ESS
employer satisfaction survey

QILT
quality indicators for learning and teaching

2018 Employer Satisfaction Survey

National Report

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We are also very grateful to the employers who took the time to provide valuable feedback about their experience. The ESS data will be used by institutions for continuous improvement and to assist prospective students to make informed decisions about future study.

The 2018 ESS was led by Graham Challice and the project team consisted of Shane Compton, Lisa Bolton, Natasha Vickers, Florence Le Guyader, James Morrison, David Haysom, Cynthia Kim, Gimwah Sng, Darren Pennay, Daniel Smith, Sebastian Misson, Wendy Guo and Joe Feng.

For more information on the conduct and results of the 2018 ESS, see the Quality Indicators for Learning and Teaching (QILT) website: www.qilt.edu.au. The QILT team can be contacted by email at qilt@srcentre.com.auwww.qilt.edu.au

Executive summary

The 2018 Employer Satisfaction Survey (ESS) represents the largest survey of its kind, reporting the views of over 5,300 employers about the attributes of recent graduates from Australian higher education institutions including universities and non-university higher education institutions (NUHEIs). Employer views of the technical skills, generic skills and work readiness of recent graduates provide assurance about the quality of Australia's higher education sector. This survey was first run in 2016, with over 3,000 employers responding, with over 4,000 in 2017 and the 2018 survey continues to build on this strong beginning.

The ESS has three design features. First, the ESS is the first national survey in Australia that directly links the experiences of graduates to the views of their direct supervisors. Second, the ESS is undertaken on a systematic basis by asking employed graduates who participate in the Graduate Outcome Survey (GOS) to provide contact information for their supervisor who is then invited to complete the ESS. This enables understanding of the limitations and bias associated with the survey methodology. By way of comparison, many other employer surveys are not conducted on a systematic basis and report the perceptions of executives who may have had little or no direct experience with graduates. Third, the ESS is large enough to provide comparisons by broad field of education, employment characteristics, occupation, demographic group and institution.

Other employer surveys of Australian higher education graduates are much smaller in scale, lack transparency in methodology and rely on the views of persons who may have had little or no direct contact with graduates. For example, the QS Graduate Employability Rankings are based on the views of approximately 800 employers while the Australian Industry Group (AIG) – Workforce Development Needs Survey Report 2018 collects the views of 300 companies about higher education, vocational education and training and, school graduates.

5,311

Number of survey responses from supervisors

Basic national results

In 2018, the overall satisfaction with graduates as rated by their direct supervisors was 85 per cent.

85%

Supervisors expressing overall satisfaction with their graduate

Employer satisfaction with other graduate attributes was as follows:

- 94 per cent satisfaction with Foundation skills – general literacy, numeracy and communication skills and the ability to investigate and integrate knowledge.
- 90 per cent satisfaction with Adaptive skills – the ability to adapt and apply skills/knowledge and work independently.
- 89 per cent satisfaction with Collaborative skills – teamwork and interpersonal skills.
- 94 per cent satisfaction with Technical skills – application of professional and technical knowledge and standards.
- 87 per cent satisfaction with Employability skills – the ability to perform and innovate in the workplace.

Overall, these results suggest employers remain highly satisfied with graduates from Australia's higher education system.

As shown by Table 1, overall satisfaction of employers with their graduates is at its highest level ever in 2018 improving by one percentage point on last year and more than offsetting the fall in overall satisfaction in 2017. Employer satisfaction with all other graduate attributes improved last year to their highest levels ever, the only exception being a slight decline in employer satisfaction with adaptive skills. Note, the changes in overall satisfaction and satisfaction with other graduate attributes were not statistically significant due to the relatively small number of responses from employers, as demonstrated by the presentation of confidence intervals.

Table 1 **Employer satisfaction, 2016 - 2018 (%)**

	Foundation		Adaptive		Collaborative		Technical		Employability		Overall satisfaction	
	%	CI	%	CI	%	CI	%	CI	%	CI	%	CI
2016	92.0	(91.2, 92.8)	88.4	(87.4, 89.4)	84.6	(83.5, 85.7)	92.2	(91.4, 93.0)	83.8	(82.7, 84.9)	84.3	(83.2, 85.4)
2017	93.4	(92.8, 94.0)	90.1	(89.3, 90.9)	85.9	(85.0, 86.8)	93.3	(92.6, 94.0)	85.0	(84.1, 85.9)	83.6	(82.7, 84.5)
2018	93.5	(92.9, 94.1)	89.9	(89.2, 90.6)	88.7	(87.9, 89.4)	93.8	(93.3, 94.4)	86.5	(85.7, 87.3)	84.8	(84.0, 85.6)

Results by course, demographic, labour market characteristics and institution

In 2018, employers reported highest overall satisfaction with Agriculture and Environmental Studies graduates at 89 per cent. Supervisors also reported above average satisfaction with Natural and Physical Sciences, Information Technology, Engineering, Architecture and Building and, Health graduates, all 87 per cent and Education graduates, 86 per cent. On the other hand, employer satisfaction, while still high, appears lower for Creative Arts graduates, 81 per cent, Society and Culture graduates, 82 per cent and Management and Commerce graduates, 83 per cent.

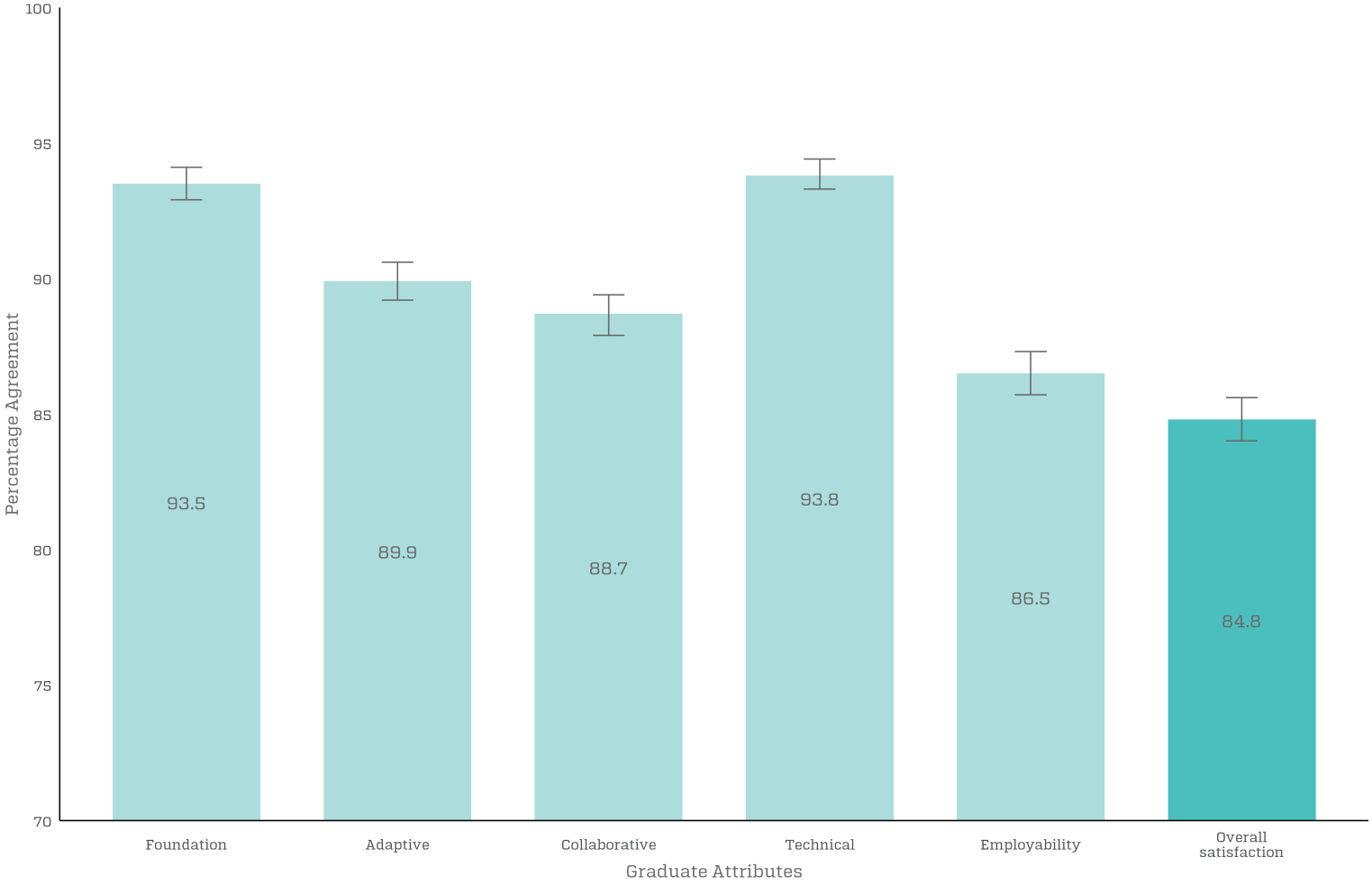
Supervisors expressed significantly higher levels of overall satisfaction with graduates who had studied internally, 86 per cent, in comparison with graduates who had studied externally, 82 per cent.

Employers appear significantly less satisfied with postgraduate coursework graduates, 83 per cent than with undergraduates, 86 per cent and postgraduate research graduates, 90 per cent.

Employers reported higher overall satisfaction with graduates working in Professional occupations, 87 per cent. This is consistent with higher education qualifications being more relevant for working in those occupations.

This report combines results from the 2016, 2017 and 2018 Employer Satisfaction Surveys providing over 10,200 employer responses to publish results at institution level for Australia's universities. Overall employer satisfaction is consistently high ranging from 91 per cent to 77 per cent across Australia's universities. The Employer Satisfaction Survey demonstrates there is differentiation across universities. For example, 87 per cent of direct supervisors rated graduates from the University of Queensland favourably, which was significantly higher than six other universities.

Figure 1 **Employer satisfaction with graduate attributes and overall satisfaction (%)**



Skills relevance and utilisation

Overall, graduates tended to view their qualification as less important for their current employment than their supervisor. While a little over half of graduates, 57 per cent, considered their qualification to be 'very important' or 'important' to their current job, around 64 per cent of supervisors indicated the graduate's qualification was 'very important' or 'important'.

Health and Education qualifications were rated by graduates and supervisors as being significantly more important for their current position than most other fields of education. This is consistent with these qualifications being a requirement for employment in many instances. For example, 74 per cent of graduates and 79 per cent of supervisors thought that Health qualifications were important for current employment. Similarly, 73 per cent of graduates and 78 per cent of supervisors thought that Education qualifications were important for graduates' current employment. Supervisors of Information Technology, Creative Arts and Management and Commerce graduates were least likely to think that the qualification was important for current employment at 45 per cent, 46 per cent and 49 per cent respectively.

Supervisors of graduates working in Professional occupations were more likely to state that the qualification was important for graduate's current employment, 75 per cent. This finding is not surprising as, of all the occupational groups, the qualifications related to professional employment are most likely to translate directly to a specific job or role, especially where qualifications are a requirement for employment.

Overall, 92 per cent of supervisors in 2018, reported that the qualification prepared the graduate 'very well' or 'well' for their current employment. The proportion of supervisors who thought the qualification prepared the graduate for the job has remained consistently high since the employer survey was first conducted in 2016, hovering between 92 and 93 per cent. Overall, there appears to be a strong relationship between skills and knowledge acquired by higher education graduates and the requirements of their jobs after graduation. This result affirms the value of higher education qualifications for employment.

92%

Supervisors reporting the qualification prepared the graduate 'very well' or 'well' for current employment

Methodology

The 2018 ESS was primarily conducted as a national online survey among 103 higher education institutions including all 41 Table A and B universities, and 62 Non-University Higher Education Institutions (NUHEIs).

The population frame for the ESS comprised 95,121 graduates, domestic and international, who responded in the 2018 GOS they were employed. Of these, 10,216 employed graduates provided sufficient contact details to approach supervisors, yielding a supervisor referral rate of 10.7 per cent. While this is an improvement on the 9.3 per cent in 2017 and 7.7 per cent achieved in 2016, there remains a reluctance among graduates to pass on their supervisor contact details.

A total of 5,311 valid survey responses from direct supervisors were collected across all study levels, representing a supervisor response rate of 52.0 per cent. This is an improvement on the supervisor response rate of 48.2 per cent in 2017 and 44.5 per cent in 2016.

Supervisors of Education and Health and graduates working in Professional occupations were overrepresented in the ESS compared with the proportion of graduates who had responded to the Graduate Outcomes Survey. Supervisors of Education and Health graduates and graduates in Professional occupations rated overall satisfaction more highly and this is expected to lead to an upward bias in reported employer satisfaction in the 2018 ESS.

On the other hand, supervisors of postgraduate coursework and external graduates were overrepresented in the ESS. Supervisors rated overall satisfaction of these graduates lower than average and this is expected to lead to a downward bias in reported employer satisfaction in the 2018 ESS.

Graduates who did not provide supervisor contact details rated their Foundation skills at 83 per cent. While still high, this was lower than for graduates who supplied their supervisor contact details, 89 per cent, and the supervisor satisfaction rating of foundation skills of 94 per cent and this general pattern is repeated in the Adaptive skills and Collaborative skills domains. It would appear graduates who were more positive about the skills they had acquired may be more comfortable having their supervisor participate in the ESS. This is expected to lead to upward bias in reported levels of employer satisfaction in the 2018 ESS.

Notwithstanding a potential upward bias in reported employer satisfaction, ratings of attributes across graduates who are willing or not willing to provider supervisor contact details are of broadly similar magnitude suggesting that results from the 2018 ESS provide evidence of the likely high quality of graduates from the Australian higher education system. Establishment of the Quality Indicators for Learning and Teaching (QILT) brand allied with efforts to promote the QILT surveys and the ESS among companies that are known employers of graduates are expected to continue to improve response rates and the robustness and validity of results from the ESS over time.

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1 Introduction

The 2018 Employer Satisfaction Survey (ESS) represents the largest survey ever undertaken of employer views of the attributes of recent graduates from Australian higher education institutions. As such, it measures key outcomes providing assurance about the quality of Australia's higher education sector. The ESS is included as part of the Quality Indicators for Learning and Teaching (QILT) survey suite. The QILT surveys are independently and centrally administered by the Social Research Centre on behalf of the Australian Government Department of Education and Training.

The impetus for a national survey of graduate employers is grounded in the Australian Government's desire to improve the range and quality of higher education performance indicators in Australia. Since graduate employment is usually one of the main objectives of completing a higher education qualification, employer views of the readiness of graduates to enter the workplace forms a key component of the quality matrix. The ESS is the first national survey of its kind in Australia that directly links the experiences of graduates to the views of their direct supervisors. Employed graduates who participate in the Graduate Outcome Survey (GOS) are asked to provide contact information for their supervisor who are then invited to complete the ESS. This report describes results from that survey of employer views of the technical skills, generic skills and work readiness of recent graduates from Australian higher education institutions.

The QILT surveys are conducted on a consistent basis using population frames constructed from the Higher Education Information Management System (HEIMS) data collection. The surveys are based on the student life cycle starting with the Student Experience Survey measuring the experiences of commencing and later year students through to the Graduate Outcomes Survey and Employer Satisfaction Survey measuring graduate outcomes and entry to the workforce and the GOS Longitudinal which measures graduate outcomes three years after course completion.

The vocational nature of Australian higher education is reflected in the long tradition of accreditation of courses by professional bodies and organisations, and a strong focus on the employment outcomes of graduates. While employer preferences for graduates are revealed by employment outcomes, in the past less attention has been paid to employers' qualitative assessment of graduates. In part, this reflects the many methodological challenges associated with measuring employer satisfaction with graduates.

A major dilemma in designing employer surveys of graduates lies in constructing robust population and sample frames while seeking to garner a sufficient number of responses. The present survey uses all graduate respondents, domestic and international, to the Graduate Outcomes Survey (GOS), which in turn is based on Higher Education Information Management

System (HEIMS) data collection, to gather the contact details of direct supervisors. One of the advantages of measuring employer satisfaction on a systematic basis is that it enables understanding of the limitations and bias associated with the survey methodology. Further details of the methodology and pattern of responses and possible bias are presented in Section 3.

One disadvantage of a systematic approach to survey collection is that the ensuing methodology can make it difficult to achieve an adequate number of responses for reporting purposes. In the present survey, this manifests itself through the low graduate referral rate due to a reluctance of graduates to pass on contact details of their direct supervisor. Collection of over 5,300 employer responses, however, does permit reporting of employer satisfaction while discriminating against key course, demographic, labour market characteristics and institution.

A key distinguishing feature of the present survey is that it measures the experiences of direct supervisors of graduates. This is unlike other employer surveys that report the perceptions of executives with little or no direct experience with graduates.

2 Results

2.1 Employer satisfaction by course, demographic, labour market characteristics and institution

The 2018 Employer Satisfaction Survey confirms the findings of the 2017 and 2016 surveys and earlier 2013–14 pilot survey that supervisors rate their graduates highly. In 2018, overall satisfaction with graduates as rated by direct supervisors was 85 per cent. Overall satisfaction reports the proportion of supervisors giving responses 'Very likely to consider' or 'Likely to consider' to the item, 'Based on your experience with this graduate, how likely are you to consider hiring another graduate from the same course and institution, if you had a relevant vacancy?' Overall, these results suggest employers are highly satisfied with graduates from Australia's higher education system.

Employers were also requested to report their satisfaction with graduates across five graduate attribute domains or scales:

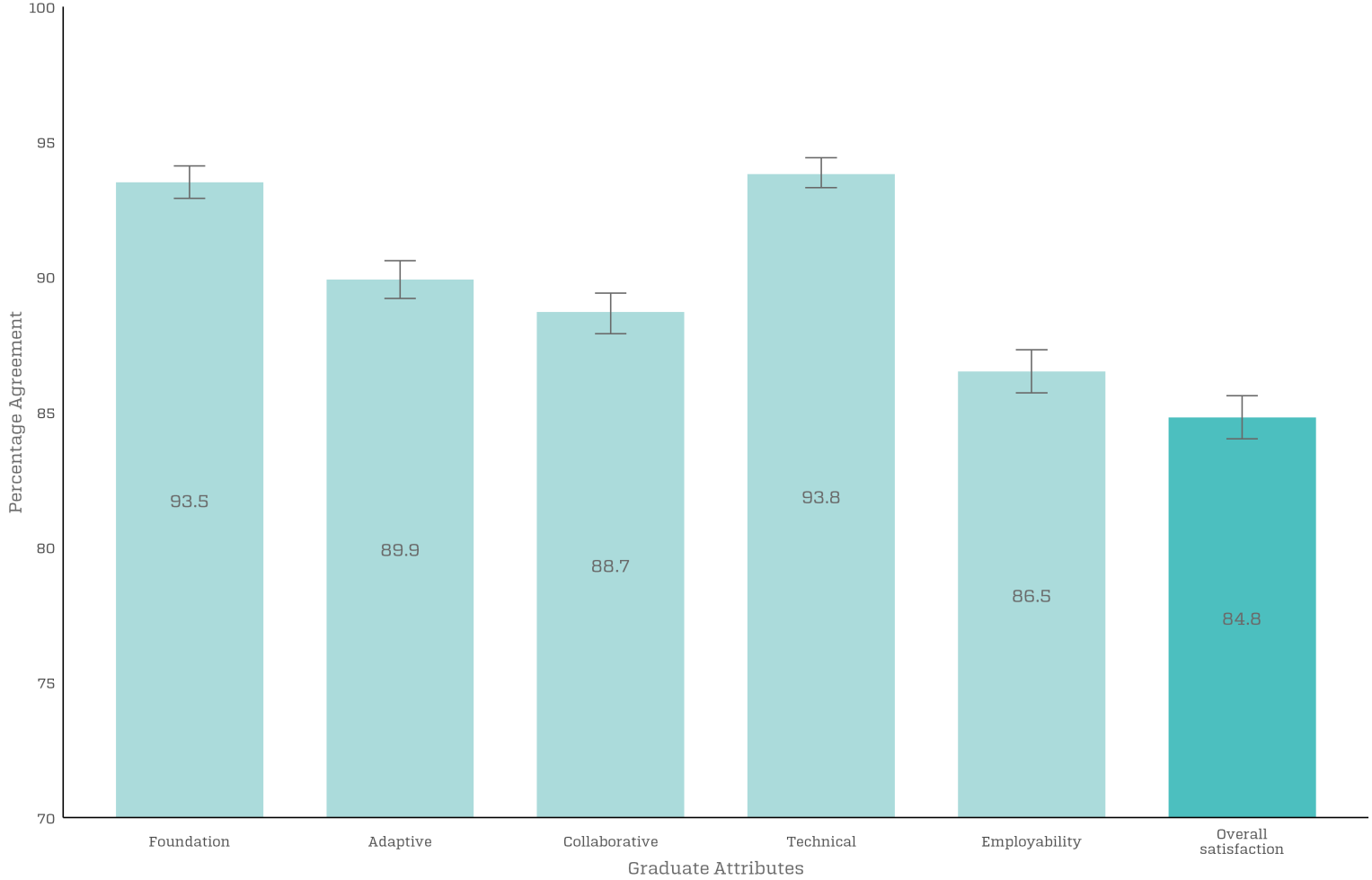
- Foundation skills – general literacy, numeracy and communication skills and the ability to investigate and integrate knowledge.
- Adaptive skills – the ability to adapt and apply skills/knowledge and work independently.
- Collaborative skills – teamwork and interpersonal skills.
- Technical skills – application of professional and technical knowledge and standards.
- Employability skills – ability to perform and innovate in the workplace.

Table 2 **Employer satisfaction, 2016 - 2018 (%)**

	Foundation		Adaptive		Collaborative		Technical		Employability		Overall satisfaction	
	%	CI	%	CI	%	CI	%	CI	%	CI	%	CI
2016	92	(91.2, 92.8)	88.4	(87.4, 89.4)	84.6	(83.5, 85.7)	92.2	(91.4, 93.0)	83.8	(82.7, 84.9)	84.3	(83.2, 85.4)
2017	93.4	(92.8, 94.0)	90.1	(89.3, 90.9)	85.9	(85.0, 86.8)	93.3	(92.6, 94.0)	85	(84.1, 85.9)	83.6	(82.7, 84.5)
2018	93.5	(92.9, 94.1)	89.9	(89.2, 90.6)	88.7	(87.9, 89.4)	93.8	(93.3, 94.4)	86.5	(85.7, 87.3)	84.8	(84.0, 85.6)

As shown by Table 2, overall satisfaction of employers with their graduates is at its highest level ever in 2018 at 85 per cent in rounded terms. This is an improvement of one percentage point on last year, more than offsetting the fall in overall satisfaction in 2017. Employer satisfaction with all other graduate attributes improved last year to their highest levels ever. Employer satisfaction with collaborative skills improved by three percentage points to 89 per cent, employability skills improved by 2 percentage points to 87 per cent, technical skills improved by one percentage point to 94 per cent and foundation skills improved by less than one percentage point to 94 per cent. The only exception being a slight decline in employer satisfaction with adaptive skills which remained at 90 per cent in rounded terms.

Figure 2 **Employer satisfaction with graduate attributes and overall satisfaction (%)**



Note the change in employer satisfaction with collaborative skills was statistically significant. The changes in overall satisfaction and satisfaction with other graduate attributes, however, were not statistically significant due to the relatively small number of responses from employers, as demonstrated by the presentation of confidence intervals.

In 2018, employers reported highest overall satisfaction with Agriculture and Environmental Studies graduates at 89 per cent. Supervisors also reported above average satisfaction with Natural and Physical Sciences, Information Technology, Engineering, Architecture and Building, and Health graduates, all 87 per cent, and Education graduates, 86 per cent. Note, overall satisfaction with Natural and Physical Science graduates improved by 7 percentage points in 2018, though the change was not statistically significant. On the other hand, employer satisfaction, while still high, appears lower for Creative Arts graduates, 81 per cent, Society and Culture graduates, 82 per cent and Management and Commerce graduates, 83 per cent. Employer satisfaction was significantly lower for Society and Culture graduates than for Natural and Physical Science, Engineering and Health graduates, as demonstrated by the presentation of confidence intervals in Figure 3. This indicates the ESS instrument is capable of discriminating across fields of education.

Employer satisfaction with different graduate attributes varies across fields of education as shown in Table 3. For example, employers of Agriculture and Environmental studies graduates provided the highest rating of overall satisfaction in 2018, as noted above, and rated graduates in this field as above average for all other graduate attributes. Similarly, employers are highly satisfied with Natural and Physical Sciences graduates, also rating them higher than average across all graduate attributes.

89%

highest employer satisfaction – Agriculture and environmental studies

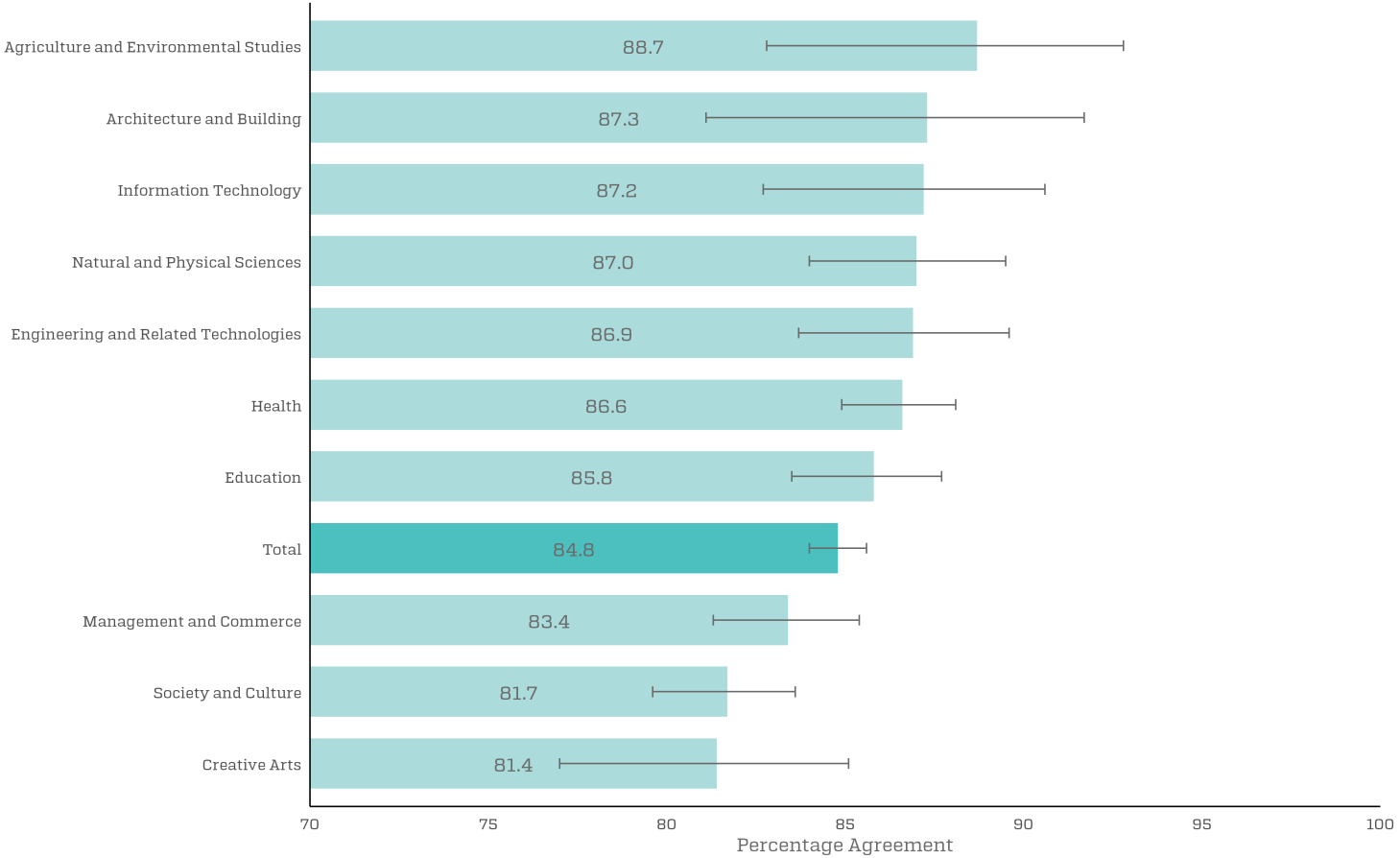
81%

lowest employer satisfaction – Creative arts

Table 3 **Employer satisfaction by broad field of education, 2018**

	Foundation		Adaptive		Collaborative		Technical		Employability		Overall satisfaction	
	%	CI	%	CI	%	CI	%	CI	%	CI	%	CI
Natural and Physical Sciences	97.3	(95.7, 98.4)	90.9	(88.2, 93.0)	93.0	(90.7, 94.8)	96.3	(94.4, 97.6)	89.4	(86.6, 91.7)	87.0	(84.0, 89.5)
Information Technology	92.9	(89.2, 95.4)	89.7	(85.5, 92.8)	90.5	(86.5, 93.4)	94.4	(91.0, 96.6)	84.6	(79.7, 88.5)	87.2	(82.7, 90.6)
Engineering and Related Technologies	95.0	(92.7, 96.6)	88.3	(85.2, 90.8)	88.6	(85.6, 91.1)	94.4	(91.9, 96.1)	83.3	(79.7, 86.4)	86.9	(83.7, 89.6)
Architecture and Building	92.7	(87.4, 96.0)	86.5	(80.2, 91.0)	91.8	(86.3, 95.3)	92.7	(87.4, 96.0)	86.0	(79.5, 90.7)	87.3	(81.1, 91.7)
Agriculture and Environmental Studies	94.6	(89.8, 97.4)	91.1	(85.5, 94.7)	89.4	(83.6, 93.3)	94.7	(89.9, 97.4)	89.9	(84.1, 93.8)	88.7	(82.8, 92.8)
Health	93.5	(92.2, 94.6)	89.1	(87.6, 90.5)	88.6	(87.0, 90.0)	93.9	(92.6, 94.9)	84.8	(83.0, 86.4)	86.6	(84.9, 88.1)
Education	93.4	(91.7, 94.7)	92.5	(90.7, 93.9)	86.1	(83.9, 88.0)	95.1	(93.6, 96.2)	87.0	(84.9, 88.9)	85.8	(83.5, 87.7)
Management and Commerce	92.8	(91.3, 94.1)	88.4	(86.5, 90.0)	87.4	(85.4, 89.1)	92.0	(90.3, 93.3)	88.2	(86.3, 89.9)	83.4	(81.3, 85.4)
Society and Culture	93.5	(92.1, 94.7)	91.2	(89.6, 92.6)	89.2	(87.4, 90.7)	93.6	(92.2, 94.7)	87.3	(85.4, 88.9)	81.7	(79.6, 83.6)
Creative Arts	92.0	(88.6, 94.5)	88.4	(84.5, 91.4)	90.2	(86.7, 93.0)	93.2	(90.0, 95.5)	85.3	(81.0, 88.7)	81.4	(77.0, 85.1)
Total	**93.5**	**(92.9, 94.1)**	**89.9**	**(89.2, 90.6)**	**88.7**	**(87.9, 89.4)**	**93.8**	**(93.3, 94.4)**	**86.5**	**(85.7, 87.3)**	**84.8**	**(84.0, 85.6)**

Figure 3 **Employer satisfaction with graduate attributes and overall satisfaction**



There appears to be greater variation in employer satisfaction with collaborative and employability skills

Conversely, Society and Culture graduates rated below average for overall satisfaction but rated at or above average for employer satisfaction with four of the five other graduate attributes. There appears to be greater variation in employer satisfaction with collaborative and employability skills, varying by 7 percentage points across different fields of education in each case. On the other hand, there appears less variation in employer satisfaction with foundation and technical skills, varying by around 4 and 5 percentage points respectively across graduates from different fields of education.

Employer satisfaction with graduates from universities and non-university higher education institutions is broadly similar and not significantly different for any graduate attribute.

Supervisors expressed significantly higher levels of overall satisfaction with graduates that studied internally, 86 per cent, in comparison with graduates that studied externally, 82 per cent, as shown by Table 4. Supervisors also rated internal graduates' collaborative skills more highly than those of external graduates, 91 per cent in comparison with 82 per cent. This difference

may be related to similar issues identified in the Student Experience Survey where students studying externally rated their engagement in learning activities, which involve collaboration with other students, lower than did internal students.

Employers appear significantly less satisfied with postgraduate coursework graduates, 83 per cent than with undergraduates, 86 per cent and postgraduate research graduates, 90 per cent, as Employer satisfaction with graduates from universities and non-university higher education institutions is broadly similar and not significantly different for any graduate attribute.

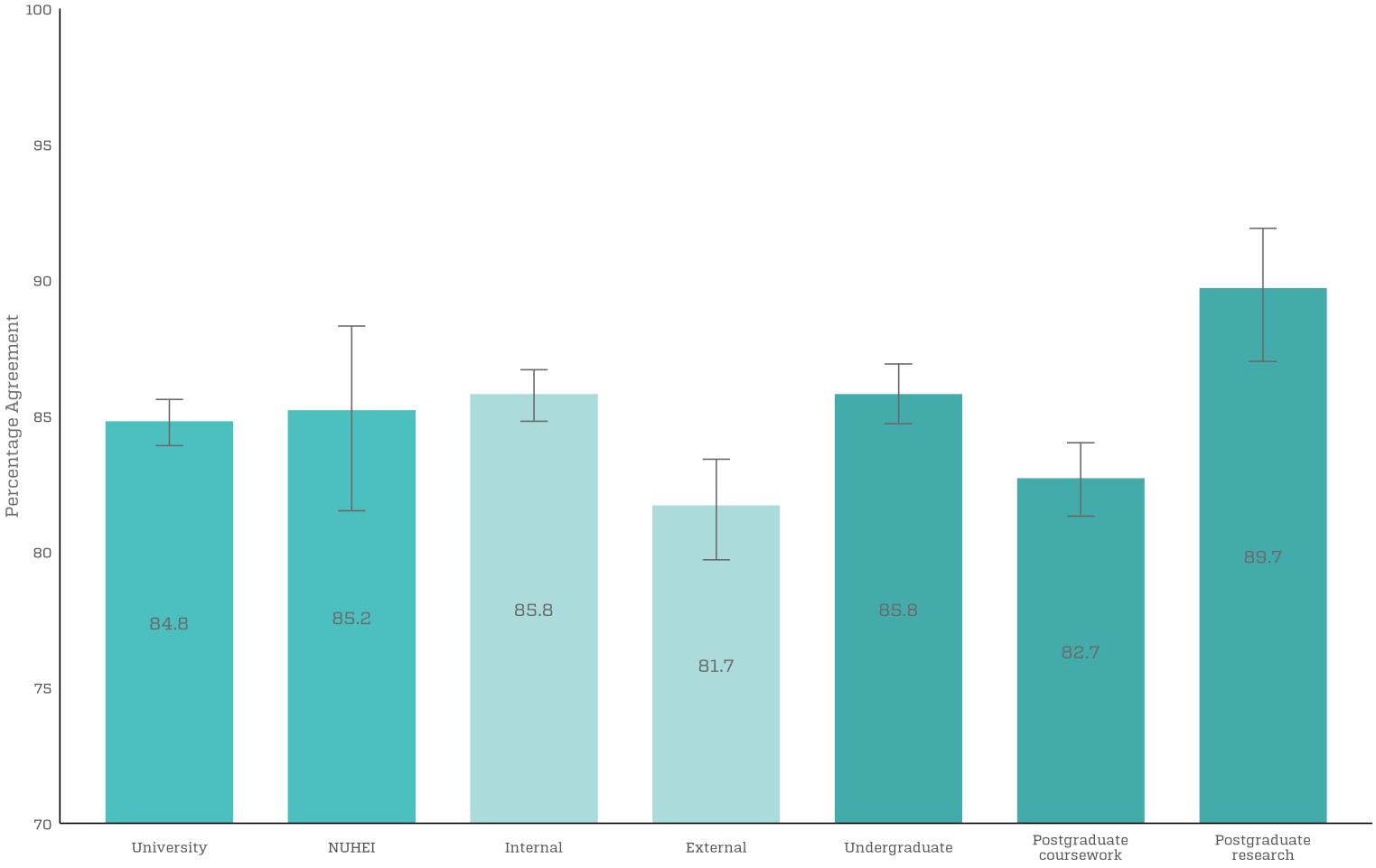
Supervisors expressed significantly higher levels of overall satisfaction with graduates that studied internally, 86 per cent, in comparison with graduates that studied externally, 82 per cent, as shown by Table 4. Supervisors also rated internal graduates' collaborative skills more highly than those of external graduates, 91 per cent in comparison with 82 per cent. This difference may be related to similar issues identified in the Student Experience Survey where students studying externally rated their engagement in learning activities, which involve collaboration with other students, lower than did internal students.

Employers appear significantly less satisfied with postgraduate coursework graduates, 83 per cent than with undergraduates, 86 per cent and postgraduate research graduates, 90 per cent, as shown by Table 4. Supervisors rated postgraduate coursework graduates significantly lower than undergraduates in terms of their collaborative and technical skills. This difference is more pronounced around collaborative skills where employers rated postgraduate coursework graduates at 85 per cent compared with 92 per cent for undergraduates. This may be attributed to a high proportion of postgraduate coursework graduates studying externally and so not engaging as much in student centred collaborative learning activities. Similarly, employers rated undergraduates significantly lower than postgraduate research graduates on most graduate attributes with the exception of collaborative skills.

Table 4 **Employer satisfaction by type of institution and course characteristics, 2018 (%)**

		Foundation		Adaptive		Collaborative		Technical		Employability		Overall satisfaction	
		%	CI	%	CI	%	CI	%	CI	%	CI	%	CI
Type of institution	University	93.6	(93.0, 94.1)	90.0	(89.3, 90.7)	88.8	(88.1, 89.6)	93.9	(93.3, 94.4)	86.6	(85.8, 87.4)	84.8	(83.9, 85.6)
	NUHEI	92.6	(89.7, 94.8)	88.6	(85.2, 91.3)	86.1	(82.5, 89.1)	93.2	(90.3, 95.2)	84.6	(80.8, 87.8)	85.2	(81.5, 88.3)
Mode	Internal	93.9	(93.2, 94.5)	89.6	(88.8, 90.4)	90.6	(89.8, 91.3)	94.3	(93.6, 94.8)	87.0	(86.0, 87.8)	85.8	(84.8, 86.7)
	External	92.3	(90.9, 93.5)	90.8	(89.3, 92.1)	82.1	(80.2, 83.9)	92.4	(91.0, 93.6)	84.9	(83.1, 86.6)	81.7	(79.7, 83.4)
Course level	Undergraduate	93.9	(93.0, 94.6)	88.9	(87.8, 89.9)	91.5	(90.6, 92.4)	94.2	(93.4, 95.0)	87.1	(86.0, 88.2)	85.8	(84.7, 86.9)
	Postgraduate coursework	92.4	(91.4, 93.3)	90.2	(89.1, 91.2)	84.8	(83.5, 86.0)	92.5	(91.5, 93.4)	85.0	(83.7, 86.2)	82.7	(81.3, 84.0)
	Postgraduate research	97.5	(95.9, 98.6)	95.1	(93.0, 96.6)	90.4	(87.7, 92.6)	98.3	(96.8, 99.1)	90.7	(88.0, 92.9)	89.7	(87.0, 91.9)
Total		**93.5**	**(92.9, 94.1)**	**89.9**	**(89.2, 90.6)**	**88.7**	**(87.9, 89.4)**	**93.8**	**(93.3, 94.4)**	**86.5**	**(85.7, 87.3)**	**84.8**	**(84.0, 85.6)**

Figure 4 **Overall satisfaction by type of institution and course characteristics, 2018 (%)**



As occurred in 2017, employers appear equally satisfied with male and female graduates in terms of overall satisfaction and all other graduate attributes, as shown by Table 5.

Employers generally rated most skills of younger graduates higher than those of older graduates aged over 30 years. However, the only significant difference occurred where employers rated younger graduates' collaborative skills at 91 per cent compared with 85 per cent for older graduates.

Similarly, employers rated graduates from a non-English speaking background more highly than those of graduates from an English speaking background in terms of overall satisfaction and all other graduate attributes. However, the only significant difference occurred where employers rated the collaborative skills of graduates from a non-English speaking background at 93 per cent compared with 88 per cent for graduates from an English speaking background.

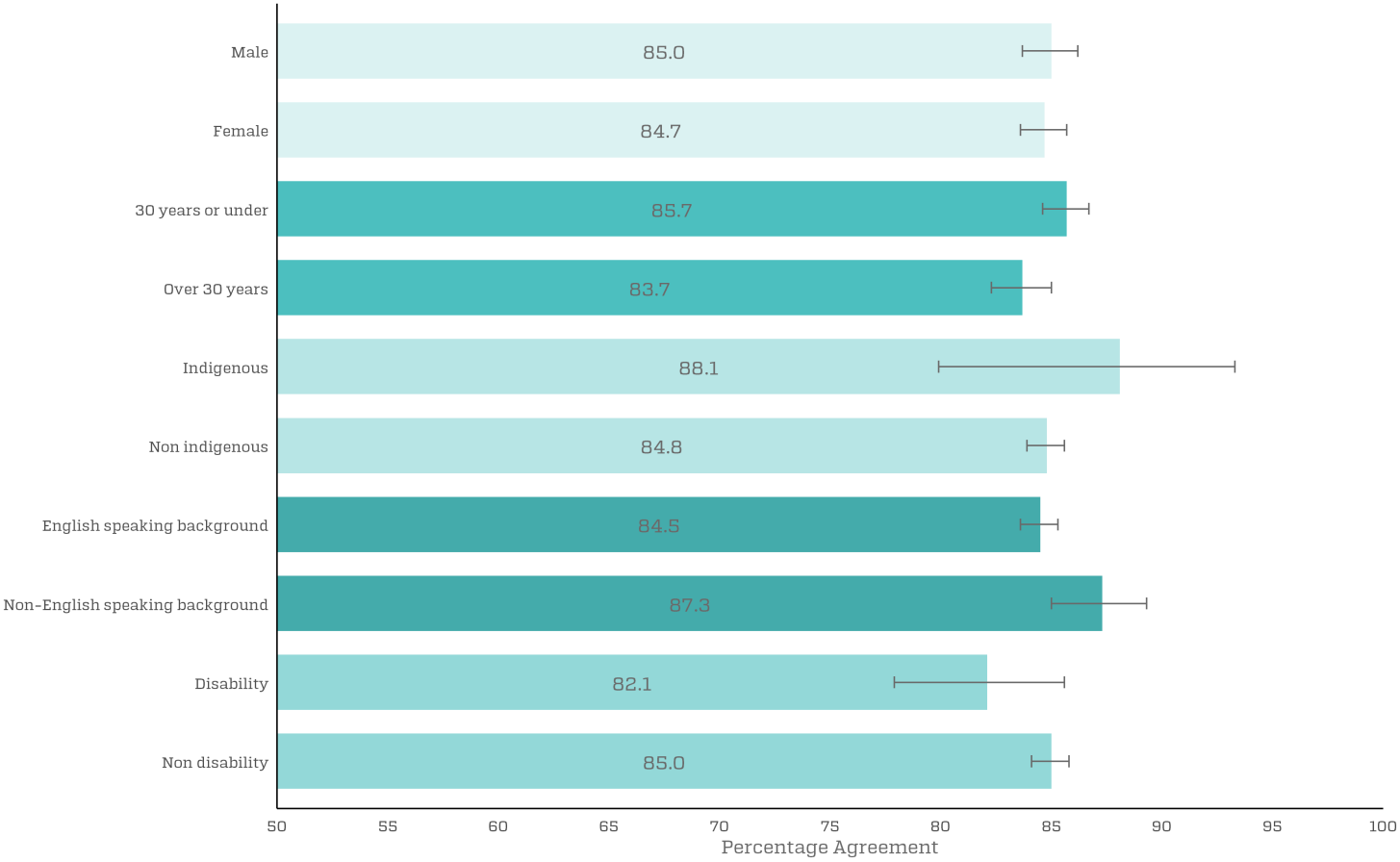
Differences in employer ratings for Indigenous and non-Indigenous graduates are not significant and should be treated with caution due to the relatively small numbers of responses from employers of Indigenous graduates. This is similarly the case with employers of graduates with a reported disability.

Employers reported higher overall satisfaction with graduates working in Professional occupations, 87 per cent. This is consistent with higher education qualifications being more relevant for working in those occupations, as shown later when discussing graduate and employer views of skills relevance and utilisation. In general, employers rated the collaborative skills of graduates employed in managerial and professional roles lower than those in other occupational categories, but these differences were not significant except for the 'other' category which attracted a very high rating of 93 per cent.

Table 5 **Employer satisfaction by demographic characteristics, 2018 (%)**

		Foundation		Adaptive		Collaborative		Technical		Employability		Overall satisfaction	
		%	CI	%	CI	%	CI	%	CI	%	CI	%	CI
Gender	Male	93.6	(92.7, 94.4)	89.7	(88.6, 90.7)	89.1	(87.9, 90.1)	94.2	(93.3, 95.0)	86.6	(85.4, 87.8)	85.0	(83.7, 86.2)
	Female	93.4	(92.7, 94.2)	90.0	(89.1, 90.9)	88.4	(87.4, 89.3)	93.6	(92.8, 94.3)	86.4	(85.3, 87.4)	84.7	(83.6, 85.7)
Age	30 years or under	93.8	(93.0, 94.5)	89.4	(88.4, 90.3)	91.4	(90.5, 92.2)	94.4	(93.6, 95.0)	87.5	(86.5, 88.5)	85.7	(84.6, 86.7)
	Over 30 years	93.2	(92.2, 94.0)	90.6	(89.5, 91.6)	84.8	(83.5, 86.1)	93.1	(92.2, 94.0)	85.1	(83.8, 86.4)	83.7	(82.3, 85.0)
Indigenous	Indigenous	95.5	(88.8, 98.5)	84.8	(76.1, 90.8)	87.9	(79.6, 93.2)	92.5	(85.2, 96.6)	92.4	(85.0, 96.5)	88.1	(79.9, 93.3)
	Not Indigenous	93.5	(92.9, 94.1)	90.0	(89.3, 90.7)	88.7	(87.9, 89.4)	93.9	(93.3, 94.4)	86.4	(85.6, 87.2)	84.8	(83.9, 85.6)
Home language	English	93.4	(92.8, 94.0)	89.9	(89.1, 90.6)	88.1	(87.2, 88.8)	93.7	(93.1, 94.3)	86.3	(85.4, 87.1)	84.5	(83.6, 85.3)
	Other than English	94.4	(92.7, 95.7)	90.4	(88.3, 92.1)	92.9	(91.1, 94.4)	94.8	(93.1, 96.0)	87.9	(85.6, 89.9)	87.3	(85.0, 89.3)
Disability	Reported disability	93.6	(90.6, 95.7)	89.5	(86.0, 92.2)	88.7	(85.1, 91.6)	94.6	(91.8, 96.5)	86.8	(83.0, 89.9)	82.1	(77.9, 85.6)
	No disability	93.5	(92.9, 94.1)	89.9	(89.2, 90.6)	88.7	(87.9, 89.4)	93.8	(93.2, 94.3)	86.5	(85.6, 87.3)	85.0	(84.1, 85.8)
Total		**93.5**	**(92.9, 94.1)**	**89.9**	**(89.2, 90.6)**	**88.7**	**(87.9, 89.4)**	**93.8**	**(93.3, 94.4)**	**86.5**	**(85.7, 87.3)**	**84.8**	**(84.0, 85.6)**

Figure 5 **Overall satisfaction by demographic group, 2018 (%)**



Although employers' overall satisfaction with graduates employed full-time, 86 per cent, was higher than with graduates who worked part-time, 83 per cent, this difference was not significant, as shown by Table 6. Employers' overall satisfaction with graduates who had been working with them for between three months and one year was higher, 86 per cent, than graduates who had been working with them for less than three months or for one year or more, both with 84 per cent and 83 per cent respectively. However, only the difference between graduates employed for three months to less than one year and those employed for one year and over was significant.

Figure 6 **Overall satisfaction by occupation, 2018 (%)**

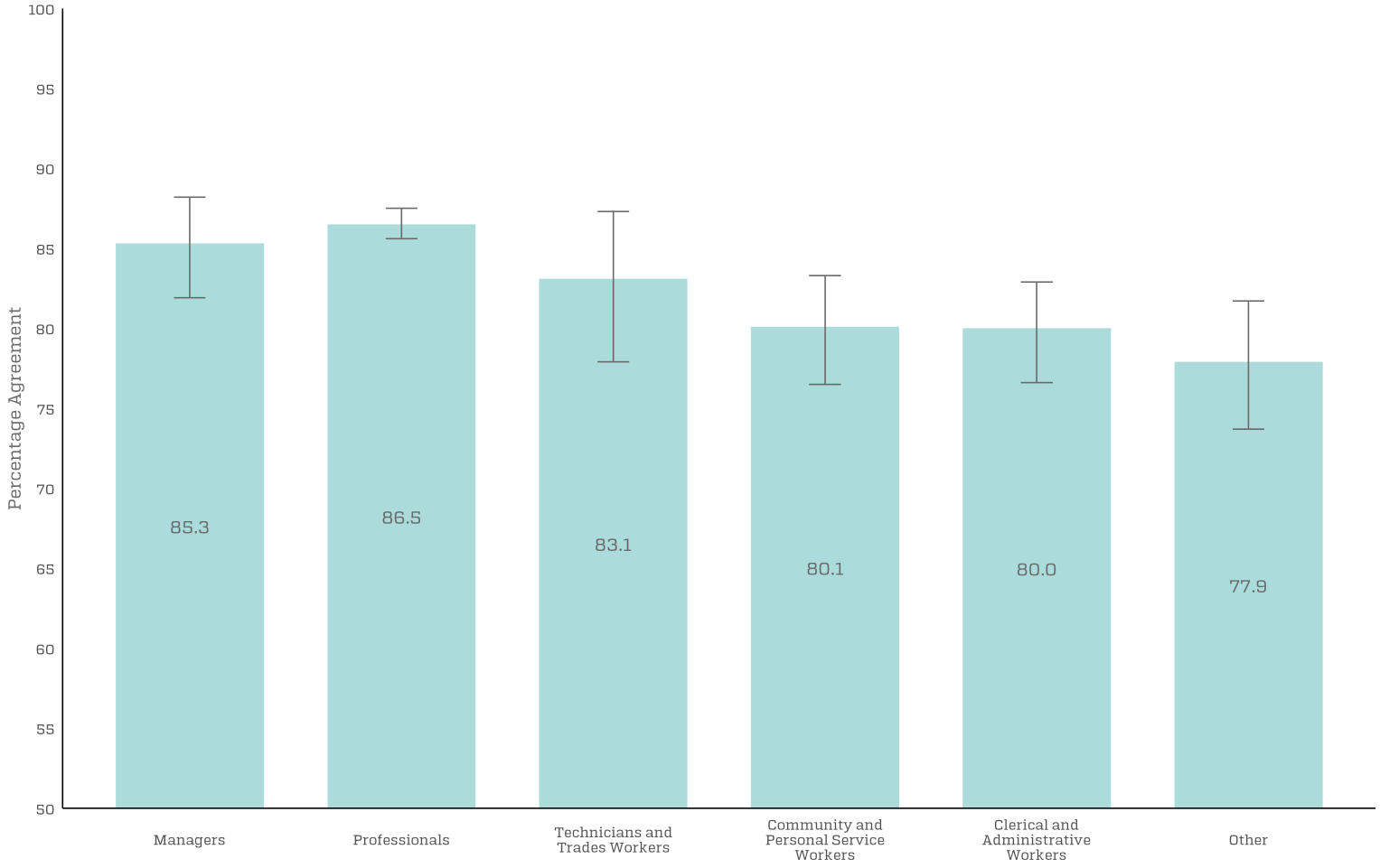
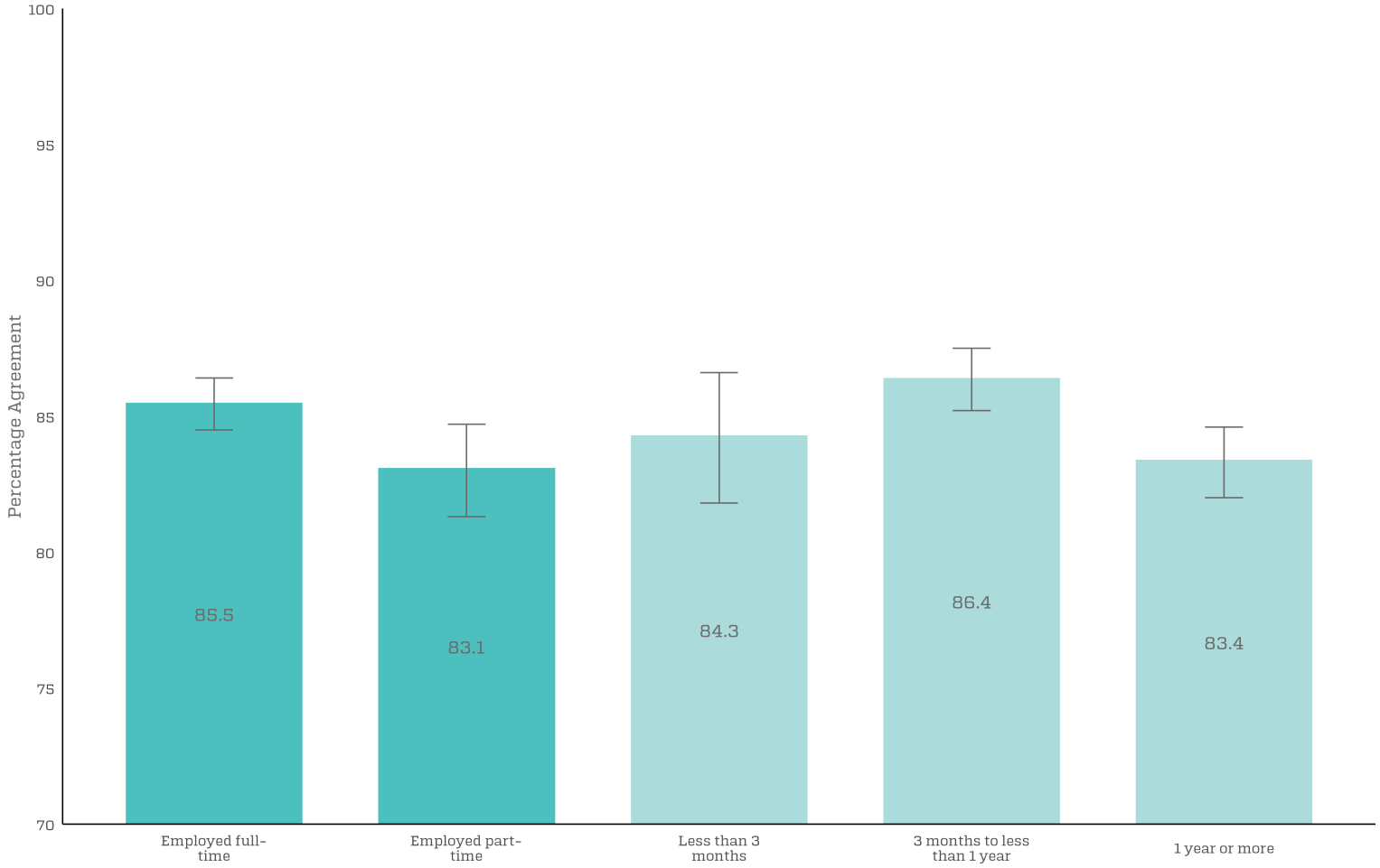


Table 6 **Employer satisfaction by labour market characteristics, 2018 (%)**

		Foundation		Adaptive		Collaborative		Technical		Employability		Overall satisfaction	
		%	CI	%	CI	%	CI	%	CI	%	CI	%	CI
Occupation	Managers	94.4	(92.0, 96.2)	91.8	(89.0, 93.9)	86.1	(82.7, 88.9)	92.3	(89.5, 94.4)	89.7	(86.6, 92.2)	85.3	(81.9, 88.2)
	Professionals	93.2	(92.5, 93.9)	89.7	(88.8, 90.5)	87.9	(86.9, 88.8)	94.0	(93.3, 94.6)	85.2	(84.1, 86.1)	86.5	(85.6, 87.5)
	Technicians and trades workers	94.2	(90.5, 96.6)	88.8	(84.2, 92.3)	92.5	(88.4, 95.2)	95.7	(92.2, 97.8)	88.7	(83.8, 92.2)	83.1	(77.9, 87.3)
	Community and personal service workers	92.9	(90.4, 94.8)	91.6	(88.9, 93.6)	90.3	(87.5, 92.5)	93.8	(91.4, 95.6)	88.8	(85.8, 91.2)	80.1	(76.5, 83.3)
	Clerical and administrative workers	94.7	(92.6, 96.2)	88.9	(86.2, 91.2)	90.6	(88.0, 92.6)	93.8	(91.6, 95.5)	89.5	(86.8, 91.8)	80.0	(76.6, 82.9)
	Other workers	94.4	(91.7, 96.3)	90.2	(86.8, 92.8)	93.2	(90.4, 95.2)	92.3	(89.1, 94.6)	88.7	(85.2, 91.5)	77.9	(73.7, 81.7)
Employment status	Full-time	93.7	(93.0, 94.3)	89.7	(88.8, 90.5)	88.2	(87.3, 89.0)	94.3	(93.7, 94.9)	86.2	(85.3, 87.1)	85.5	(84.5, 86.4)
	Part-time	93.1	(91.8, 94.1)	90.6	(89.2, 91.9)	90.2	(88.8, 91.4)	92.4	(91.1, 93.5)	87.3	(85.7, 88.8)	83.1	(81.3, 84.7)
Duration of job with current employer	Less than 3 months	91.9	(89.9, 93.5)	86.5	(84.0, 88.6)	88.7	(86.4, 90.6)	92.8	(90.9, 94.4)	86.6	(84.1, 88.7)	84.3	(81.8, 86.6)
	3 months to < 1 year	94.1	(93.3, 94.9)	89.0	(87.9, 90.0)	90.6	(89.5, 91.5)	94.8	(94.0, 95.5)	86.2	(85.0, 87.4)	86.4	(85.2, 87.5)
	1 year or more	93.4	(92.5, 94.2)	92.0	(90.9, 92.9)	86.7	(85.5, 87.9)	93.2	(92.2, 94.0)	86.9	(85.6, 88.0)	83.4	(82.0, 84.6)
Total		**93.5**	**(92.9, 94.1)**	**89.9**	**(89.2, 90.6)**	**88.7**	**(87.9, 89.4)**	**93.8**	**(93.3, 94.4)**	**86.5**	**(85.7, 87.3)**	**84.8**	**(84.0, 85.6)**

Figure 7 **Overall satisfaction by employment characteristics, 2018 (%)**



2.2 Employer satisfaction by institution

This report combines results from the 2016, 2017 and 2018 Employer Satisfaction Surveys to publish results for Table A and B universities at institution level as shown in Table 7. This is consistent with the approach utilised on the QILT website where results are pooled across surveys to increase the number of responses and confidence intervals are published to improve the robustness and validity of the data. The number of employer responses in the 2016 to 2018 surveys across institutions is shown in Appendix 3. There are over 12,240 employer responses across universities, ranging from over 650 responses for Deakin University down to 26 responses for Torrens University. The QILT reports and website do not publish results where there are fewer than 25 survey responses. For this reason, results for individual non-university higher education institution (NUHEIs) are not shown as the number of employer responses is generally too small.

Table 7 demonstrates that employer satisfaction is consistently high across Australia's Table A and B universities, with overall satisfaction ranging from 91 per cent to 77 per cent across universities. In general, employer satisfaction appears broadly similar across most institutions. For example, employer satisfaction with graduates from Bond University was rated highest at 91 per cent. However, because of the small number of employer responses for Bond University graduates, this result was not significantly different from any other university. Nevertheless, the publication of confidence intervals demonstrates there is some differentiation in employer satisfaction among some institutions. For example, 88 per cent of direct supervisors rated graduates from the University of Queensland favourably which was significantly higher than employer satisfaction at six other universities.

The results shown in Table 7 demonstrate the ESS has the capacity to discriminate across universities. Other employer surveys of Australian higher education graduates are much smaller in scale, lack transparency in methodology and rely on the views of persons who may have had little or no direct contact with graduates. For example, the QS Graduate Employability Rankings are based on the views of approximately 800 employers while the Australian Industry Group (AIG) – Workforce Development Needs Survey Report 2018 collects the views of 300 companies about higher education, vocational education and training and, school graduates.

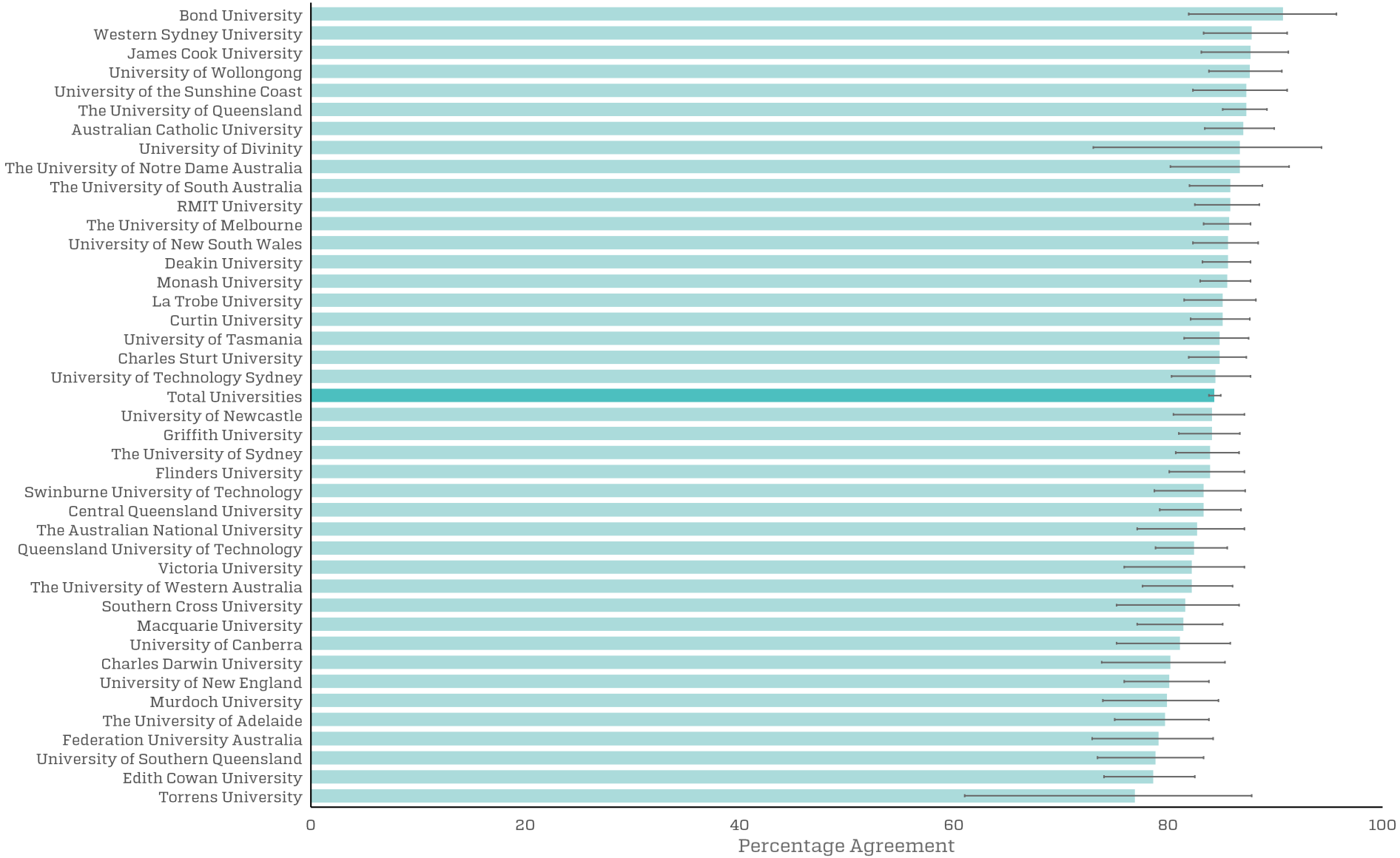
Employer satisfaction is consistently high across Australia's Table A and Table B universities ranging from 91% to 77%

Table 7 **Employer satisfaction by institution (universities only), 2016 - 2018**

	Foundation		Adaptive		Collaborative		Technical		Employability		Overall satisfaction	
	%	CI	%	CI	%	CI	%	CI	%	CI	%	CI
Australian Catholic University	92.8	(89.8, 94.9)	88.8	(85.4, 91.5)	84.8	(81.0, 88.0)	91.5	(88.4, 93.9)	82.8	(78.8, 86.2)	87.0	(83.4, 89.9)
Bond University	92.5	(83.9, 96.9)	88.2	(78.6, 94.0)	90.2	(80.9, 95.4)	94.2	(86.0, 98.1)	88.2	(78.6, 94.0)	90.7	(81.9, 95.7)
Central Queensland University	92.0	(88.7, 94.3)	88.4	(84.7, 91.3)	86.5	(82.7, 89.7)	93.4	(90.4, 95.6)	84.2	(80.0, 87.6)	83.3	(79.2, 86.8)
Charles Darwin University	88.4	(82.9, 92.3)	86.8	(81.1, 91.0)	84.8	(79.0, 89.3)	92.4	(87.5, 95.5)	82.0	(75.8, 87.0)	80.2	(73.8, 85.3)
Charles Sturt University	93.9	(91.9, 95.5)	92.0	(89.7, 93.8)	85.9	(83.1, 88.3)	93.6	(91.5, 95.2)	87.1	(84.4, 89.4)	84.8	(81.9, 87.3)
Curtin University	91.9	(89.6, 93.8)	88.3	(85.6, 90.6)	86.9	(84.0, 89.3)	92.0	(89.6, 93.9)	83.7	(80.6, 86.4)	85.1	(82.1, 87.6)
Deakin University	93.4	(91.7, 94.9)	92.0	(90.0, 93.6)	87.2	(84.9, 89.2)	94.2	(92.5, 95.6)	87.5	(85.1, 89.5)	85.6	(83.2, 87.7)
Edith Cowan University	94.4	(91.5, 96.4)	90.8	(87.4, 93.4)	89.6	(86.0, 92.4)	94.8	(92.0, 96.7)	85.1	(81.0, 88.5)	78.6	(74.0, 82.5)
Federation University Australia	94.0	(89.5, 96.7)	92.3	(87.5, 95.4)	85.6	(79.8, 90.0)	93.2	(88.5, 96.1)	91.0	(86.1, 94.4)	79.1	(72.9, 84.2)
Flinders University	92.4	(89.5, 94.6)	88.9	(85.6, 91.6)	87.0	(83.5, 89.8)	92.4	(89.4, 94.5)	85.1	(81.4, 88.2)	83.9	(80.1, 87.1)
Griffith University	93.3	(91.1, 95.0)	89.7	(87.1, 91.9)	85.5	(82.5, 88.1)	93.1	(90.8, 94.9)	84.7	(81.6, 87.4)	84.1	(81.0, 86.7)
James Cook University	94.6	(91.0, 96.8)	90.7	(86.4, 93.7)	91.2	(87.1, 94.1)	96.7	(93.6, 98.4)	88.7	(84.1, 92.1)	87.7	(83.1, 91.2)
La Trobe University	94.4	(91.8, 96.2)	91.3	(88.2, 93.6)	86.9	(83.3, 89.8)	94.2	(91.5, 96.1)	85.5	(81.7, 88.6)	85.1	(81.5, 88.2)
Macquarie University	95.7	(93.0, 97.4)	89.0	(85.3, 91.9)	84.9	(80.8, 88.2)	94.7	(91.8, 96.6)	86.9	(82.9, 90.1)	81.4	(77.1, 85.1)
Monash University	94.6	(92.9, 95.9)	91.0	(88.9, 92.7)	87.7	(85.3, 89.7)	94.0	(92.2, 95.4)	86.3	(83.8, 88.5)	85.5	(83.0, 87.7)
Murdoch University	95.3	(91.4, 97.5)	88.0	(82.8, 91.9)	85.6	(80.1, 89.8)	95.0	(91.0, 97.4)	83.5	(77.6, 88.0)	79.9	(73.9, 84.7)
Queensland University of Technology	93.3	(90.7, 95.2)	89.8	(86.8, 92.2)	86.0	(82.6, 88.8)	91.0	(88.1, 93.3)	85.6	(82.1, 88.5)	82.4	(78.8, 85.5)
RMIT University	92.6	(89.9, 94.5)	89.0	(86.0, 91.4)	90.6	(87.7, 92.8)	94.4	(92.0, 96.1)	87.5	(84.3, 90.2)	85.8	(82.5, 88.5)
Southern Cross University	90.7	(85.5, 94.2)	88.9	(83.4, 92.8)	87.0	(81.4, 91.2)	90.6	(85.3, 94.1)	85.0	(79.1, 89.6)	81.6	(75.2, 86.6)
Swinburne University of Technology	92.5	(89.0, 95.0)	92.3	(88.7, 94.9)	90.0	(86.0, 92.9)	94.3	(90.9, 96.4)	90.1	(86.1, 93.1)	83.3	(78.7, 87.2)
The Australian National University	93.7	(89.6, 96.3)	89.3	(84.3, 92.8)	84.3	(78.9, 88.6)	92.7	(88.3, 95.5)	83.9	(78.3, 88.3)	82.7	(77.1, 87.1)
The University of Adelaide	94.7	(91.6, 96.7)	92.4	(89.0, 94.9)	89.7	(85.9, 92.6)	95.6	(92.6, 97.4)	87.9	(83.7, 91.1)	79.7	(75.0, 83.8)
The University of Melbourne	93.4	(91.7, 94.8)	89.5	(87.3, 91.3)	85.2	(82.8, 87.3)	92.6	(90.8, 94.2)	84.8	(82.3, 87.0)	85.7	(83.3, 87.7)

	Foundation		Adaptive		Collaborative		Technical		Employability		Overall satisfaction	
	%	CI	%	CI	%	CI	%	CI	%	CI	%	CI
The University of Notre Dame Australia	93.6	(88.4, 96.6)	93.5	(88.2, 96.6)	87.9	(81.6, 92.2)	93.4	(88.1, 96.5)	89.7	(83.8, 93.7)	86.7	(80.2, 91.3)
The University of Queensland	94.0	(92.3, 95.3)	89.6	(87.5, 91.3)	87.0	(84.8, 89.0)	94.9	(93.4, 96.1)	84.0	(81.6, 86.2)	87.3	(85.1, 89.2)
The University of South Australia	94.4	(91.7, 96.3)	90.0	(86.6, 92.6)	87.1	(83.5, 90.1)	94.6	(91.8, 96.5)	88.4	(84.8, 91.2)	85.8	(82.0, 88.8)
The University of Sydney	91.7	(89.2, 93.7)	86.7	(83.7, 89.2)	89.0	(86.2, 91.3)	93.9	(91.7, 95.6)	82.5	(79.2, 85.4)	83.9	(80.7, 86.6)
The University of Western Australia	96.0	(93.2, 97.7)	91.4	(87.7, 94.1)	88.5	(84.5, 91.6)	92.2	(88.6, 94.7)	85.2	(80.8, 88.7)	82.2	(77.6, 86.0)
Torrens University	92.0	(77.7, 98.1)	92.0	(77.7, 98.1)	88.5	(73.8, 95.8)	88.5	(73.8, 95.8)	88.0	(72.9, 95.7)	76.9	(61.0, 87.8)
University of Canberra	89.7	(84.8, 93.2)	83.6	(77.9, 88.0)	85.0	(79.5, 89.3)	88.9	(83.8, 92.6)	82.0	(76.0, 86.8)	81.1	(75.2, 85.8)
University of Divinity	93.5	(81.6, 98.5)	93.1	(80.4, 98.4)	80.6	(66.5, 89.9)	86.7	(73.0, 94.3)	77.4	(63.0, 87.5)	86.7	(73.0, 94.3)
University of New England	91.6	(88.4, 94.0)	89.6	(86.1, 92.3)	81.0	(76.7, 84.6)	92.3	(89.1, 94.6)	83.2	(79.1, 86.7)	80.1	(75.9, 83.8)
University of New South Wales	91.8	(89.0, 93.9)	90.5	(87.6, 92.8)	86.1	(82.8, 88.9)	90.9	(88.0, 93.2)	84.6	(81.0, 87.5)	85.6	(82.3, 88.4)
University of Newcastle	93.5	(90.9, 95.4)	91.3	(88.3, 93.5)	86.8	(83.5, 89.6)	95.2	(92.9, 96.8)	85.9	(82.5, 88.8)	84.1	(80.5, 87.1)
University of Southern Queensland	92.0	(88.0, 94.7)	83.3	(78.3, 87.4)	80.9	(75.6, 85.3)	94.4	(90.7, 96.7)	84.1	(79.0, 88.1)	78.8	(73.4, 83.3)
University of Tasmania	89.7	(86.9, 92.0)	87.1	(84.0, 89.7)	83.7	(80.4, 86.6)	89.2	(86.3, 91.6)	81.8	(78.2, 84.9)	84.8	(81.5, 87.5)
University of Technology Sydney	93.6	(90.6, 95.7)	89.7	(86.2, 92.4)	89.1	(85.5, 92.0)	94.6	(91.8, 96.5)	86.3	(82.3, 89.5)	84.4	(80.3, 87.7)
University of the Sunshine Coast	95.5	(91.8, 97.6)	93.5	(89.3, 96.1)	91.6	(87.1, 94.6)	95.4	(91.7, 97.6)	90.6	(85.9, 93.9)	87.3	(82.3, 91.1)
University of Wollongong	92.1	(88.8, 94.5)	86.1	(82.0, 89.3)	90.3	(86.8, 93.0)	93.5	(90.3, 95.7)	84.7	(80.5, 88.2)	87.6	(83.8, 90.6)
Victoria University	90.3	(85.2, 93.8)	88.5	(83.1, 92.4)	90.3	(85.2, 93.8)	93.9	(89.5, 96.7)	87.8	(82.2, 91.8)	82.2	(75.9, 87.1)
Western Sydney University	94.5	(91.1, 96.7)	89.9	(85.8, 92.9)	92.3	(88.6, 95.0)	95.3	(92.1, 97.3)	86.4	(81.8, 90.0)	87.8	(83.3, 91.1)
Total Universities	**93.1**	**(92.8, 93.5)**	**89.7**	**(89.2, 90.2)**	**87.0**	**(86.4, 87.5)**	**93.4**	**(93.0, 93.8)**	**85.5**	**(84.9, 86.0)**	**84.3**	**(83.8, 84.9)**

Figure 8 **Overall satisfaction by institution (university only), 2016 - 2018 (%)**



2.3 Skills relevance and utilisation

With the rapid expansion in student enrolments in recent years, concerns have been expressed that this may be leading to an oversupply of higher education graduates. This oversupply can manifest itself in the 'over-education' of graduates where they may not be fully utilising their skills or qualifications in their present position. There is a considerable literature on qualification related underemployment. The Employer Satisfaction Survey provides valuable evidence on employers' perceptions on the relevance and utilisation of higher education graduates' skills and qualifications. It remains important to monitor these assessments over time.

Overall, graduates tend to view their qualification as less important for their current employment than do their supervisors, as shown by Table 8. Over half of the graduates, 57 per cent, considered their qualification to be 'very important' or 'important' to their current job. Just over one in ten graduates, 12 per cent, felt that it was 'not at all important'. On the other hand, around 64 per cent of supervisors indicated that the qualification was 'very important' or 'important' and only 7 per cent indicated that it was 'not at all important' for the graduate's current job. Given that a little over half of the graduates had been employed for less than one year after completing their qualification, their relative lack of work experience may explain why they did not fully comprehend the extent to which their qualification is important for their job.

Health and Education qualifications were rated by graduates and supervisors as being significantly more important for their current position than most other fields of education. This is consistent with these qualifications being a requirement for employment in many instances. For example, 74 per cent of graduates and 79 per cent of supervisors thought that Health qualifications were important for current employment, as shown by Table 9. Similarly, 73 per cent of graduates and 78 per cent of supervisors thought that Education qualifications were important for current employment. Supervisors of Information Technology, Creative Arts and Management and Commerce graduates were least likely to think that the qualification was important for current employment at 45 per cent, 46 per cent and 49 per cent respectively. The largest discrepancy between the views of graduates and employers was in Natural and Physical Sciences where 47 per cent of graduates rated their qualification as being important compared with 62 per cent of supervisors, a difference of 15 percentage points. Other areas where supervisors rated the qualification substantially higher than graduates was in Agriculture and Environmental Sciences and, Management and Commerce with a gap of over 10 percentage points. Interestingly Information Technology graduates were the only group to consider their qualification more important to their current work than their supervisors, 48 per cent compared with 45 per cent.

Graduates and supervisors of those working in professional occupations were most likely to state that the qualification was important for the job at 68 per cent and 75 per cent respectively. This is consistent with the ABS classification of occupations where managerial and professional jobs are defined at Skill Level 1 being commensurate with qualifications at bachelor level or higher. Graduates and supervisors working in lower skill level jobs, that is, technicians and trade workers and below, were unsurprisingly much less likely to state that the qualification was important for the job.

Graduates and their supervisors were also asked to indicate the extent to which the recent qualification prepared the graduate for their job. A high proportion of graduates and supervisors, 88 per cent and 92 per cent respectively, thought the qualification

88%

graduates indicating their qualification was important for their current job

92%

supervisors indicating the graduate's qualification was important for their current job

prepared the graduate for the job, as shown in Table 11. The proportion of supervisors who thought the qualification prepared the graduate for the job has remained consistently high since the employer survey was first conducted in 2016, hovering between 92 and 93 per cent in rounded terms. Overall, there appears to be a strong relationship between skills and knowledge acquired by higher education graduates and the requirements of their jobs after graduation. This result strongly affirms the value of higher education qualifications in terms of preparation for work.

Table 8 **Importance of qualification for current employment, 2018**

	Graduates		Supervisors	
	%	CI	%	CI
Very important	38.2	(37.1, 39.3)	42.4	(41.2, 43.5)
Important	18.3	(17.5, 19.2)	21.5	(20.6, 22.4)
Fairly important	17.2	(16.3, 18.0)	17.0	(16.2, 17.9)
Not that important	14.7	(13.9, 15.5)	12.3	(11.6, 13.1)
Not at all important	11.6	(10.9, 12.4)	6.9	(6.3, 7.5)
Total	**100.0**		**100.0**	

Table 9 **Importance of qualification for current employment by broad field of education, 2018***

	Graduates		Supervisors	
	%	CI	%	CI
Natural and Physical Sciences	46.7	(42.8, 50.7)	61.5	(57.6, 65.3)
Information Technology	47.8	(42.1, 53.5)	45.3	(39.7, 51.1)
Engineering and Related Technologies	59.2	(54.9, 63.3)	67.7	(63.5, 71.5)
Architecture and Building	68.4	(60.9, 75.1)	68.4	(60.9, 75.1)
Agriculture and Environmental Studies	50.8	(43.3, 58.3)	61.0	(53.5, 68.1)
Health	74.2	(72.1, 76.2)	79.3	(77.3, 81.1)
Education	73.2	(70.5, 75.7)	77.9	(75.3, 80.2)
Management and Commerce	39.1	(36.5, 41.8)	49.4	(46.7, 52.1)
Society and Culture	47.5	(45.0, 50.1)	56.0	(53.5, 58.5)
Creative Arts	38.8	(33.9, 43.9)	45.5	(40.4, 50.6)
Total	**56.5**	**(55.4, 57.6)**	**63.8**	**(62.7, 64.9)**
Standard deviation (percentage points)	13.4		12.3	

*Refers to the percentage of graduates and supervisors rating the qualification as 'very important' or 'important' for current employment.

Table 10 **Importance of qualification for current employment, by occupation group, 2018***

	Graduates		Supervisors	
	%	CI	%	CI
Managers	42.9	(38.6, 47.3)	58.1	(53.7, 62.4)
Professionals	68.1	(66.8, 69.4)	75.0	(73.8, 76.2)
Technicians and trades workers	34.6	(29.1, 40.7)	48.0	(41.9, 54.2)
Community and personal service workers	36.8	(32.9, 40.8)	38.9	(35.0, 42.9)
Clerical and administrative workers	30.1	(26.7, 33.8)	39.5	(35.7, 43.3)
Other workers	18.2	(14.9, 22.0)	18.3	(15.0, 22.1)
Total	**56.5**	**(55.4, 57.6)**	**63.8**	**(62.7, 64.9)**
Standard Deviation	16.7		19.3	

*Refers to the percentage of graduates and supervisors rating the qualification as 'very important' or 'important' for current employment.

Taken in conjunction with the findings regarding the importance of the qualification, it seems to be the case that importance could be related to domain-specific skills or knowledge whereas preparedness is a broader concept, encapsulating generic skills and potentially basic employability. Alternatively, as almost half of graduates had been employed in their current position before they completed their qualification, it is understandable that a higher education qualification could be perceived as being less important while still preparing the graduate for employment by broadening or deepening existing skills and knowledge.

In general, graduates across all fields of education, with the exception of Architecture and Building, were less likely than their supervisors to indicate they felt their qualification prepared them for their current job, as shown by Table 12. Society and Culture, 83 per cent, and Natural and Physical Sciences and Creative Arts graduates, both 84 per cent, were least likely to state that their qualification prepared them for their job. Supervisors in each of these areas were more likely to state that the course had prepared the graduate well or very well for their current employment with Society and Culture supervisors rating preparedness almost 9 percentage points higher than graduates. Supervisors in Natural and Physical Sciences and Creative Arts also rated preparedness substantially higher than graduates by 7 and 6 percentage points respectively

It should also be noted there was less variation across fields of education among supervisors stating the qualification prepared the graduate for current employment, 3 percentage points, than among those stating the qualification was important for the job, 12 percentage points (see Table 9). This seems to support the previous observation that while higher education qualifications may not be 'important' in the sense they are 'mandatory' or 'required', they nevertheless prepare graduates for employment very well.

Table 13 shows that supervisors of graduates working in Professional occupations were most likely, at 95 per cent, to state that the qualification had prepared the graduate well or very well for current employment. The difference in ratings of preparedness by graduates and supervisors for graduates in Management,

Table 11 **Extent to which qualification prepared graduate for current employment, 2018**

	Graduates		Supervisors	
	%	CI	%	CI
Very well	44.7	(43.6, 45.9)	50.2	(49.0, 51.4)
Well	43.4	(42.3, 44.6)	41.8	(40.7, 43.0)
Not well	6.2	(5.7, 6.8)	4.1	(3.6, 4.5)
Not at all	5.6	(5.1, 6.2)	3.9	(3.5, 4.4)
Total	**100.0**		**100.0**	

Table 12 **Extent to which qualification prepared graduate well or very well for current employment, by broad field of education, 2018***

	Graduates		Supervisors	
	%	CI	%	CI
Natural and Physical Sciences	84.2	(80.9, 87.1)	91.0	(88.3, 93.1)
Information Technology	85.4	(80.8, 89.1)	91.6	(87.6, 94.4)
Engineering and Related Technologies	89.0	(85.9, 91.5)	92.3	(89.6, 94.3)
Architecture and Building	85.6	(79.2, 90.3)	84.5	(78.0, 89.4)
Agriculture and Environmental Studies	86.0	(79.5, 90.7)	90.8	(85.1, 94.5)
Health	92.5	(91.2, 93.7)	93.4	(92.1, 94.5)
Education	92.4	(90.7, 93.9)	95.2	(93.7, 96.4)
Management and Commerce	87.3	(85.3, 89.0)	91.3	(89.6, 92.8)
Society and Culture	82.8	(80.6, 84.7)	91.4	(89.8, 92.8)
Creative Arts	84.3	(80.0, 87.9)	90.3	(86.6, 93.1)
Food, Hospitality and Personal Services	0.0	0.0	0.0	0.0
Total	**88.1**	**(87.4, 88.9)**	**92.1**	**(91.4, 92.7)**
Standard deviation	3.4		2.7	

* n/a indicates suppression due to the number of responses being less than 25.

Professional and Technical and Trades occupations was quite low at around 2 to 4 percentage points, whereas differences for Community and Personal Service workers with 9 percentage points, and Clerical and Administrative workers and Other workers both with 11 percentage points seems to indicate that those employed in "lower" level positions were less confident in how well their course had prepared them for work compared with their immediate supervisors.

Supervisors were also offered the opportunity to provide feedback on the main ways that the qualification had prepared the graduate for employment, as shown by Table 14, and there were around 7,700 comments in eight themes. Overall, 38 per cent, of supervisors reported on the specific skills and knowledge that were relevant to the domain or area in which the graduate was currently working. A substantial number of comments were also made that expanded on the quantitative ratings of graduate attributes including Adaptive skills, 38 per cent, Employability and Enterprise skills 35 per cent, and Technical and Professional skills, 31 per cent and Foundation skills with 24 per cent. Positive feedback was also provided in relation to the Personal attributes of the graduate, 11 per cent, the specific attributes of the higher education institution or the course, 10 per cent and Teamwork and interpersonal skills, 10 per cent.

There were substantially fewer comments, around 2,500, in relation to ways in which the qualification could have better prepared the graduate for employment suggesting the majority of supervisors felt that the graduate had been well prepared for the workplace, as shown by Table 15. These observations are consistent with the generally very positive supervisor ratings of graduate preparation.

The greatest number of comments were made in relation Technical and professional skills, 40 per cent, Domain specific skills and knowledge, 23 per cent and Employability and enterprise skills 22 per cent. Supervisor feedback regarding how to better prepare graduates for employment also focused on institutional and course attributes that could have better prepared the graduate for employment with 13 per cent, Foundation skills 10 per cent and Adaptive skills, Teamwork and interpersonal skills and Personal attributes with 8 per cent, 5 per cent and 3 per cent respectively.

Table 13 **Extent to which qualification prepared graduate well or very well for current employment, by occupation, 2018 (%)**

	Graduates		Supervisors	
	%	CI	%	CI
Managers	89.7	(86.5, 92.2)	93.4	(90.7, 95.4)
Professionals	92.6	(91.8, 93.3)	94.8	(94.1, 95.4)
Technicians and trades workers	81.3	(75.6, 85.8)	84.8	(79.7, 88.9)
Community and personal service workers	78.9	(75.1, 82.2)	87.5	(84.3, 90.1)
Clerical and administrative workers	78.9	(75.4, 82.0)	89.4	(86.6, 91.7)
Other workers	59.8	(54.6, 64.7)	70.9	(66.1, 75.3)
Total	**88.1**	**(87.4, 88.9)**	**92.1**	**(91.4, 92.7)**
Standard Deviation	11.5		8.6	

Table 14 **Main ways that the qualification prepared the graduate for employment, 2018***

	%	CI
Domain specific skills and knowledge	38.4	(37.2, 39.7)
Adaptive skills	37.9	(36.7, 39.2)
Employability and enterprise skills	35.4	(34.1, 36.6)
Technical and professional skills	30.7	(29.5, 32.0)
Foundation skills	24.3	(23.2, 25.4)
Personal attributes	11.2	(10.4, 12.0)
Teamwork and interpersonal skills	9.6	(8.9, 10.5)
Institutional and course attributes	9.5	(8.7, 10.3)

*Does not add to 100 per cent. Supervisors were able to provide more than one comment.

Table 15 **Main ways that the qualification could have better prepared the graduate for employment, 2018***

	%	CI
Technical and professional skills	40.0	(38.2, 41.8)
Domain specific skills and knowledge	23.4	(21.9, 25.0)
Employability and enterprise skills	22.3	(20.8, 23.9)
Institutional and course attributes	12.7	(11.5, 14.0)
Foundation skills	9.5	(8.5, 10.7)
Adaptive skills	7.9	(7.0, 9.0)
Teamwork and interpersonal skills	4.7	(4.0, 5.6)
Personal attributes	3.4	(2.8, 4.1)

*Does not add to 100 per cent. Supervisors were able to provide more than one comment.

3 Methodology

3.1 Institutions and responses

The 2018 ESS was primarily conducted as a national online survey among 103 higher education institutions including all 41 Table A and B universities and 62 Non-University Higher Education Institutions (NUHEIs). The population frame for the ESS comprised 95,121 graduates, domestic and international, who responded in the 2018 GOS and indicated that they were employed. Of these, 10,216 employed graduates provided sufficient contact details to approach supervisors, yielding a graduate referral rate of 10.7 per cent which is an increase on the 9.3 per cent, in 2017 and 7.7 per cent in 2016. As in previous years, there remains a reluctance among graduates to pass on their supervisor contact details. Establishment of the QILT brand allied with efforts to promote the QILT surveys and especially the ESS among companies that are known employers of graduates may help to lift the supervisor referral rate over time. A total of 5,311 valid survey responses from direct supervisors were collected across 75 institutions and all study levels, representing a supervisor response rate of 52.0 per cent which is an increase from 48.2 per cent in 2017 and 44.5 per cent in 2016. Further information on survey methodology and institutional responses is included in Appendices 1 and 3.

Table 16 **Respondents by broad field of education, 2018***

	Employed graduates			Supervisors		
	n	%	CI	n	%	CI
Natural and Physical Sciences	6,982	7.3	(7.2, 7.5)	395	7.4	(6.9, 8.1)
Information Technology	3,680	3.9	(3.8, 4.0)	205	3.9	(3.4, 4.3)
Engineering and Related Technologies	5,674	6.0	(5.8, 6.1)	363	6.8	(6.3, 7.4)
Architecture and Building	2,093	2.2	(2.1, 2.3)	113	2.1	(1.8, 2.5)
Agriculture and Environmental Studies	1,513	1.6	(1.5, 1.7)	117	2.2	(1.9, 2.6)
Health	20,109	21.1	(20.9, 21.4)	1,243	23.4	(22.5, 24.4)
Education	10,062	10.6	(10.4, 10.7)	746	14.0	(13.3, 14.8)
Management and Commerce	19,044	20.0	(19.8, 20.2)	868	16.3	(15.5, 17.2)
Society and Culture	20,184	21.2	(21.0, 21.4)	1,012	19.1	(18.2, 20.0)
Creative Arts	5,755	6.1	(5.9, 6.2)	249	4.7	(4.2, 5.2)
Total	**95,121**	**100.0**		**5,311**	**100.0**	

*Total includes a small number of responses in Food, Hospitality and Personal Services. Note that total figures by broad field of education shown elsewhere in this report include Food, Hospitality and Personal Services.

3.2 Response bias

The tables that follow compare the course, demographic and labour market characteristics of employed graduate respondents to the GOS, with the characteristics of graduates whose supervisors responded to the ESS to detect possible bias in the ESS. That is, these tables identify the extent to which the ESS departs from being a representative survey of employers of recent graduates. Employed graduate respondents to the GOS were asked to provide contact details of their supervisors and as such represent the population frame for the ESS.

Comparison of employed graduates with supervisor responses by field of education shows that Education and Health graduates are overrepresented in the survey while Management and Commerce and Society and Culture are underrepresented in the ESS, as shown by Table 16. Table 17 suggests there is a slight overrepresentation of non-university responses to the survey. While employers of NUHEI graduates report lower satisfaction, since they represent a small fraction of responses, this is expected to lead to only a very small downward bias in reported overall satisfaction.

From Table 3, supervisors of Education and Health recorded higher than average ratings while supervisors of Management and Commerce and Society and Culture graduates reported lower than average satisfaction ratings. Therefore, the bias in supervisor responses by field of education, all other things equal, raises reported overall satisfaction.

There is a disproportionately higher level of response from supervisors of external graduates in the ESS by 4.7 percentage points as seen in Table 17. Supervisors of external graduates report lower overall satisfaction (see Table 4) so that overrepresentation of the supervisors of external graduates would lead to a downward bias in reported overall satisfaction in the 2018 ESS

Table 17 **Respondents by type of institution and course characteristics, 2018**

		Employed graduates			Supervisors		
		n	%	CI	n	%	CI
Type of institution	University	89,539	94.1	(94.0, 94.3)	4,993	94.0	(93.5, 94.5)
	NUHEI	5,582	5.9	(5.7, 6.0)	318	6.0	(5.5, 6.5)
Mode	Internal	77,794	81.8	(81.6, 82.0)	4,093	77.1	(76.1, 78.0)
	External	17,219	18.1	(17.9, 18.3)	1,209	22.8	(21.8, 23.7)
Course level	Undergraduate	53,288	56.0	(55.8, 56.3)	2,700	50.8	(49.7, 52.0)
	Postgraduate coursework	36,610	38.5	(38.2, 38.7)	2,194	41.3	(40.2, 42.4)
	Postgraduate research	5,223	5.5	(5.4, 5.6)	417	7.9	(7.3, 8.5)

Supervisors of postgraduate coursework and postgraduate research graduates are somewhat over-represented by 2.8 and 2.4 percentage points respectively while undergraduates are underrepresented by 5.2 percentage points. Since employers report lower satisfaction with postgraduate coursework graduates this is anticipated to lead to a downward bias in reported employer satisfaction. This would be offset, in part, by overrepresentation of postgraduate research graduates who report higher employer satisfaction. However, the population of postgraduate research graduates is much smaller, likely resulting in smaller bias.

Table 18 compares the demographic characteristics of employed graduate respondents to the GOS with the demographic characteristics of graduates whose supervisors actually responded to the ESS. Supervisors of male graduates are overrepresented in the ESS by around 4.3 percentage points as seen in Table 18 and they reported slightly higher overall satisfaction, as shown by Table 5. However, differences in employer satisfaction with male and female graduates are not significant so the overrepresentation of employers of male graduates is unlikely to materially impact on reported overall satisfaction.

Supervisors of graduates aged 30 years and over are overrepresented in the ESS by 10.8 percentage points. This is consistent with the overrepresentation of supervisors of postgraduate coursework graduates as shown in Table 17. Employers of older graduates reported lower overall satisfaction, so the overrepresentation of older graduates is likely to lead to a downward bias in reported overall satisfaction. However, note there was no significant difference in employers' overall satisfaction between younger and older graduates.

Supervisors of graduates working in Professional occupations are overrepresented by 8.1 percentage points in the ESS. From Table 6 earlier, supervisors of graduates working in Professional occupations reported higher overall satisfaction. All other things equal, this would lead to an upward bias in the reported overall satisfaction in the 2018 ESS.

There is no significant difference in employers' overall satisfaction between younger and older graduates

Table 18 **Respondents by demographic characteristics, 2018**

		Employed graduates			Supervisors		
		n	%	CI	n	%	CI
Gender	Male	36,415	38.3	(38.0, 38.5)	2,263	42.6	(41.5, 43.7)
	Female	58,604	61.6	(61.4, 61.9)	3,040	57.2	(56.1, 58.4)
Age	30 years or under	65,922	69.3	(69.1, 69.5)	3,106	58.5	(57.4, 59.6)
	Over 30 years	29,199	30.7	(30.5, 30.9)	2,205	41.5	(40.4, 42.6)
Indigenous	Indigenous	851	0.9	(0.8, 0.9)	68	1.3	(1.0, 1.6)
	Not Indigenous	94,270	99.1	(99.1, 99.2)	5,243	98.7	(98.4, 99.0)
Home language	English	81,594	85.8	(85.6, 86.0)	4,624	87.1	(86.3, 87.8)
	Other than English	13,527	14.2	(14.0, 14.4)	687	12.9	(12.2, 13.7)
Disability	Reported disability	4,208	4.4	(4.3, 4.5)	274	5.2	(4.7, 5.7)
	No disability	90,855	95.5	(95.4, 95.6)	5,030	94.7	(94.2, 95.2)

Supervisors of graduates employed full-time are overrepresented in the ESS by 5.6 percentage points. From Table 6 earlier, there was little significant difference in reported overall satisfaction among supervisors of graduates who worked either full-time or part-time. Supervisors of graduates who have worked in their current job for between three months and one year are over-represented in the 2018 ESS by around 4.4 percentage points. Satisfaction with this group was significantly higher than for those who had been employed for under three months and so their overrepresentation may lead to an upward bias in employer satisfaction.

In summary, over-representation of responses from employers of graduates in Education and Health courses, graduates working in Professional occupations and graduates employed between 3 months and one year, is likely to lead to an upward bias in reported employer satisfaction. On the other hand, over-representation of the supervisors of postgraduate coursework and external graduates is likely to lead to a downward bias in reported employer satisfaction.

Table 19 **Respondents by labour market characteristics, 2018**

		Employed graduates			Supervisors		
		n	%	CI	n	%	CI
Occupation	Managers	8,066	8.8	(8.6, 8.9)	346	6.6	(6.1, 7.2)
	Professionals	54,759	59.6	(59.3, 59.8)	3,551	67.7	(66.6, 68.7)
	Technicians and trades workers	2,829	3.1	(3.0, 3.2)	179	3.4	(3.0, 3.8)
	Community and personal service workers	8,583	9.3	(9.2, 9.5)	405	7.7	(7.1, 8.3)
	Clerical and administrative workers	7,890	8.6	(8.4, 8.7)	448	8.5	(7.9, 9.2)
	Other workers	9,782	10.6	(10.5, 10.8)	319	6.1	(5.6, 6.6)
	Total	91,909	100.0		5,248	100.0	
Employment status	Full-time	64,787	68.1	(67.9, 68.4)	3,912	73.7	(72.7, 74.6)
	Part-time	30,334	31.9	(31.6, 32.1)	1,399	26.3	(25.4, 27.3)
	Total	95,121	100.0		5,311	100.0	
Duration of job with current employer*	Less than 3 months	11,877	13.3	(13.1, 13.4)	650	12.3	(11.5, 13.0)
	3 months to < 1 year	36,008	40.2	(39.9, 40.5)	2,363	44.6	(43.4, 45.7)
	1 year or more	41,688	46.5	(46.3, 46.8)	2,289	43.2	(42.1, 44.3)
Total		**89,573**	**100.0**		**5,302**	**100.0**	

*Graduates refers to duration of job with current employer while data for supervisors refers to duration of job with current supervisor.

3.3 Graduate Attributes Scale – Employer (GAS-E)

The Graduate Attributes Scale – Employer (GAS-E) was developed as part of the original 2013–14 Trial of the Employer Satisfaction Survey. The project team synthesised a number of frameworks relevant to the skills of university graduates and identified a number of general attributes. The GAS-E has been designed to assess common rather than specific graduate attributes, within a limited workplace context. The items were further tested and refined during a 2015 trial of the instrument. The five graduate attribute domains identified, as noted earlier, include:

- foundation skills
- adaptive skills
- collaborative skills
- technical skills
- employability skills.

The GAS-E forms the core of the Employer Satisfaction Survey.

Graduates responding to the GOS were asked to assess their Foundation, Adaptive and Collaborative skills. This enables assessment of the likely impact of the low graduate referral rate, one of the major continuing methodological challenges facing the current ESS, by comparing graduate self-assessment of attributes among graduates that did or did not provide supervisor contact details.

Table 20 shows that graduates who provided contact details for their supervisor rated their Foundation, Adaptive and Collaborative skills more highly than graduates who elected not to offer contact information. Even though the ratings for these groups of skills is high for both groups, it would appear that graduates who were more positive about the skills they had acquired would be more comfortable having their supervisor participate in the ESS. This could be expected to lead to upward bias in reported levels of employer satisfaction in the 2018 ESS.

For purposes of comparison, supervisor assessment of these graduate attributes is repeated in Table 20 below. While noting the potential for upward bias in reported employer satisfaction, it is worth repeating the overall high rating of graduate attributes by both categories of graduates that did or did not provide supervisor contact details and also by supervisors. While graduates not providing supervisor contact details showed lower ratings of graduate attributes, Table 20 demonstrates this was not of a substantially lower order of magnitude. Notwithstanding potential upward bias in reported employer satisfaction, results in the 2018 ESS continues to provide evidence of the likely high quality of graduates from the Australian higher education system.

Graduates who were more positive about the skills they had acquired would be more comfortable having their supervisor participate in the ESS

Table 20 **Graduate attributes of graduates who did and did not provide contact details, 2018**

	Graduates not providing supervisor details		Graduates providing supervisor details		Supervisors	
	%	CI	%	CI	%	CI
Foundation skills	83.1	(82.9, 83.3)	88.9	(88.4, 89.4)	93.5	(92.9, 94.1)
Adaptive skills	81.4	(81.2, 81.7)	87.6	(87.0, 88.1)	89.9	(89.2, 90.6)
Collaborative skills	74.9	(74.6, 75.2)	80.0	(79.3, 80.6)	88.7	(87.9, 89.4)

Appendices

Appendix 1 2018 ESS methodological summary

The collection periods were November 2017 to February 2018 and May to July 2018, with a minor collection taking place in February 2018 to April 2018 to accommodate institutions running a trimester academic calendar. For reporting purposes, the November and February collection period outcomes are combined.

Computer Assisted Telephone Interviewing (CATI) was the primary mode of collection for the ESS, with online collection a secondary mode. The online survey presentation was informed by Australian Bureau of Statistics standards, accessibility guidelines and other relevant resources, with standard features including:

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

A copy of the generic survey items (i.e. excluding any department or institution specific items) is included in the full ESS methodology report.

Sample collection

The collection of supervisor details occurred each round at the end of the Graduate Outcomes Survey. All graduates in employment (but not self-employed or working in a family business) were asked to provide details (name, email and/or phone number) of their current supervisor so they could be invited to take part in the ESS.

The population frame for the ESS comprised 95,121 graduates, domestic and international, who responded in the 2018 GOS that they were employed. Of these, 10,216 employed graduates provided sufficient contact details to approach supervisors, yielding a supervisor referral rate of 10.7 per cent. While this is an improvement on the 9.3 per cent in 2017 and 7.7 per cent achieved in 2016, there remains a reluctance among graduates to pass on their supervisor contact details.

Survey programming

The ESS instrument was programmed into SPSS Dimensions in order to improve the ease of data capture, as well as facilitate the seamlessness between online and CATI.

The CATI ESS was administered in an identical format to the online ESS. Interviewers had an interfacing script at the front and back ends of the survey which allowed categorising of call outcomes. Once agreement to complete the survey was established, the interviewers initiated the online survey. The non-mandatory nature of the ESQ items allowed for responses to items to be skipped if requested by the supervisor.

Table 21 **ESS project overview, 2016-2018**

Project element	November 2015[1]	May 2016	Total	November 2016[2]	May 2017	Total	November 2017[2]	May 2018	Total
Number of supervisors approached[3]	2,089	4,793	**6,882**	3,311	5,711	**9,022**	2,317	7,899	**10,216**
Number of completed surveys	840	2,221	**3,061**	1,689	2,659	**4,348**	1,113	4,198	**5,311**
Supervisor response rate (%)	40.2	46.3	**44.5**	51.0	46.6	**48.2**	48.0	53.1	**52.0**
Data collection period	November 2015 – February 20164	May – July 2016	2015–2016	November 2015 – February 20175	May – July 2017	2016–2017	November 2017 – February 20185	May – July 2018	2017–2018
Data collection mode	Online and CATI			Online and CATI			Online and CATI		
Analytic unit	Supervisor			Supervisor			Supervisor		

1 Includes February supplementary round outcomes.
2 Includes February supplementary round outcomes
3 Excludes opt outs, disqualified and out of scope surveys
4 February data collection took place from February to April 2018
5 February data collection took place from February to April 2018

Call procedures

Call procedures for telephone non-response follow-up for the 2018 ESS featured:

- call attempts placed over different days of the working week and times of day;
- placing a second call attempt to 'fax / modem' and 'number disconnected' outcomes (given that there are occasionally issues with internet connections and problems at the exchange);
- use of the alternative contact number(s), where provided;
- providing an automatic email containing a direct link if respondents preferred to complete online rather than complete a telephone interview; and
- interviewer team briefing and quality control.

All interviewers selected to work on the ESS attended a comprehensive briefing session, delivered by the Social Research Centre project management team. Briefings were conducted on 2 November 2016, 27 March 2017 and 3 May 2018.

The briefing covered the following aspects:

- survey context and background;
- survey procedures (sample management protocols, response rate maximisation procedures);
- privacy and confidentiality issues;
- a detailed examination of the survey questionnaire, with a focus on ensuring the uniform interpretation of questions and response frames, and addressing item-specific data quality issues;
- targeted refusal aversion techniques;

- strategies to maintain co-operation (i.e., minimise mid-survey terminations);
- approaches to get past 'gatekeepers' (i.e. receptionist);
- comprehensive practice interviewing and role play; and
- a review of key data quality issues.

Validations were undertaken by remote monitoring, in accordance with ISO 20252 procedures.

1800 and email helpdesk

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

The ESS helpdesk team was briefed on the ESS 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 ESS team were responsible for monitoring the ESS inbox and responded as appropriate to queries.

Invitation and follow-up activity - GOS

The four-week rolling prize draw associated with the Graduate Outcomes Survey was 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

There were two workflows for the ESS, depending on the contact information provided. If a valid email address was supplied, the supervisor would receive an email invitation to the survey on the following working day. If the contact details contained a valid phone number only, the Social Research Centre would call the supervisor in an attempt to complete a CATI survey.

In 2018, in an effort to maximise recruitment of supervisors for the ESS, during the fieldwork period, respondents who had chosen to provide their supervisor contact details but provided invalid information were followed up by telephone shortly after completing the GOS. Invalid contact details (e.g. email address incorrect) were provided by 1,138 respondents in November; of these 289 (26.5 per cent) provided correct supervisor details over the phone. In May 1,030 respondents were followed up, with 425 (41.2 per cent) providing updated contact information for their supervisor.

Table 22 **Email and reminder schedule**

Email invitation sent	Email reminder 1 sent	Email reminder 2 sent
Monday	Thursday the same week	Following Thursday
Tuesday	Friday the same week	Following Friday
Wednesday	Following Monday	Following Monday
Thursday	Following Tuesday	Following Tuesday
Friday	Following Wednesday	Following Wednesday

The email workflow included an invitation followed up by two reminder emails, the first sent three business days following the invitation and the second sent seven business days following the first reminder send.

In the November and February collection periods supervisors entered the CATI workflow 5 days after the reminder email if they had not completed the survey. During the May collection period supervisors were entered into CATI 2 working days after non-response to the reminder email.

Response rates

The 2018 ESS was conducted as a national online or CATI survey. A total of 5,311 valid surveys were collected, representing a supervisor response rate of 52.0 per cent overall. Of the valid surveys, 2,176 were completed online and 3,135 were completed over the phone. This is an improvement on the supervisor response rate of 48.2 per cent in 2017 and 44.5 per cent in 2016.

Appendix 2
Summary of 2018 ESQ items

Variable	Item name	Item label	Base – detail	Values
Module	**Module A: Screening and confirmation**			
		First we have a few questions about your role and <**E403**>'s role, so we can understand your relationship to <**E403**>.		
QS1	SUPERVISOR RELATIONSHIP	Just to check, do you currently supervise <**E403**>?	*(ALL)	1. Yes 2. No, but I used to be their supervisor 3. No, I have never been their supervisor (GO TO TERM)
QS2	SUPERVISOR RELATIONSHIP DURATION	And, how long have you been <**E403**>'s supervisor?	*(CURRENT OR PREVIOUS SUPERVISOR)	1. Less than 1 month 2. At least 1 month but less than 3 months 3. At least 3 months but less than 1 year 4. 1 year or more
QS5	GRADUATE'S OCCUPATION	How would you describe <**E403**>'s occupation?	*(ALL)	1. Managers and administrators hospitality, retail and service managers, specialist managers, farmers and farm managers, chief executives, general managers and legislators 2. Professionals & associate professionals legal, social and welfare professionals, ICT professionals, health professionals, education professionals, design, engineering, science and transport professionals, business, human resource and marketing professionals, arts and media professionals 3. Technicians and trade workers other technicians and trades workers, skilled animal and horticultural workers, food trades workers, electro-technology and telecommunications trades workers, construction trades workers, automotive and engineering trades workers, engineering, ICT and science technicians 4. Clerical and administrative workers other clerical and administrative workers, clerical and office support workers, numerical clerks, inquiry clerks and receptionists, general clerical workers, personal assistants and secretaries, office managers and program administrators

Variable	Item name	Item label	Base – detail	Values
Module	**Module A: Screening and confirmation**			
QS5	GRADUATE'S OCCUPATION	How would you describe <**E403**>'s occupation?	*(ALL)	5. Community and personal service workers Sports and personal service workers, protective service workers, hospitality workers, carers and aides, health and welfare support workers 6. Sales workers Sales support workers, sales assistants and salespersons, sales representatives and agents 7. Machinery operators and drivers Store person, road and rail drivers, mobile plant operators, machine and stationary plant operators 8. Labourers and related workers Food preparation assistants, farm, forestry and garden workers, Factory process workers, construction and mining labourers, cleaners and laundry workers 9. Other (describe) (TEXT BOX)
QS3	AWARENESS OF INSTITUTION	Before today, were you aware that <**E403**> completed a qualification from <**E306C**>?	*(ALL)	1. Yes 2. No
QS4	AWARENESS OF INSTITUTION	And, before today, were you aware that the qualification <**E403**> completed was a <**qualfinal**>?	*(ALL)	1. Yes 2. No
QS6	GRADUATE TASKS	What are the main tasks that they usually perform in their job?	*(ALL)	(VERBATIM RESPONSE TEXT BOX)
QS7	EMPLOYER OCCUPATION	How would you describe your **main PAID** occupation? Please roll your cursor over each option to see a full description.	*(ALL)	1. Managers and administrators Hospitality, retail and service managers, specialist managers, farmers and farm managers, chief executives, general managers and legislators 2. Professionals & associate professionals Legal, social and welfare professionals, ICT professionals, health professionals, education professionals, design, engineering, science and transport professionals, business, human resource and marketing professionals, arts and media professionals 3. Technicians and trade workers Other technicians and trades workers, skilled animal and horticultural workers, food trades workers, electro-technology and telecommunications trades workers, construction trades workers, automotive and engineering trades workers, engineering, ict and science technicians

Variable	Item name	Item label	Base – detail	Values
Module	**Module A: Screening and confirmation**			
QS7	EMPLOYER OCCUPATION	How would you describe your **main PAID** occupation? Please roll your cursor over each option to see a full description.	*(ALL)	4. Clerical and administrative workers Other clerical and administrative workers, clerical and office support workers, numerical clerks, inquiry clerks and receptionists, general clerical workers, personal assistants and secretaries, office managers and program administrators 5. Community and personal service workers Sports and personal service workers, protective service workers, hospitality workers, carers and aides, health and welfare support workers 6. Sales workers Sales support workers, sales assistants and salespersons, sales representatives and agents 7. Machinery operators and drivers Store person, road and rail drivers, mobile plant operators, machine and stationary plant operators 8. Labourers and related workers food preparation assistants, farm, forestry and garden workers, factory process workers, construction and mining labourers, cleaners and laundry workers 9. Other (describe) (TEXT BOX)
QS8	EMPLOYER DUTIES	What are the main tasks that you usually perform in this job?	*(ALL)	(VERBATIM RESPONSE TEXT BOX)
Module	**Module B: Overall graduate preparation**			
Text	The next set of questions asks about the skills and attributes you think are important for recent graduates to have when coming into your organisation. Please answer them in relation to the job currently performed by <**E403**>			
QOP1	FORMAL REQUIREMENT	Is a <**qualfinal**> or similar qualification a formal requirement for <**E403**> to do their job?	*(ALL)	1. Yes 2. No
QOP2	IMPORTANCE OF QUALIFICATION	To what extent is it important for <**E403**> to have a <**qualfinal**> or similar qualification to being able to do the job well? Is it…		1. Not at all important 2. Not that important 3. Fairly important 4. Important 5. Very important

Variable	Item name	Item label	Base – detail	Values
Module	**Module B: Overall graduate preparation**			
QOP3	OVERALL PREPARATION	Overall, how well did <**E403**>'s <**qualfinal**> prepare <**him/her**> for their job?	*(ALL)	1. Not at all prepared 2. Not well prepared 3. Well prepared 4. Very well prepared 5. Don't know unsure
QOP4	OPEN (POSITIVE)	What are the MAIN ways that <**E306C**> prepared <**E403**> for employment?	*(ALL)	1. Don't know/unsure (VERBATIM RESPONSE TEXT BOX)
QOP5	OPEN (IMPROVE)	And what are the **MAIN** ways that <**E306C**> could have better prepared <**E403**> for employment?	*(ALL)	1. Don't know/unsure (VERBATIM RESPONSE TEXT BOX)
QS11	OVERALL RATING	Based on your experience with <**E403**>, how likely are you to consider hiring another <**qualfinal**> graduate from <**E30 6C**>, if you had a relevant vacancy? Would you say	*(ALL)	1. Very unlikely to consider 2. Unlikely to consider 3. Neither unlikely nor likely to consider 4. Likely to consider 5. Very likely to consider 6. Don't know/unsure
Module	**Module C: Graduate attributes scale**			
Text	The following questions ask about specific skills and attributes that may be important for employees to have in your organisation.			
GAS Stem		For each skill or attribute, to what extent do you agree or disagree that <**E403**>'s <**qualfinal**> from <**E306C**> prepared them for their job? :If the skill is not required by <**E403**> in their role, you can answer 'Not applicable'.	*(ALL)	
GAS	ADAPTIVE SKILLS AND ATTRIBUTES	9. Broad background knowledge 10. Ability to develop innovative ideas 11. Ability to identify new opportunities 12. Ability to adapt knowledge to different contexts 13. Ability to apply skills in different contexts 14. Capacity to work independently	*(ALL)	1. Strongly disagree 2. Disagree 3. Neither disagree nor agree 4. Agree 5. Strongly agree 9. Not applicable

Variable	Item name	Item label	Base – detail	Values
Module	**Module C: Graduate attributes scale**			
GAS	FOUNDATION SKILLS	1. Oral communication skills 2. Written communication skills 3. Numeracy skills 4. Ability to develop relevant knowledge 5. Ability to develop relevant skills 6. Ability to solve problems 7. Ability to integrate knowledge 8. Ability to think independently about problems	*(ALL)	1. Strongly disagree 2. Disagree 3. Neither disagree nor agree 4. Agree 5. Strongly agree 9. Not applicable
GAS	TEAMWORK SKILLS	15. Working well in a team 16. Getting on well with others in the workplace 17. Working collaboratively with colleagues to complete tasks 18. Understanding different points of view 19. Ability to interact with co-workers from different or multi-cultural backgrounds	*(ALL)	1. Strongly disagree 2. Disagree 3. Neither disagree nor agree 4. Agree 5. Strongly agree 9. Not applicable
GAS	TECHNICAL SKILLS	20. Applying professional knowledge to job tasks 21. Using technology effectively 22. Applying technical skills in the workplace 23. Maintaining professional standards 24. Observing ethical standards 25. Using research skills to gather evidence	*(ALL)	1. Strongly disagree 2. Disagree 3. Neither disagree nor agree 4. Agree 5. Strongly agree 9. Not applicable
GAS	EMPLOYABILITY SKILLS	26. Ability to work under pressure 27. Capacity to be flexible in the workplace 28. Ability to meet deadlines 29. Understanding the nature of your business or organisation 30. Demonstrating leadership skills 31. Demonstrating management skills 32. Taking responsibility for personal professional development 33. Demonstrating initiative in the workplace	*(ALL)	1. Strongly disagree 2. Disagree 3. Neither disagree nor agree 4. Agree 5. Strongly agree 9. Not applicable

Variable	Item name	Item label	Base – detail	Values
Module	**Module D: Emerging policy issues**			
Module	**Module E: Discipline specific issues**			
Module	**Module F: Close**			
Text		Thank you for your assistance with this survey. We would like to provide some feedback to participants about the outcomes of the study. We anticipate finishing the study in early 2015		
C1	RESULTS FEEDBACK	Would you like to receive a one page summary of the outcomes of the study?	*(ALL)	1. Yes 2. No
C2	SUPERVISOR EMAIL (CONFIRM)	Can we confirm that <**supemail**> is the best email address to contact you on?	*(WOULD LIKE SUMMARY)	1. Yes 2. No (ALLOW EMAIL ENTRY)
C3	SURVEY FEEDBACK	Would you like to be notified when the national data is released on the Quality Indicators for Learning and Teaching (QILT) website?	*(ALL)	1. Yes 2. No
C4	ACKNOWLEDGEMENT	Would you like your organisation to be acknowledged on the QILT website for supporting this important research? If you are unsure please select yes, as you will be able to opt out of this during our follow up with you.	*(ALL)	1. Yes 2. No
C5	FOLLOW UP	We will be in touch separately with information about how your organisation will be acknowledged on the QILT website using your confirmed email address. If you would prefer we use another email address please enter this below.	*(ALL)	1. Yes 2. No (ALLOW EMAIL ENTRY)
Text	END	Thank you for your time today and support in ensuring that graduates complete their qualifications well equipped to meet the needs of organisations like yours.		
	(TERMINATED – NOT SUPERVISOR OF GRADUATE)	Thank you for your willingness to complete the Employer Satisfaction Survey (ESS). You have indicated that you are not the supervisor of <**E403**>. If you incorrectly selected this option or your workplace still wishes to take part with another supervisory person please call The Social Research Centre's helpdesk on 1800 023 040. You can also email us at ess@srcentre.com.au.	*IF (QS1=3)	

Appendix 3 Institutional participation

Table A3a **University participation**

Institution	2016	2017	2018
Australian Catholic University	73	112	114
Bond University	19	16	19
Central Queensland University	76	115	85
Charles Darwin University	39	40	58
Charles Sturt University	89	179	238
Curtin University of Technology	128	191	155
Deakin University	190	234	267
Edith Cowan University	72	101	91
Federation University Australia	11	61	72
Flinders University	47	122	152
Griffith University	115	180	170
James Cook University	59	53	76
La Trobe University	72	105	136
Macquarie University	59	90	116
Monash University	175	192	268
Murdoch University	36	47	73
Queensland University of Technology	158	102	110
RMIT University	72	106	200
Southern Cross University	28	49	56
Swinburne University of Technology	56	81	84
The Australian National University	48	50	63
The University of Adelaide	36	86	111
The University of Melbourne	163	208	329
The University of Notre Dame Australia	30	40	44
The University of Queensland	173	233	333
The University of South Australia	82	99	113
The University of Sydney	175	87	171
The University of Western Australia	48	93	91
Torrens University	0	5	23
University of Canberra	35	61	60
University of Divinity	7	10	15
University of New England	53	108	125
University of New South Wales	87	155	128
University of Newcastle	91	123	135
University of Southern Queensland	60	93	40
University of Tasmania	76	123	200
University of Technology Sydney	42	95	136
University of the Sunshine Coast	34	55	70
University of Wollongong	73	66	125
Victoria University	31	60	49
Western Sydney University	41	68	92

Table A3b **NUHEI participation**

Institution	2016	2017	2018
Academy of Information Technology	0	0	4
ACAP and NCPS	9	19	6
Adelaide College of Divinity	1	0	4
Alphacrucis College	1	0	8
Australian Academy of Music and Performing Arts	0	1	0
Australian College of Theology Limited	15	24	25
Australian Institute of Business Pty Ltd	8	23	37
Australian Institute of Management Education & Training	0	2	0
Australian Institute of Professional Counsellors	0	1	1
Australian School of Management	0	1	0
Avondale College of Higher Education	8	16	13
Blue Mountains International Hotel Management School	3	0	0
Box Hill Institute	1	1	2
Christian Heritage College	3	5	12
Collarts (Australian College of the Arts)	0	2	3
Eastern College Australia	4	5	3
Endeavour College of Natural Health	3	4	10
Excelsia College	2	3	2
Health Education & Training Institute	0	0	5
Holmes Institute	1	2	11
Holmesglen Institute	2	3	4
INSEARCH	0	1	3
International College of Hotel Management	0	0	3

Institution	2016	2017	2018
International College of Management, Sydney	0	5	3
Jazz Music Institute	0	1	0
Kaplan Business School	7	15	8
Kaplan Higher Education Pty Ltd	2	20	10
King's Own Institute	0	0	13
LCI Melbourne	0	0	1
Le Cordon Bleu Australia	0	2	2
Macleay College	1	3	3
Marcus Oldham College	0	0	8
Melbourne Institute of Technology	2	2	7
Melbourne Polytechnic	4	4	3
Montessori World Education Institute (Australia)	1	0	0
Moore Theological College Council	0	0	23
Morling College	1	2	0
Nan Tien Institute	0	1	0
National Art School	3	2	3
North Metropolitan TAFE	0	0	2
Perth Bible College	0	2	1
Photography Studies College (Melbourne)	1	1	0
Raffles College Pty Ltd	0	1	0
SAE Institute	4	5	12
Sydney College of Divinity	0	10	7
Tabor College of Higher Education	3	5	8

Institution	2016	2017	2018
TAFE NSW	5	11	5
TAFE Queensland	0	1	1
TAFE South Australia	2	0	0
The Australian College of Physical Education	0	0	3
The Australian Institute of Music	0	3	2
The Cairnmillar Institute	0	0	2
The College of Law Limited	1	30	26
The MIECAT Institute	1	3	2
The Tax Institute	1	0	0
Think Education	0	0	5
Whitehouse Institute of Design, Australia	0	3	0
William Angliss Institute	2	9	2

Appendix 4 Production of scores

A series of steps are taken to produce the graduate attributes scale results used in this report. A selection of the SPSS syntax used to produce these scores is presented below.

Scores for each EGAS scale are computed as the mean of the constituent item scores. A focus area score is only computed for respondents who have a valid item score for a minimum number of items in each scale.

The SPSS syntax used to generate EGAS average scores is shown in Figure 9. The recoded item scores are not retained in the analysis file.

Because the reporting metric for the 2018 ESS EGAS is 'percentage satisfied', these variables must be created for each EGAS scale. 'Percentage satisfied' results reflect the percentage of students who achieve a threshold EGAS scale score of 3.5 or greater. The SPSS syntax used to generate these variables is presented in Figure 9.

At the item level, satisfaction reflects a response in the top two categories on a five-point response scale. The SPSS syntax used to generate EGAS average scores is shown in Figure 11.

Variable	Label	Number of items required
EGFOUND	GAS-E(F) Foundational skills scale score	6 items
EGADAPT	GAS-E(A) Adaptive Scale Score	4 items
EGCOLLB	GAS-E(C) Collaboration Scale Score	3 items
EGTECH	GAS-E(T) Technical Scale Score	4 items
EGEMPLY	GAS-E(E) Employability Scale Score	6 items
EHIRE	Likelihood of hiring another graduate with the same qualification from the same institution	Single item

Figure 9 **SPSS syntax used to compute EGAS mean scores**

```
COMPUTE EGFOUNDr =MEAN.6(EGFOUND1, EGFOUND2, EGFOUND3, EGFOUND4, EGFOUND5, EGFOUND6, EGFOUND7, EGFOUND8).
COMPUTE EGADAPTr = MEAN.4(EGADAPT1, EGADAPT2, EGADAPT3, EGADAPT4, EGADAPT5, EGADAPT6).
COMPUTE EGCOLLBr = MEAN.3(EGCOLLB1, EGCOLLB2, EGCOLLB3, EGCOLLB4, EGCOLLB5).
COMPUTE EGTECHr = MEAN.4(EGTECH1, EGTECH2, EGTECH3, EGTECH4, EGTECH5, EGTECH6).
COMPUTE EGEMPLYr = MEAN.6(EGEMPLY1, EGEMPLY2, EGEMPLY3, EGEMPLY4, EGEMPLY5, EGEMPLY6, EGEMPLY7, EGEMPLY8).
```

Figure 10 **SPSS syntax used to compute EGAS scale scores**

```
IF (EGFOUNDr GE 3.5) EGFOUND=100.
IF (EGFOUNDr LT 3.5) EGFOUND=0.
IF (EGADAPTr GE 3.5) EGADAPT=100.
IF (EGADAPTr LT 3.5) EGADAPT=0.
IF (EGCOLLBr GE 3.5) EGCOLLB=100.
IF (EGCOLLBr LT 3.5) EGCOLLB=0.
IF (EGTECHr GE 3.5) EGTECH=100.
IF (EGTECHr LT 3.5) EGTECH=0.
IF (EGEMPLYr GE 3.5) EGEMPLY=100.
IF (EGEMPLYr LT 3.5) EGEMPLY=0.
```

Figure 11 **SPSS syntax used to compute item satisfaction variables**

```
RECODE EHIRE (1=0) (2=0) (3=0) (4=100) (5=100) (ELSE=SYSMIS) INTO EHIRES.
```