 12 months	(Working or away from job)
How many months have you worked <for your employer/in your business>?	Enter number of months	(Worked for employer for less than 12 months)
How many years have you worked <for your employer/in your business>?	Enter number of years	(Worked for employer for more than 12 months)
Is this your first full-time job?	Yes/No	(Usually working 35 hours or more and worked for employer for less than 12 months and not self employed)
In **Australian dollars**, how much do you usually earn in <this job/**all your jobs**>, before tax or anything else was taken out?	• Amount per hour (specify) • Amount per day (specify) • Amount each week (specify) • Amount each fortnight (specify) • Amount each month (specify) • Amount each year (specify) • No earnings • Don't know	(Working in Australia)
Sorry but the salary you entered doesn't fit within our range. Please select the best option for how much you would usually earn in <this job/**all your jobs**>, per annum before tax or anything else was taken out?	• $1 – $9,999 • $10,000 – $19,999 • $20,000 – $29,999 • $30,000 – $39,999 • $40,000 – $49,999 • $50,000 – $59,999 • $60,000 – $79,999 • $80,000 – $99,999 • $100,000 – $124,999 • $125,000 – $149,999 • $150,000 or more • Don't know	(Working in Australia and out of range salary entered)

Item label	Response scale	Base
And in **Australian dollars**, how much do you usually earn in your main job, before tax or anything else was taken out?	• Amount per hour (specify) • Amount per day (specify) • Amount each week (specify) • Amount each fortnight (specify) • Amount each month (specify) • Amount each year (specify) • No earnings • (Don't know)	(Working in Australia and more than one job)
Sorry but the salary you entered doesn't fit within our range. Please select the best option for how much you would usually earn in your main job, per annum before tax or anything else was taken out?	• $1 – $9,999 • $10,000 – $19,999 • $20,000 – $29,999 • $30,000 – $39,999 • $40,000 – $49,999 • $50,000 – $59,999 • $60,000 – $79,999 • $80,000 – $99,999 • $100,000 – $124,999 • $125,000 – $149,999 • $150,000 or more • Don't know	(Working in Australia and more than one job and out of range salary entered)
What is your gross (that is pre-tax) annual salary? You can estimate if necessary. Please select currency <Currency drop down list>	Text	(Working outside Australia)

Item label	Response scale	Base
How did you first find out about this job?	• University or college careers service • Careers fair or information session • Other university or college source (such as faculties or lecturers or student society) • Advertisement in a newspaper or other print media • Advertisement on the internet • Via resume posted on the internet • Family or friends • Approached employer directly • Approached by an employer • Employment agency • Work contacts or networks • Social media • An employer promotional event • Other (please specify___)	(Worked for employer for less than 12 months and not self employed)
The following statements are about your skills, abilities and education. • My job requires less education than I have • I have more job skills than are required for this job • Someone with less education than myself could perform well on my job • My previous training is being fully utilised on this job • I have more knowledge than I need in order to do my job • My education level is above the level required to do my job • Someone with less work experience than myself could do my job just as well • I have more abilities than I need in order to do my job	• Strongly disagree • Disagree • Neither disagree nor agree • Agree • Strongly agree	(Working or away from job)

Item label	Response scale	Base
You mentioned that you are **not** looking to work more hours. What is the **main reason** you work **single response** the number of hours you are currently working?	• No suitable job in my local area • No job with a suitable number of hours • No suitable job in my area of expertise • Considered to be too young by employers • Considered to be too old by employers • Short-term illness or injury • Long-term health condition or disability • Caring for family member with a health condition or disability • Caring for children • Studying • Other (Please specify___)	(Working less than 35 hours and not looking for more hours)
You mentioned that you are looking to work more hours. What is the **main reason** you work the number of hours you are currently working?	• No suitable job in my local area • No job with a suitable number of hours • No suitable job in my area of expertise • Considered to be too young by employers • Considered to be too old by employers • Short-term illness or injury • Long-term health condition or disability • Caring for family member with a health condition or disability • Caring for children • Studying • Other (Please specify___)	(Working less than 35 hours and looking for more hours)

Item label	Response scale	Base
Your previous responses indicated that you have **more** skills or education than are needed to do your current job. What is the **main reason** you are working in a job that doesn't use all of your skills or education?	• No suitable job in my local area • No job with a suitable number of hours • No suitable job in my area of expertise • Considered to be too young by employers • Considered to be too old by employers • Short-term illness or injury • Long-term health condition or disability • Caring for family member with a health condition or disability • Caring for children • Studying • Other (please specify___)	(Perceived overqualification for current job)
When did you begin looking for work?	Enter month and enter year	(Working and looking for work)
Further study		
Are you currently a full-time or part-time student at a TAFE, university or other educational institution?	Yes – full-time/Yes – part-time/No	(All)
What is the full title of the qualification you are currently studying?	Qualification title	(Studying)
What is your major field of education for this qualification?	• Natural and physical sciences • Information technology • Engineering and related technologies • Architecture and building • Agriculture environmental and related studies • Health • Education • Management and commerce • Society and culture • Creative arts • Food, hospitality and personal services • Mixed field qualification • Other (please specify_____)	(Studying)

Item label	Response scale	Base
What is the level of this qualification?	• Higher Doctorate • Doctorate by Research • Doctorate by Coursework • Master Degree by Research • Master Degree by Coursework • Graduate Diploma • Graduate Certificate • Bachelor (Honours) Degree • Bachelor (Pass) Degree • Advanced Diploma • Associate Degree • Diploma • Non-award course • Bridging and Enabling course	(Studying)
And the institution where you are currently studying?	Institution	(Studying)

Item label	Response scale	Base
Graduate attributes		
For each of the following skills or attributes, to what extent do you agree or disagree that your <Final Course> from <Institution> prepared you for this job? If the skill is not required in your role, you can answer 'Not applicable'. **Statements** **Foundation skills** • Oral communication skills • Written communication skills • Numeracy skills • Ability to develop relevant knowledge • Ability to develop relevant skills • Ability to solve problems • Ability to integrate knowledge • Ability to think independently about problems **Adaptive skills and attributes** • Broad general knowledge • Ability to develop innovative ideas • Ability to identify new opportunities • Ability to adapt knowledge in different contexts • Ability to apply skills in different contexts • Capacity to work independently **Teamwork and interpersonal skills** • Working well in a team • Getting on well with others in the workplace • Working collaboratively with colleagues to complete tasks • Understanding of different points of view • Ability to interact with co-workers from different or multicultural backgrounds	• Strongly disagree • Disagree • Neither disagree nor agree • Agree • Strongly agree • Not applicable	(Working or away from job)

Item label	Response scale	Base
Graduate Attributes CEQ/PREQ		
The next series of questions are about your <course >. By <course> we mean the major fields of education or programs of study that made up your qualification.		(Not postgraduate by research)
Now a series of statements regarding your <FinalMajor1/FinalMajor2/FinalCourseA> <major/qualification>. • The staff put a lot of time into commenting on my work • The teaching staff normally gave me helpful feedback on how I was going • The <course> helped me develop my ability to work as a team member • The teaching staff of this <course> motivated me to do my best work • The course provided me with a broad overview of my field of knowledge • The <course> sharpened my analytic skills • My lecturers were extremely good at explaining things • The teaching staff worked hard to make their subjects interesting • The course developed my confidence to investigate new ideas • The <course> developed my problem-solving skills • The staff made a real effort to understand difficulties I might be having with my work • University stimulated my enthusiasm for further learning • The <course> improved my skills in written communication • I learned to apply principles from this course to new situations • I consider what I learned valuable for my future • As a result of my <course>, I feel confident about tackling unfamiliar problems • My course helped me to develop the ability to plan my own work • My university experience encouraged me to value perspectives other than my own • Overall, I was satisfied with the quality of this <course>	• Strongly disagree • Disagree • Neither disagree nor agree • Agree • Strongly agree • Not applicable	(Not postgraduate by research)
Please tell us about your postgraduate research experience. If you have had more than one supervisor or have studied in more than one department or faculty, please respond to the questions below in relation to your most recent supervision experience, whether by one or more supervisors. Please interpret 'thesis' and other research-related terms in the context of your own field of education.	• Strongly disagree • Disagree • Neither disagree nor agree • Agree • Strongly agree • Not applicable	(Postgraduate by research)

Item label	Response scale	Base
Please indicate the extent to which you strongly disagree, disagree, neither agree nor disagree, agree or strongly agree with each of these statements. • Supervision was available when I needed it • The thesis examination process was fair • I had access to a suitable working space • I developed an understanding of the standard of work expected • The department provided opportunities for social contact with other postgraduate students • My research further developed my problem solving skills • My supervisor(s) made a real effort to understand difficulties I faced • I had good access to the technical support I needed • I was integrated into the department's community • I learned to develop my ideas and present them in my written work • I understood the required standard for the thesis • I was able to organise good access to necessary equipment • My supervisor(s) provided additional information relevant to my topic • My research sharpened my analytical skills • I was satisfied with the thesis examination process • The department provided opportunities for me to become involved in the broader research culture • I was given good guidance in topic selection and refinement • I had good access to computing facilities and services • I understood the requirements of thesis examination • Doing my research helped me to develop my ability to plan my own work • My supervisor(s) provided helpful feedback on my progress • A good seminar program for postgraduate students was provided • The research ambience in the department or faculty stimulated my work • I received good guidance in my literature search • The examination of my thesis was completed in a reasonable time • As a result of my research, I feel confident about tackling unfamiliar problems • There was appropriate financial support for research activities • Overall, I was satisfied with the quality of my higher degree research experience		
Now, a couple of general questions about your <course>...		(All)
What were the best aspects of your <course>?	Open text	(All)
What aspects of your <course> were most in need of improvement?	Open text	(All)

Item label	Response scale	Base
Graduate preparation		
Is a <Course> or similar qualification a formal requirement for you to do your current job?	Yes No	(Working or away from job and working for employer for less than 12 months)
To what extent is it important for you to have a < Course >, or similar qualification, to be able to do your job?	Not at all important Not that important Fairly important Important Very important	(Working or away from job and working for employer for less than 12 months)
Overall, how well did your < Course > prepare you for your job?	Not at all Not well Well Very well Don't know/Unsure	(Working or away from job and working for employer for less than 12 months)
What are the main ways that < Institution > prepared you for employment in your organisation?	Text	(Working or away from job and working for employer for less than 12 months)
What are the main ways <Institution> could have better prepared you for employment in your organisation?	Text	(Working or away from job and working for employer for less than 12 months)
Contact details		
ESS bridging		

Appendix 6 Study area concordance

Study areas for Quality Indicators for Learning and Teaching (QILT) surveys, including the GOS, are defined in accordance with the Australian Bureau of Statistics' (ABS) Australian Standard Classification of Education (ASCED). The QILT website and in general this report use 21 aggregated study areas as the basis of analysis. Targets for data collection are based on 45 study areas. Concordance between these study areas and ASCED fields are listed below. Details of the fields of education are available from the ABS web site.

Study area (21)		Study area (45)		ASCED field of education
1	Science and mathematics	1	Natural & physical sciences	010000, 010300, 010301, 010303, 010500, 010501, 010503, 010599, 010700, 010701, 010703, 010705, 010707, 010709, 010711, 010713, 010799, 019900, 019999
		2	Mathematics	010100, 010101, 010103, 010199
		3	Biological sciences	010900, 010901, 010903, 010905, 010907, 010909, 010911, 010913, 010915, 010999
		4	Medical science & technology	019901, 019903, 019905, 019907, 019909
2	Computing & Information Systems	5	Computing & information systems	020000, 020100, 020101, 020103, 020105, 020107, 020109, 020111, 020113, 020115, 020117, 020119, 020199, 020300, 020301, 020303, 020305, 020307, 020399, 029900, 029901, 029999
3	Engineering	6	Engineering – other	030000, 030100, 030101, 030103, 030105, 030107, 030109, 030111, 030113, 030115, 030117, 030199, 030500, 030501, 030503, 030505, 030507, 030509, 030511, 030513, 030515, 030599, 031100, 031101, 031103, 031199, 031700, 031701, 031703, 031705, 031799, 039900, 039901, 039903, 039905, 039907, 039909, 039999
		7	Engineering – process & resources	030300, 030301, 030303, 030305, 030307, 030399
		8	Engineering – mechanical	030700, 030701, 030703, 030705, 030707, 030709, 030711, 030713, 030715, 030717, 030799
		9	Engineering – civil	030900, 030901, 030903, 030905, 030907, 030909, 030911, 030913, 030999
		10	Engineering – electrical & electronic	031300, 031301, 031303, 031305, 031307, 031309, 031311, 031313, 031315, 031317, 031399
		11	Engineering – aerospace	031500, 031501, 031503, 031505, 031507, 031599

Study area (21)		Study area (45)		ASCED field of education
4	Architecture and built environment	12	Architecture & urban environments	040000, 040100, 040101, 040103, 040105, 040107, 040199
		13	Building & construction	040300, 040301, 040303, 040305, 040307, 040309, 040311, 040313, 040315, 040317, 040319, 040321, 040323, 040325, 040327, 040329, 040399
5	Agriculture and environmental studies	14	Agriculture & forestry	050000, 050100, 050300, 050500, 050700, 059900
		15	Environmental studies	050900
6	Health services and support	16	Health services & support	060000, 060900, 060901, 060903, 060999, 061500, 061501, 061700, 061705, 061707, 061709, 061711, 061713, 061799, 061900, 061901, 061903, 061905, 061999, 069900, 069901, 069903, 069905, 069907, 069999
		17	Public health	061300, 061301, 061303, 061305, 061307, 061309, 061311, 061399
7	Medicine	18	Medicine	060100, 060101, 060103, 060105, 060107, 060109, 060111, 060113, 060115, 060117, 060119, 060199
8	Nursing	19	Nursing	060300, 060301, 060303, 060305, 060307, 060309, 060311, 060313, 060315, 060399
9	Pharmacy	20	Pharmacy	060500, 060501
10	Dentistry	21	Dentistry	060700, 060701, 060703, 060705, 060799
11	Veterinary science	22	Veterinary science	061100, 061101, 061103, 061199
12	Rehabilitation	23	Physiotherapy	061701
		24	Occupational therapy	061703
13	Teacher education	25	Teacher education – other	070000, 070100, 070107, 070109, 070111, 070113, 070115, 070117, 070199, 070300, 070301, 070303, 079900, 079999
		26	Teacher education – early childhood	070101
		27	Teacher education – primary & secondary	070103, 070105

Study area (21)		Study area (45)		ASCED field of education
14	Business and management	28	Accounting	080100, 080101
		29	Business management	080300, 080301, 080303, 080305, 080307, 080309, 080311, 080313, 080315, 080317, 080319, 080321, 080323, 080399
		30	Sales & marketing	080500, 080501, 080503, 080505, 080507, 080509, 080599
		31	Management & commerce – other	080000, 080900, 080901, 080903, 080905, 080999, 089900, 089901, 089903, 089999
		32	Banking & finance	081100, 081101, 081103, 081105, 081199
		40	Economics	091900, 091901, 091903
15	Humanities, culture and social sciences	33	Political science	090100, 090101, 090103
		34	Humanities inc history & geography	090000, 090300, 090301, 090303, 090305, 090307, 090309, 090311, 090313, 090399, 091300, 091301, 091303, 091700, 091701, 091703, 099900, 099901, 099903, 099905, 099999
		35	Language & literature	091500, 091501, 091503, 091505, 091507, 091509, 091511, 091513, 091515, 091517, 091519, 091521, 091523, 091599
16	Social work	36	Social work	090500, 090501, 090503, 090505, 090507, 090509, 090511, 090513, 090515, 090599
17	Psychology	37	Psychology	090700, 090701, 090799
18	Law and paralegal studies	38	Law	090900, 090901, 090903, 090905, 090907, 090909, 090911, 090913, 090999
		39	Justice studies & policing	091100, 091101, 091103, 091105, 091199
19	Creative arts	42	Art & design	100000, 100300, 100301, 100303, 100305, 100307, 100309, 100399, 100500, 100501, 100503, 100505, 100599, 109900, 109999
		43	Music & performing arts	100100, 100101, 100103, 100105, 100199
20	Communications	44	Communication, media & journalism	100700, 100701, 100703, 100705, 100707, 100799
21	Tourism, hospitality, personal services, sport and recreation	41	Sport & recreation	092100, 092101, 092103, 092199
		45	Tourism, hospitality & personal services	1101000, 110300, 120100, 120300, 120500, 129999

Appendix 7
Additional tables

Table A **Undergraduate employment outcomes, by 45 study areas, 2015 and 2016 (%)**

	Full-time employment		Overall employment		Labour force participation rate	
Study area	**2015**	**2016**	**2015**	**2016**	**2015**	**2016**
Natural & physical sciences	51.9	63.1	83.0	82.7	92.1	83.5
Mathematics	62.2	72.4	82.4	83.5	94.5	84.9
Biological sciences	43.4	53.8	81.4	79.1	90.0	81.6
Medical sciences & technology	52.9	61.8	82.2	81.0	90.5	79.2
Computing & information systems	67.0	72.5	83.2	82.6	93.9	94.4
Engineering – other	74.2	79.2	85.6	85.3	95.3	94.8
Engineering – process & resources	67.8	69.6	84.3	82.2	94.3	94.8
Engineering – mechanical	72.2	72.3	84.1	80.5	94.8	95.2
Engineering – civil	77.7	81.7	87.8	88.0	95.4	97.1
Engineering – electrical & electronic	78.2	75.4	85.9	81.0	97.3	94.5
Engineering – aerospace	61.0	68.5	83.4	80.5	93.6	92.7
Architecture & urban environments	68.2	69.3	87.3	83.1	95.2	93.5
Building & construction	89.3	91.3	93.9	95.3	96.5	98.2
Agriculture & forestry	76.4	77.1	91.4	84.4	93.3	93.3
Environmental studies	51.0	52.1	81.2	84.2	94.7	93.2
Health services & support	68.4	71.2	92.2	90.4	95.5	93.7
Public health	66.4	70.1	91.0	89.0	95.5	94.4
Medicine	96.3	98.5	98.7	97.7	94.1	95.6
Nursing	78.7	82.5	95.1	93.3	95.8	97.7
Pharmacy	95.6	96.3	97.6	96.0	97.4	94.9
Dentistry	86.9	82.3	95.6	94.1	91.4	97.7
Veterinary science	84.9	89.8	93.0	89.9	94.4	88.2
Physiotherapy	95.7	91.6	98.8	97.1	98.2	96.4
Occupational therapy	77.2	76.4	92.9	93.2	96.2	98.7

	Full-time employment		Overall employment		Labour force participation rate	
Study area	**2015**	**2016**	**2015**	**2016**	**2015**	**2016**
Teacher education – other	66.8	82.8	91.6	93.4	95.0	94.5
Teacher education – early childhood	75.3	81.7	95.5	95.6	95.4	95.8
Teacher education – primary & secondary	71.5	79.0	94.7	94.2	96.0	96.4
Accounting	76.9	76.2	89.5	86.4	94.0	96.5
Business management	71.0	74.6	90.5	87.5	95.1	96.5
Sales & marketing	68.4	74.2	91.0	89.5	95.3	96.7
Management & commerce – other	77.1	78.2	88.9	86.7	93.6	95.0
Banking & finance	73.4	78.1	88.5	86.0	94.6	96.1
Political science	67.4	63.9	89.3	82.9	90.6	92.0
Humanities inc history & geography	57.4	61.9	86.2	83.6	88.0	88.4
Language & literature	58.3	59.4	86.1	83.4	87.0	85.8
Social work	71.2	66.7	87.7	85.5	93.0	94.2
Psychology	55.4	60.8	86.4	85.2	91.7	87.0
Law	75.0	74.5	90.3	84.4	92.6	95.2
Justice studies & policing	64.4	63.0	87.6	83.1	91.0	93.7
Economics	74.4	72.5	89.9	84.8	93.0	95.1
Sport & recreation	61.4	70.5	95.2	95.7	96.9	94.3
Art & design	46.9	55.8	83.5	80.8	89.8	89.6
Music & performing arts	47.1	53.5	89.9	83.4	93.1	91.6
Communication, media & journalism	53.1	60.8	85.4	82.4	91.6	93.6
Tourism, hospitality & personal services	54.3	64.9	89.5	83.7	95.0	95.6
All study areas*	**68.8**	**70.9**	**89.5**	**86.4**	**93.7**	**92.0**

*For 2016, where a graduate completes combined degrees across two study areas, their outcomes are included in both study areas. 'All study areas' figures count each graduate once only.

Table B **Undergraduate occupation level, overall employed, by 45 study areas, 2016 (%)**

Study area	Occupation group						
	Managers	Professionals	Technicians & trade	Community & personal service	Clerical & administrative	All other occupations	All employed
Natural & physical sciences	3.0	46.7	7.3	13.9	8.9	20.2	100.0
Mathematics	n/a	77.1	n/a	n/a	n/a	10.3	100.0
Biological sciences	3.8	28.3	9.4	17.7	12.7	27.9	100.0
Medical sciences & technology	n/a	37.9	11.8	12.1	n/a	25.2	100.0
Computing & information systems	6.1	68.2	8.1	2.0	5.3	10.3	100.0
Engineering – other	7.8	64.6	11.8	3.3	4.0	8.5	100.0
Engineering – process & resources	n/a	68.9	n/a	n/a	n/a	14.9	100.0
Engineering – mechanical	8.1	71.8	n/a	n/a	n/a	9.6	100.0
Engineering – civil	11.5	64.6	6.3	n/a	n/a	8.8	100.0
Engineering – electrical & electronic	n/a	80.5	n/a	n/a	n/a	n/a	100.0
Engineering – aerospace	n/a	58.3	n/a	n/a	n/a	25.2	100.0
Architecture & urban environments	4.1	53.6	13.6	7.6	5.9	15.1	100.0
Building & construction	25.8	19.2	21.5	n/a	26.2	n/a	100.0
Agriculture & forestry	13.2	34.7	16.0	n/a	n/a	21.5	100.0
Environmental studies	n/a	29.1	n/a	15.4	12.8	29.1	100.0
Health services & support	2.7	43.9	2.3	27.8	8.4	14.9	100.0
Public health	n/a	55.5	n/a	13.7	12.0	14.6	100.0
Medicine	n/a	94.7	n/a	n/a	n/a	n/a	100.0
Nursing	n/a	88.7	n/a	7.3	1.1	2.1	100.0
Pharmacy		96.3	n/a	n/a	n/a	n/a	100.0
Dentistry	n/a	53.6		43.0	n/a	n/a	100.0
Veterinary science	n/a	68.2	n/a	n/a	n/a	n/a	100.0
Physiotherapy	n/a	93.8	n/a	n/a	n/a	n/a	100.0

Study area	Occupation group						
	Managers	Professionals	Technicians & trade	Community & personal service	Clerical & administrative	All other occupations	All employed
Occupational therapy		80.1	n/a	10.2	n/a	5.9	100.0
Teacher education – other	4.6	70.8	n/a	10.0	3.9	9.9	100.0
Teacher education – early childhood	6.8	81.5		7.2	n/a	n/a	100.0
Teacher education – primary & secondary	1.7	86.9	n/a	4.6	n/a	4.3	100.0
Accounting	6.9	62.6	n/a	n/a	19.2	8.4	100.0
Business management	17.8	33.6	1.4	8.4	22.8	16.1	100.0
Sales & marketing	13.9	43.8	n/a	n/a	13.9	19.2	100.0
Management & commerce – other	9.0	56.5	n/a	n/a	16.0	12.9	100.0
Banking & finance	6.8	59.1	n/a	n/a	18.9	10.3	100.0
Political science	6.3	34.8	n/a	n/a	24.6	20.9	100.0
Humanities inc history & geography	4.8	35.4	2.5	17.3	20.4	19.6	100.0
Language & literature	3.9	35.4	n/a	n/a	20.8	21.7	100.0
Social work	4.7	57.2	n/a	20.6	10.1	n/a	100.0
Psychology	5.6	35.4	2.1	18.3	16.9	21.6	100.0
Law	5.0	54.2	n/a	4.3	27.5	n/a	100.0
Justice studies & policing	n/a	13.0	n/a	35.9	25.7	19.8	100.0
Economics	5.1	60.3	n/a	n/a	16.3	12.2	100.0
Sport & recreation	n/a	28.4	n/a	22.9	n/a	25.7	100.0
Art & design	5.5	37.5	4.3	13.6	9.5	29.6	100.0
Music & performing arts	n/a	50.8	n/a	14.2	8.5	20.0	100.0
Communication, media & journalism	7.5	42.2	3.6	10.9	14.3	21.5	100.0
Tourism, hospitality & personal services	n/a	n/a	n/a	n/a	n/a	n/a	100.0
All study areas*	**5.6**	**53.5**	**3.4**	**11.6**	**11.4**	**14.5**	**100.0**

*For 2016, where a graduate completes combined degrees across two study areas, their outcomes are included in both study areas. 'All study areas' figures count each graduate once only

Table C **Undergraduate full-time employment, by study area, 2006–2016 (%)**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016*
Science and mathematics	77.3	75.6	78.3	68.1	63.9	65.8	62.8	55.4	51.0	49.5	61.0
Computing and information systems	78.8	83.1	84.2	80.1	73.2	77.7	74.7	70.3	67.2	67.0	72.5
Engineering	90.3	91.4	92.9	87.2	82.7	84.9	86.6	82.6	72.2	73.9	76.4
Architecture and built environment	91.0	93.0	92.1	80.9	81.3	78.5	75.2	69.9	68.6	75.4	75.2
Agriculture and environmental studies	75.3	77.3	80.4	75.8	66.2	68.1	70.7	64.4	59.9	58.1	59.8
Health services and support	83.0	85.1	85.6	78.6	75.9	76.7	75.1	70.1	67.9	67.9	70.9
Medicine	97.9	98.2	97.5	96.9	97.3	97.8	98.1	96.9	97.5	96.3	98.2
Nursing	96.8	97.5	96.6	96.4	92.6	91.4	91.6	81.9	80.1	78.7	82.5
Pharmacy	99.4	99.4	97.7	97.6	97.7	97.3	98.1	97.6	94.1	95.6	96.3
Dentistry	97.3	95.0	92.9	88.1	90.5	88.3	80.1	79.3	79.9	86.9	82.3
Veterinary science	94.7	94.0	91.8	92.1	90.6	88.4	80.8	78.8	80.7	84.9	89.8
Rehabilitation	92.5	94.1	95.3	91.6	89.9	88.9	89.3	84.5	80.9	87.4	84.0
Teacher education	79.2	80.3	82.8	78.2	74.9	74.2	74.9	70.8	70.0	71.7	80.3
Business and management	84.2	85.8	86.2	79.6	76.4	77.0	76.3	73.6	71.2	72.7	75.5
Humanities, culture and social sciences	72.7	76.2	77.2	71.9	68.0	66.7	66.8	61.1	58.4	59.3	61.8
Social work	80.9	88.5	86.4	81.6	77.6	77.4	75.3	69.9	71.6	71.2	66.7
Psychology	72.6	79.1	77.3	71.3	65.5	63.5	63.2	56.1	52.1	55.4	60.8
Law and paralegal studies	88.5	90.4	90.1	86.1	80.8	81.3	80.0	76.1	73.3	73.0	72.6
Creative arts	61.8	66.2	66.7	51.5	53.2	52.5	53.8	48.3	44.7	47.0	55.0
Communications	69.5	72.9	72.4	60.9	62.2	61.2	62.3	55.8	55.1	53.1	60.7
Tourism, hospitality, personal services, sport and recreation	68.5	76.1	75.1	63.6	55.7	60.9	60.7	70.4	55.1	57.8	68.5
All study areas	**82.4**	**84.5**	**85.2**	**79.2**	**76.2**	**76.3**	**76.1**	**71.3**	**68.1**	**68.8**	**70.9**

*For 2016, where a graduate completes combined degrees across two study areas, their outcomes are included in both study areas. 'All study areas' figures count each graduate once only.

Table D **Undergraduate overall employment, by study area, 2006–2016 (%)**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016*
Science and mathematics	92.4	91.8	92.1	88.0	86.1	86.8	86.8	83.8	82.6	82.1	81.5
Computing and information systems	91.1	91.9	92.3	89.8	86.7	89.2	87.1	84.7	82.6	83.2	82.5
Engineering	95.3	95.3	95.9	92.0	90.0	91.0	92.5	89.9	84.7	85.7	83.9
Architecture and built environment	96.3	97.3	96.5	90.2	93.1	90.7	90.8	87.4	89.0	89.3	85.8
Agriculture and environmental studies	92.2	92.1	94.2	90.6	86.3	87.9	88.8	86.4	86.8	84.0	84.2
Health services and support	96.4	96.2	96.5	94.4	94.0	93.9	93.2	92.3	91.4	91.9	90.1
Medicine	99.0	99.3	98.7	97.8	98.2	99.0	98.7	98.5	98.4	98.7	97.4
Nursing	99.2	99.2	98.9	98.7	97.7	97.4	97.6	95.2	95.4	95.1	93.3
Pharmacy	99.8	99.2	98.4	98.3	99.3	98.6	98.2	98.3	97.8	97.6	96.0
Dentistry	99.4	100.0	97.5	98.3	97.2	97.2	97.0	93.5	93.0	95.6	94.1
Veterinary science	99.4	97.6	95.5	94.8	94.7	93.1	91.3	85.8	89.4	93.0	89.4
Rehabilitation	98.1	98.3	98.3	97.5	97.6	96.0	96.4	94.8	94.1	96.1	95.2
Teacher education	96.7	96.4	96.9	96.4	95.9	95.3	95.2	94.8	94.4	94.4	94.3
Business and management	94.2	94.7	94.3	91.9	90.6	91.0	91.0	89.8	89.7	90.1	87.1
Humanities, culture and social sciences	90.6	92.1	91.6	90.5	88.5	88.6	88.3	86.6	85.4	86.6	83.5
Social work	93.9	94.7	95.4	93.6	91.3	90.6	90.1	87.8	88.7	87.7	85.5
Psychology	92.7	93.9	92.3	91.6	90.5	89.5	88.7	86.4	86.4	86.4	85.0
Law and paralegal studies	96.0	95.8	95.6	93.8	93.2	91.9	92.3	90.3	89.9	89.8	84.3
Creative arts	89.3	90.4	90.5	85.9	87.4	85.0	86.4	84.2	83.3	85.4	81.4
Communications	91.5	91.5	90.7	88.8	87.8	87.7	89.2	87.0	86.2	85.4	83.0
Tourism, hospitality, personal services, sport and recreation	89.6	94.8	92.4	92.1	89.9	89.8	89.8	94.9	88.8	92.4	89.6
All study areas	**94.5**	**94.9**	**94.8**	**92.7**	**91.8**	**91.6**	**91.7**	**90.0**	**89.2**	**89.5**	**86.4**

*For 2016, where a graduate completes combined degrees across two study areas, their outcomes are included in both study areas. 'All study areas' figures count each graduate once only.

Table E **Undergraduate median starting salaries, 2006–2016, by study area ($ '000)**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016*	% change 2006 to 2016
Science and mathematics	40.0	42.0	45.0	47.0	49.0	51.0	53.0	50.0	52.0	52.0	55.2	38.0
Computing and information systems	42.0	43.2	46.8	49.8	50.0	51.0	53.0	53.0	54.0	55.0	60.0	42.9
Engineering	46.0	50.0	54.0	57.0	56.0	60.0	63.0	63.8	61.6	60.0	62.6	36.1
Architecture and built environment	38.9	40.0	43.0	45.0	45.0	45.0	48.0	48.8	49.0	45.0	55.0	41.6
Agriculture and environmental studies	38.5	40.8	42.0	46.0	45.0	47.0	51.0	49.0	51.1	49.0	55.0	42.9
Health services and support	42.0	44.0	46.0	48.0	50.0	52.0	52.8	54.0	55.0	56.0	59.5	41.7
Medicine	47.0	50.0	50.0	53.5	56.0	59.0	60.0	60.0	60.7	65.0	69.2	47.2
Nursing	40.0	42.0	45.0	46.0	49.0	49.1	50.0	52.0	52.0	53.0	58.4	46.0
Pharmacy	32.0	34.0	34.0	35.0	36.0	37.0	38.8	39.0	40.0	42.0	43.8	36.9
Dentistry	65.0	68.0	70.0	70.0	75.0	80.0	80.0	80.0	75.0	80.0	83.5	28.5
Veterinary science	38.0	40.0	40.0	45.0	44.0	45.0	45.0	45.0	46.3	50.0	50.0	31.6
Rehabilitation	42.6	45.0	47.4	48.0	50.2	53.0	54.0	56.0	56.0	59.0	60.0	40.9
Teacher education	43.9	46.0	47.0	51.0	53.0	55.0	56.0	57.0	59.0	61.0	62.9	43.5
Business and management	38.5	40.0	43.0	45.0	45.0	47.0	49.0	49.5	50.0	50.0	55.0	42.9
Humanities, culture and social sciences	39.0	41.5	43.0	45.0	46.0	46.5	50.0	50.0	50.0	50.0	55.0	41.0
Social work	42.0	44.0	45.0	45.0	47.0	50.0	50.0	50.0	55.0	55.5	60.0	42.9
Psychology	40.0	42.2	43.1	45.0	47.1	47.0	49.0	50.0	49.0	50.0	54.8	37.0
Law and paralegal studies	41.0	44.8	46.0	50.0	48.0	50.0	52.0	55.0	52.9	55.0	60.0	46.3
Creative arts	34.0	35.0	36.3	37.5	38.0	40.0	40.0	40.0	40.0	40.0	48.0	42.9
Communications	35.0	35.0	38.0	40.0	39.0	40.0	41.0	42.0	43.9	45.0	48.0	37.1
Tourism, hospitality, personal services, sport and recreation	34.0	35.0	36.0	38.2	40.0	38.5	43.3	41.5	43.5	40.0	52.2	53.5
All study areas	**40.4**	**43.0**	**45.0**	**48.0**	**49.0**	**50.0**	**52.0**	**52.5**	**52.0**	**54.0**	**57.9**	**43.3**

*For 2016, where a graduate completes combined degrees across two study areas, their outcomes are included in both study areas. 'All study areas' figures count each graduate once only.

Table F **Undergraduate employment outcomes, universities only, 2015 and 2016**

	2015			2016		
	Male	**Female**	**Total**	**Male**	**Female**	**Total**
Full-time employment (%)	68.5	69.2	68.9	70.4	71.7	71.2
Overall employed (%)	87.3	90.8	89.5	83.4	88.2	86.5
Labour force participation rate (%)	93.9	93.6	93.7	91.0	92.5	92.0
Median salary ($)	55,000*	53,000*	54,000*	60,000	56,600	58,000

*Graduates aged less than 25 and in first full-time employment.

Table G **Undergraduate employment outcomes, by study area, universities only, 2015 and 2016 (%)**

	Full-time employment		Total employment		Labour force participation rate	
Study area	**2015**	**2016**	**2015**	**2016**	**2015**	**2016**
Science and mathematics	49.5	61.1	82.1	81.5	91.0	82.3
Computing and information systems	67.1	72.7	83.2	82.8	94.0	94.4
Engineering	73.9	76.4	85.7	83.9	95.3	95.1
Architecture and built environment	75.3	75.0	89.3	85.7	95.6	94.5
Agriculture and environmental studies	58.0	59.7	84.0	84.1	94.4	93.1
Health services and support	68.2	71.0	91.9	90.2	95.8	93.7
Medicine	96.3	98.2	98.7	97.4	94.1	95.2
Nursing	78.7	82.3	95.1	93.2	95.9	97.6
Pharmacy	95.6	96.3	97.6	96.0	97.4	94.9
Dentistry	86.9	82.3	95.6	94.1	91.4	97.7
Veterinary science	84.9	89.8	93.0	89.4	94.4	88.3
Rehabilitation	87.4	84.0	96.1	95.2	97.3	97.4
Teacher education	71.8	80.3	94.4	94.3	95.7	95.7
Business and management	72.7	75.7	90.1	87.2	94.6	96.1
Humanities, culture and social sciences	58.7	61.4	86.5	83.4	88.2	88.6
Social work	71.3	67.9	88.6	86.3	93.4	94.6
Psychology	55.5	60.7	86.5	85.1	91.9	87.0
Law and paralegal studies	73.0	72.9	89.7	84.3	92.3	94.9
Creative arts	46.9	55.5	85.3	81.9	90.9	89.9
Communications	53.1	61.9	85.5	83.7	91.6	93.4
Tourism, hospitality, personal services, sport and recreation	58.6	67.9	93.0	92.1	96.6	94.4
All study areas*	**68.8**	**70.9**	**89.5**	**86.4**	**93.7**	**92.0**

*Where a graduate completes combined degrees across two study areas, their outcomes are included in both study areas. 'All study areas' figures count each graduate once only.

Table H **Undergraduate employment outcomes by demographic group, universities only, 2015 and 2016 (%)**

		Full-time employment		Overall employment		Labour force participation rate	
		2015	2016	2015	2016	2015	2016
Age	30 years or under	68.2	70.8	89.8	86.5	94.4	92.3
	Over 30 years	72.7	73.6	88.2	86.3	90.8	90.4
Indigenous	Indigenous	80.5	74.5	90.6	86.0	92.2	89.9
	Non Indigenous	68.8	71.2	89.6	86.5	93.8	92.0
Home language	English	70.4	71.8	90.7	86.9	94.1	92.0
	Language other than English	60.8	55.1	83.0	73.7	91.6	89.4
Disability	Reported disability	56.5	61.5	77.7	79.7	84.7	87.0
	No disability	69.3	71.8	89.9	86.9	94.3	92.3
Study mode	Internal	67.6	69.8	89.3	85.7	93.9	91.4
	External/distance	81.9	74.7	92.2	88.6	93.7	93.5
Total university undergraduate		**68.9**	**71.2**	**89.5**	**86.5**	**93.7**	**92.0**

Table I **Undergraduate occupation level, by employment type, universities only, 2016 (%)**

	Employed full-time			Overall employed		
	Male	Female	Total	Male	Female	Total
Managers	9.1	6.2	7.3	7.2	4.6	5.5
Professionals	63.6	66.4	65.3	53.6	54.1	53.9
Technicians and trades workers	5.6	2.1	3.4	5.5	2.2	3.3
Community and personal service workers	6.2	7.1	6.7	9.7	12.5	11.6
Clerical and administrative workers	7.9	12.8	11.0	8.2	13.1	11.4
All other occupations	7.6	5.4	6.2	15.8	13.5	14.3
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Table J **Undergraduate occupation level, overall employed, by study area, universities only, 2016 (%)**

Study area	Occupation group						
	Managers	Professionals	Technicians & trade	Community & personal service	Clerical & administrative	All other occupations	All employed
Science and mathematics	3.0	41.9	8.3	14.2	10.0	22.6	100.0
Computing and information systems	5.9	68.8	7.8	2.1	5.3	10.1	100.0
Engineering	7.6	68.5	6.7	3.6	3.8	9.8	100.0
Architecture and built environment	9.7	44.9	15.5	5.8	11.2	12.9	100.0
Agriculture and environmental studies	7.4	31.0	11.2	12.5	11.3	26.7	100.0
Health services and support	2.6	44.5	2.1	26.7	9.2	14.9	100.0
Medicine	n/a	93.8	n/a	n/a	n/a	n/a	100.0
Nursing	n/a	88.6	n/a	7.4	1.1	2.1	100.0
Pharmacy		96.3	n/a	n/a	n/a	n/a	100.0
Dentistry	n/a	53.6		43.0	n/a	n/a	100.0
Veterinary science	n/a	68.2	n/a	n/a	n/a	n/a	100.0
Rehabilitation	n/a	86.7	n/a	5.9	n/a	4.0	100.0
Teacher education	3.3	82.1	n/a	6.3	n/a	5.2	100.0
Business and management	12.0	48.6	1.3	5.5	18.9	13.7	100.0
Humanities, culture and social sciences	4.9	34.6	2.2	16.8	21.4	20.2	100.0
Social work	4.6	58.0	n/a	20.8	n/a	5.9	100.0
Psychology	5.4	35.1	2.0	18.3	17.2	22.0	100.0
Law and paralegal studies	5.2	47.4	n/a	n/a	27.1	10.0	100.0
Creative arts	4.2	43.6	3.8	13.5	9.7	25.2	100.0
Communications	7.8	42.3	2.5	11.6	14.4	21.4	100.0
Tourism, hospitality, personal services, sport and recreation	n/a	25.4	n/a	24.6	n/a	24.6	100.0
All study areas*	**5.6**	**53.5**	**3.4**	**11.6**	**11.4**	**14.5**	**100.0**

*Where a graduate completes combined degrees across two study areas, their outcomes are included in both study areas. 'All study areas' figures count each graduate once only.

Table K **Undergraduate employment outcomes, NUHEIs only, 2016**

	Male	Female	Total
Full-time employment (%)	61.5	63.9	63.0
Overall employed (%)	79.0	85.4	83.1
Labour force participation rate (%)	93.2	92.2	92.5
Median salary ($)	50,500	50,000	50,200

Table L **Undergraduate employment outcomes by study area, NUHEIs only, 2016 (%)**

	Full-time employment	Total employment	Labour force participation rate
Science and mathematics	n/a	n/a	n/a
Computing and information systems	n/a	n/a	n/a
Engineering	n/a	83.9	93.9
Architecture and built environment	n/a	n/a	100.0
Agriculture and environmental studies	n/a	n/a	n/a
Health services and support	68.5	89.6	91.5
Medicine			
Nursing	93.2	96.6	100.0
Pharmacy			
Dentistry			
Veterinary science			
Rehabilitation			
Teacher education	82.0	93.3	97.6
Business and management	67.4	84.5	95.6
Humanities, culture and social sciences	78.4	86.8	81.2
Social work	58.1	80.1	91.8
Psychology	65.0	81.0	90.6

	Full-time employment	Total employment	Labour force participation rate
Law and paralegal studies	n/a	83.9	96.9
Creative arts	52.8	79.0	92.3
Communications	47.0	74.8	95.8
Tourism, hospitality, personal services, sport and recreation	n/a	n/a	n/a
All study areas*	**63.0**	**83.1**	**92.5**

*Where a graduate completes combined degrees across two study areas, their outcomes are included in both study areas. 'All study areas' figures count each graduate once only.

Table M **Undergraduate employment outcomes by demographic group, NUHEIs only, 2016 (%)**

		Full-time employment	Overall employment	Labour force participation rate
Age	30 years or under	68.2	89.8	94.4
	Over 30 years	72.7	88.2	90.8
Indigenous	Indigenous	80.5	90.6	92.2
	Non Indigenous	68.8	89.6	93.8
Home language	English	70.4	90.7	94.1
	Language other than English	60.8	83.0	91.6
Disability	Reported disability	56.5	77.7	84.7
	No disability	69.3	89.9	94.3
Study mode	Internal	67.6	89.3	93.9
	External/distance	81.9	92.2	93.7
Total NUHEI undergraduate		**68.9**	**89.5**	**93.7**

Table N **Undergraduate occupation level, by employment type, NUHEIs only, 2016 (%)**

	Employed full-time			Overall employed		
	Male	**Female**	**Total**	**Male**	**Female**	**Total**
Managers	13.2	9.6	11.0	9.8	7.3	8.2
Professionals	44.9	52.2	49.4	38.5	45.9	43.4
Technicians and trades workers	12.2	n/a	6.7	11.5	2.8	5.8
Community and personal service workers	n/a	n/a	8.3	10.0	13.9	12.6
Clerical and administrative workers	n/a	12.4	11.1	7.3	10.7	9.5
All other occupations	14.2	13.0	13.5	22.8	19.4	20.6
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Table 0 **Undergraduate satisfaction by study area, universities only, 2016 (% agreement)**

	Overall satisfaction	Good teaching scale	Generic skills scale
Science and mathematics	84.0	66.7	84.9
Computing and information systems	75.9	58.2	77.5
Engineering	75.5	49.0	84.0
Architecture and built environment	73.8	62.2	77.9
Agriculture and environmental studies	85.7	69.3	88.1
Health services and support	81.7	67.4	84.3
Medicine	79.4	47.4	79.1
Nursing	79.8	58.8	83.0
Pharmacy	86.6	67.5	85.1
Dentistry	77.2	60.3	82.0
Veterinary science	86.3	67.1	85.6
Rehabilitation	88.1	72.9	88.8
Teacher education	78.2	60.0	78.3
Business and management	79.0	56.1	79.3
Humanities, culture and social sciences	85.2	74.8	83.1
Social work	87.1	70.0	87.7
Psychology	80.7	63.2	84.6
Law and paralegal studies	82.5	56.1	84.5
Creative arts	74.9	70.2	76.9
Communications	80.7	70.0	81.3
Tourism, hospitality, personal services, sport and recreation	80.9	67.3	84.2
All study areas	**80.6**	**62.6**	**82.1**

Table P **Undergraduate satisfaction by study area, NUHEIs only, 2016 (% agreement)**

	Overall satisfaction	Good teaching scale	Generic skills scale
Science and mathematics	n/a	n/a	n/a
Computing and information systems	77.2	71.9	78.9
Engineering	61.3	56.7	80.6
Architecture and built environment	87.9	75.8	84.8
Agriculture and environmental studies	n/a	n/a	n/a
Health services and support	76.8	71.5	85.6
Medicine			
Nursing	95.1	80.3	88.5
Pharmacy			
Dentistry			
Veterinary science			
Rehabilitation			
Teacher education	94.4	84.8	89.6
Business and management	78.1	68.5	80.2
Humanities, culture and social sciences	92.7	87.2	88.8
Social work	87.0	78.8	87.7
Psychology	84.7	72.9	88.1
Law and paralegal studies	96.2	88.9	96.3
Creative arts	72.7	69.6	78.3
Communications	71.3	75.2	75.2
Tourism, hospitality, personal services, sport and recreation	n/a	n/a	n/a
All study areas	**79.7**	**73.5**	**82.4**