

# 2016 Employer Satisfaction Survey

## National Report

APRIL 2017

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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.

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For more information on the conduct and results of the 2016 ESS see the Quality Indicators for Learning and Teaching (QILT) website. The QILT team can be contacted by email at [qilt@srcentre.com.au](mailto:qilt@srcentre.com.au)



# Executive summary

The 2016 Employer Satisfaction Survey (ESS) represents the largest survey of its kind reporting the views of over 3,000 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.

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 are 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, type of institution, employment characteristics, occupation and demographic group. Other employer surveys only provide a limited view of the sector as a whole.

## Basic national results

In 2016, overall satisfaction with graduates as rated by direct supervisors was 84 per cent.

Employer satisfaction with other graduate attributes was as follows:

- 92 per cent satisfaction with foundation skills – general literacy, numeracy and communication skills and the ability to investigate and integrate knowledge.
- 88 per cent satisfaction with adaptive skills – the ability to adapt and apply skills/knowledge and work independently.
- 85 per cent satisfaction with collaborative skills – teamwork and interpersonal skills.
- 92 per cent satisfaction with technical skills – application of professional and technical knowledge and standards.
- 84 per cent satisfaction with employability skills – the ability to perform and innovate in the workplace.

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

# 84%

% of supervisors expressing overall satisfaction with their graduate

## Results by course, demographic and labour market characteristics

Supervisors were more satisfied with graduates from vocationally oriented courses. Supervisors' overall satisfaction with Engineering, Health, Information Technology and Education graduates was 89 per cent, 89 per cent, 87 per cent and 86 per cent respectively. On the other hand, employer satisfaction, while still high, appears lower for graduates with more generalist degrees such as Creative Arts, Management and Commerce, Natural and Physical Sciences, and Society and Culture at 78 per cent, 80 per cent, 83 per cent and 83 per cent respectively.

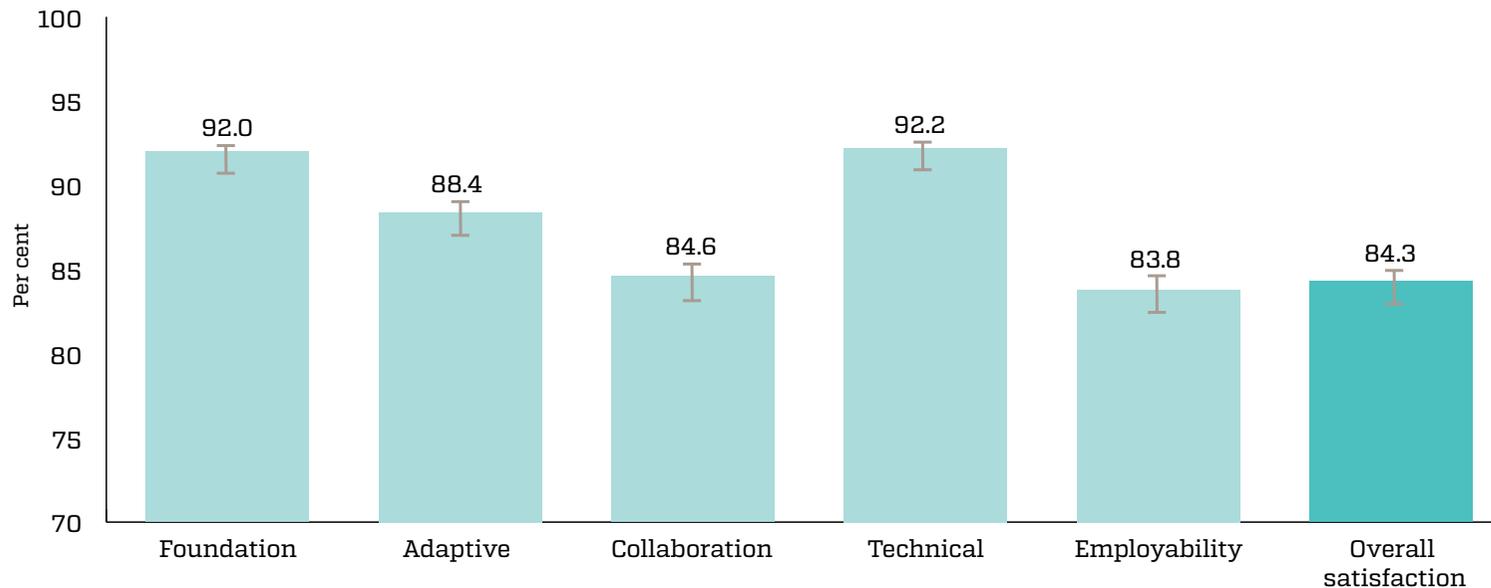
Results for overall employer satisfaction confirm findings from the 2016 Graduate Outcomes Survey that employers seem to prefer graduates with vocationally oriented degrees over those with generalist degrees since the former have higher employment outcomes immediately upon graduation. Nevertheless, findings from the 2016 Graduate Outcomes Survey – Longitudinal (GOS-L) show graduates with generalist degrees do appear to catch up over time in terms of employment outcomes, at least three years after graduation.

Supervisors expressed higher levels of overall satisfaction with graduates that studied internally, 85 per cent, in comparison with graduates that studied externally, 81 per cent.

Employers appear more satisfied with female graduates, 86 per cent, than with male graduates, 82 per cent.

Employer satisfaction with graduates from vocational courses was higher than for graduates from generalist courses

Figure 1 Employer satisfaction with graduate attributes and overall satisfaction, 2016 (%)



Employers reported higher overall satisfaction with graduates working in professional occupations, 87 per cent, than graduates working in all other occupations, though the difference between those working in community and personal service occupations was not significant.

Differences in employer satisfaction across type of institution were relatively minor and not significant. The ESS instrument is currently not capable of discriminating across institutions. Hence, institution level results are not presented in this report.

## Skills relevance and utilisation

Overall, graduates tended to view their qualification as less important for their current employment than their supervisor. Over half of graduates, 58 per cent, considered their qualification to be 'very important' or 'important' to their current job. On the other hand, around two-thirds, 66 per cent, of supervisors indicated the graduate's qualification was 'very important' or 'important'.

Health and Education qualifications were rated by supervisors as being more important for their current position, which is consistent with earlier findings showing higher employer satisfaction with graduates with more vocationally oriented qualifications. These qualifications may be a requirement for employment. 81 per cent of supervisors of Health graduates and 79 per cent of supervisors of Education graduates thought that qualifications were important for current employment. Supervisors of Creative Arts, Agriculture and Environmental Studies and Management and Commerce graduates were least likely to think that the qualification was important for current employment, 42 per cent, 52 per cent and 52 per cent respectively.

Supervisors of graduates working in professional occupations were more likely to state that the qualification was important for current employment, 78 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.

More than nine out of ten supervisors, 93 per cent, reported that the qualification prepared the graduate 'very well' or 'well' for current employment. 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.

# 66%

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

## Methodology

The 2016 ESS was primarily conducted as a national online survey among 96 higher education institutions including all 40 Table A and B universities, and 56 Non-University Higher Education Institutions (NUHEIs).

The population frame for the ESS comprised 89,349 graduates, domestic and international, who responded in the 2016 GOS they were employed. Of these, 6,882 employed graduates provided sufficient contact details to approach supervisors, yielding a supervisor referral rate of 7.7 per cent. As occurred with previous trials of the ESS, there appears to be a continuing reluctance among graduates to pass on their supervisor contact details.

A total of 3,061 valid survey responses from direct supervisors were collected across all study levels, representing a supervisor response rate of 44.5 per cent.

Supervisors of Health and Education graduates and graduates working in professional occupations were overrepresented in the ESS. Supervisors rated overall satisfaction of these graduates more highly. This is expected to lead to an upward bias in reported employer satisfaction in the 2016 ESS.

On the other hand, supervisors of external and male 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 2016 ESS.

Graduates who did not provide supervisor contact details rated their foundation skills at 84 per cent. While still high, this was lower than for graduates who supplied their supervisor contact details, 90 per cent, and the supervisor satisfaction rating of foundation skills of 92 per cent. It would appear graduates who were more positive about the skills they had acquired would 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 2016 ESS.

Notwithstanding potential upward bias in reported employer satisfaction, ratings of attributes across graduates who are willing or not willing to provide supervisor contact details are of broadly similar magnitude suggesting that results from the 2016 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 improve responses and the robustness and validity of results from the ESS over time.

# 3,061

Number of survey responses  
from supervisors

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# 1 Introduction

The 2016 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 has been included as part of the Quality Indicators for Learning and Teaching (QILT) survey suite. The QILT are independently and centrally administered by the Social Research Centre on behalf of the Australian Government Department of Education and Training.

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. As a result, it will be possible to triangulate employer satisfaction with student/graduate satisfaction and graduate employment. This will be of substantial benefit in providing a rich dataset to enhance the design of teaching and learning practices to improve graduate outcomes.

## 2 Measuring Employer Satisfaction

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.

### 2.1 1999 National Employer Survey

In 1999, the then Department of Education, Training and Youth Affairs commissioned AC Nielsen Research Services to conduct a survey of employer satisfaction with graduates.<sup>1</sup> Telephone interviews were used to construct a sample frame of employers stratified by size of business and industry sector among those who had recruited a new graduate in the last two years. Graduate recruitment managers for each employer were sent a mail survey yielding over 1,100 responses, a response rate of 52.8 per cent. In-depth qualitative research with industry associations, employers and graduates was undertaken to guide the design of a survey requesting employers to rate the importance and performance of recent graduates across a range of twenty five basic skills, academic skills and personal attributes.

Overall, the performance of graduates was rated reasonable by employers, neither particularly low or high. The performance ratings given by graduate recruitment

managers to new graduates across all skills and attributes ranged from 3.2 to 4.2 out of a possible 5.0. The skills employers considered most valuable were creativity and flair, enthusiasm and the capacity for independent and critical thinking. The three skills showing the greatest performance shortfalls, given their importance to employers, were creativity and flair, oral business communications and problem solving.

### 2.2 Development of QILT National Employer Survey

In 2013-14, the Workplace Relations Centre from the University of Sydney Business School conducted a small scale pilot of the Employer Satisfaction Survey (ESS) across four universities and five broad fields of education.<sup>2</sup> The pilot was phone based and gathered five hundred responses from direct supervisors. Graduates proved reluctant to provide the contact details of their supervisor with a low graduate referral rate of 8.2 per cent. Apparently, graduates were concerned the survey represented a direct assessment of their own performance whereas the intention was to measure performance at a much higher level of aggregation by system, field of education, institution and student and labour market characteristics, not at individual level. Once contact was made with direct supervisors, they proved more than willing to respond to the survey with a supervisor response rate of 79.6 per cent.

<sup>1</sup> *Employer Satisfaction with Graduate Skills*, Evaluations and Investigations Programme 99/7, Higher Education Division, Department of Education, Training and Youth Affairs, February 2000.

<sup>2</sup> *Employer Satisfaction Survey*, Report for the Department of Education June 2014, Workplace Research Centre, The University of Sydney Business School.

The ESS instrument developed as part of the pilot was based on previous conceptual frameworks relating to graduate skills including the Mayer competencies, the Employability Skills Framework and the Australian Blueprint for Career Development. Previous employer surveys instruments served as precedents including the 1999 national employer survey, the Monash University Employer Survey (2007) and the UniSA Teaching Quality Indicators Pilot Project (2009).

The pilot ESS found direct supervisors rated their graduates highly, with a 92 per cent overall satisfaction rating. Teamwork and interpersonal skills and foundation skills received the highest rating at 96 per cent and 95 per cent respectively. Disciplinary skills, employability skills, adaptive skills and enterprise skills received lower ratings at 93 per cent, 93 per cent, 89 per cent and 79 per cent respectively. The low graduate referral rate was associated with a response bias towards graduates that had an ongoing relationship with the labour market and this may have led to a positive bias in the satisfaction results reported for the pilot survey. Due to the small number of around 500 responses from direct supervisors, the instrument was unable to discriminate across universities and fields of education.

In 2014-15, the QILT administrator, the Social Research Centre conducted additional small scale trials of the Employer Satisfaction Survey aimed at refining the survey methodology and the ESS instrument. A small scale trial was conducted among three universities and two non-university higher education institutions (NUHEIs) in conjunction with the administration of the October 2014 round of the Australian Graduate Survey. Trialling alternative survey methodologies resulted in a similarly low graduate referral rate of 6.2 per cent and a supervisor

response rate of 55.8 per cent. Refinement of the ESS resulted in an instrument that included an overall satisfaction item and five scales comprising foundation skills, adaptive skills, collaborative skills, technical skills and, employability skills. Appendix 2 provides the 2016 Employer Survey Questionnaire (ESQ).

### 2.3 Employer survey characteristics

As noted earlier, due to the methodological challenges associated with measuring employer satisfaction, there appear to be a limited number of employer assessments of graduates. Table 1 compares key characteristics of the present 2016 Employer Satisfaction Survey with the National Centre for Vocational Education and Research's (NCVER) Employers' Use and Views of the Vocational Education and Training (VET) system survey, the QS Graduate Employability Rankings and the Times Higher Education Global Employability Rankings.

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 below in Section 4.

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

Table 1 Employer survey characteristics

	2016 Employer Satisfaction Survey	NCVER Employers' use and views of the VET system survey	QS Graduate Employability Rankings	Times Higher Education Global University Employability Ranking
<b>Employer responses</b>	Over 3,000	Around 4,500 with interaction with VET system in previous year	Approximately 700- 900 from Australia	152 from Australia
<b>Respondent base</b>	Direct supervisors of employed graduates, as measured by the Graduate Outcomes Survey, which in turn is based on course completions data from HEIMS. This allows for analysis of response bias	All organisations in Australia with at least one employee, selected through random sample from the ABS Business Register	Employers selected via multiple methods, including media partners, jobs portals, databases of previous respondents, and employers nominated by universities	Companies with over 5000 employees and which recruit at least 50 graduates per year, selection method unknown
<b>Typical respondent</b>	Direct supervisors of recent graduates	Human resource managers	Unclear	Recruitment managers and managing directors
<b>Performance measures</b>	Overall satisfaction indicator plus multiple graduate attributes	Wide range of measures on use of and satisfaction with the VET system, skills of employees, and recruitment difficulties	Ranking of universities by perceived employability of graduates with multiple component measures including graduate employment rate, employer presence on campus as well as employer survey results	Ranking of universities by perceived employability of graduates
<b>Analytic unit</b>	Higher education system, field of education and other course, demographic and labour market characteristics	VET system	Institution	Institution

A key distinguishing feature of the present survey is that it measures the experiences of direct supervisors of graduates

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 and reluctance of graduates to pass on contact details of their direct supervisor. Collection of 3,000 employer responses, however, does permit reporting of employer satisfaction while discriminating against key course, demographic and labour

market characteristics. The notable exception is that institution level results are not presented in this report as results are not sufficiently robust at this level of reporting.

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 which report the perceptions of executives with little or no direct experience with graduates.

# 3 Results

## 3.1 Employer satisfaction by course, demographic and labour market characteristics

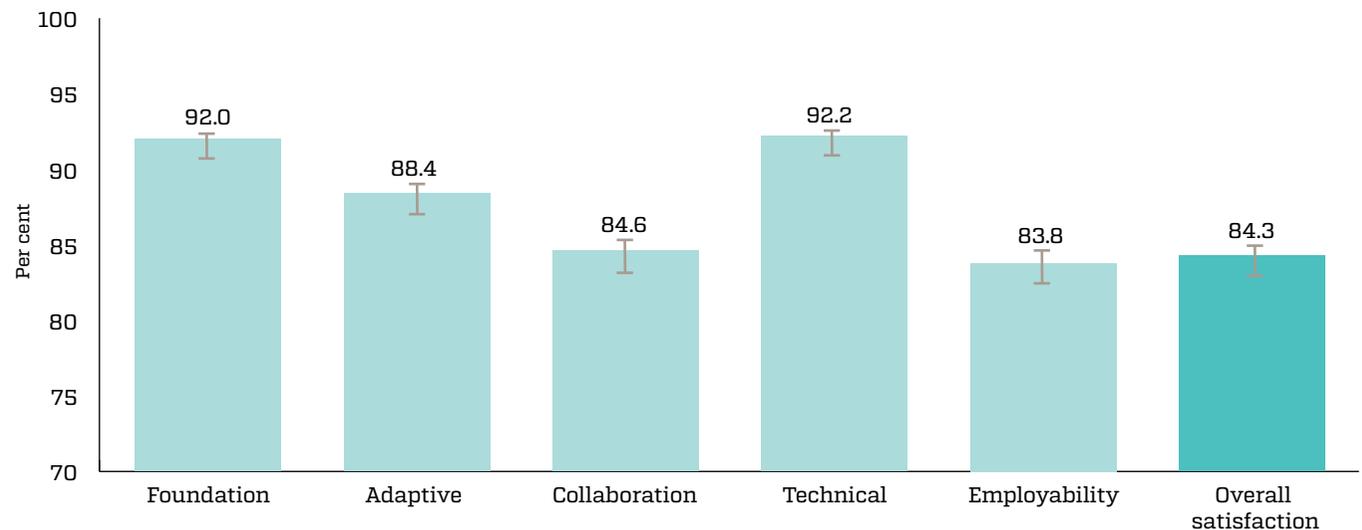
The 2016 Employer Satisfaction Survey confirms the findings of the earlier 2013-14 pilot survey that supervisors rate their graduates highly. In 2016, overall satisfaction with graduates as rated by direct supervisors was 84 per cent. Overall satisfaction reports the proportion of supervisors giving 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.

Overall, employers rated graduates' skills in these areas highly. Supervisors reported highest satisfaction with graduates' foundation and technical skills at 92 per cent, as shown by Figure 2. Graduates' adaptive, collaborative and employability skills were also rated highly at 88 per cent, 85 per cent and 84 per cent respectively.

Figure 2 Employer satisfaction with graduate attributes and overall satisfaction, 2016 (%)



Turning to results of employer satisfaction by field of education, it appears supervisors were more satisfied with graduates from vocationally oriented courses. For example, supervisors' overall satisfaction with Engineering, Health, Information Technology and Education graduates was 89 per cent, 89 per cent, 87 per cent and 86 per cent respectively, as shown by Figure 3. On the other hand, employer satisfaction, while still high, appears lower for graduates with more generalist degrees such as Creative Arts, Management and Commerce, Natural and Physical Sciences, and Society and Culture, at 78 per cent, 80 per cent, 83 per cent and 83 per cent respectively. Differences in employer satisfaction between vocational and generalist courses appear significant. For example, employer satisfaction with Health graduates was significantly higher than with Society and Culture or Management and Commerce 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 across fields of education is shown in Table 2.

Results for overall employer satisfaction appear consistent with findings from the 2016 Graduate Outcomes Survey (GOS). That is, employers seem to prefer graduates with vocationally oriented degrees over those with generalist degrees. Immediately upon graduation, graduates from vocationally oriented courses report higher employment outcomes and higher employer satisfaction. It is important to place this finding in the context of findings from the 2016 Graduate Outcomes Survey – Longitudinal (GOS-L) that graduates with generalist degrees do appear to catch up over time in terms of employment outcomes, at least three years after graduation.

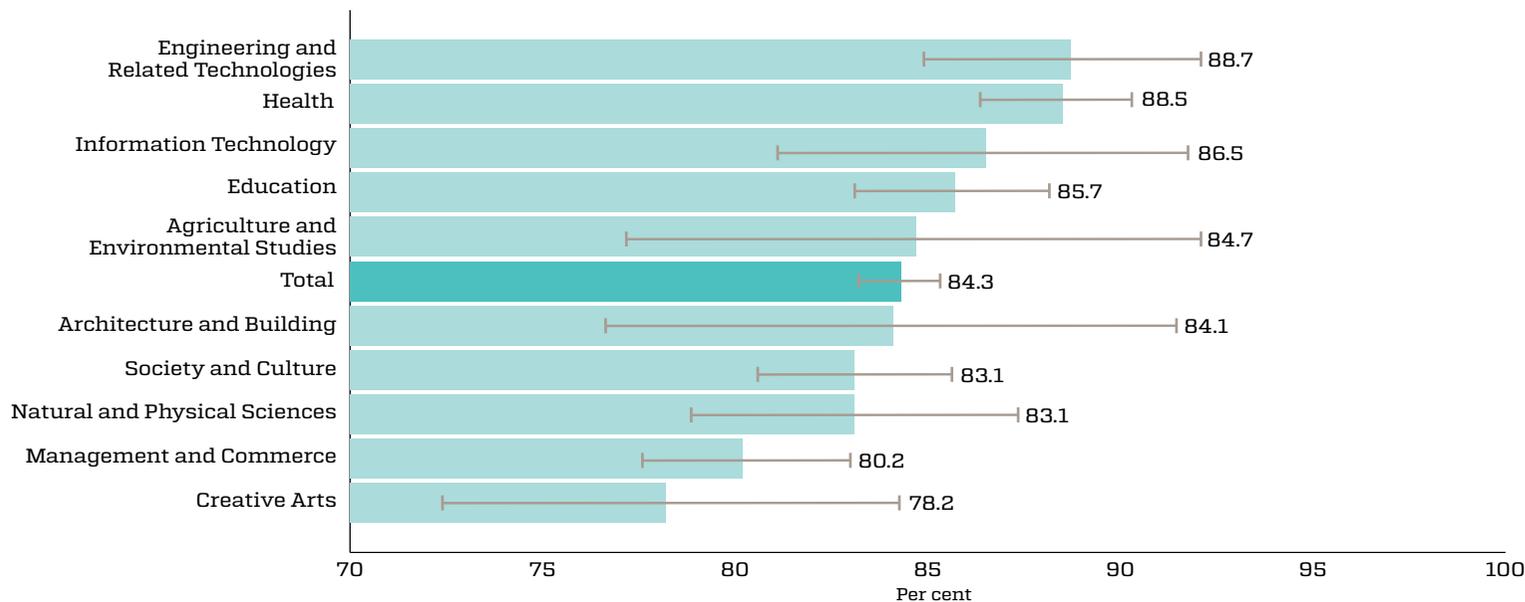
89%

Highest employer satisfaction – Engineering

78%

Lowest employer satisfaction – Creative Arts

Figure 3 Overall satisfaction by broad field of education, 2016 (%)



There is more variation in employer satisfaction with different graduate attributes across fields of education as shown by Table 2. For example, Agriculture and Environmental Studies graduates have higher employer satisfaction across all graduate attributes, though in some cases differences between other fields of education may not be significant. Education graduates are rated more highly by supervisors than Health graduates in terms of their adaptive skills. Similarly Education graduates are rated more highly than Management and Commerce graduates in terms of their technical skills. University graduates reported higher employer satisfaction, 84 per cent, than graduates from non-university higher education institutions, 82 per cent. However, the difference in employer satisfaction across type of institution was relatively minor and not significant, as shown by Figure 4 and Table 3. The ESS instrument is currently not capable of discriminating across institutions. Hence, institution level results are not presented in this report.

Supervisors expressed higher levels of overall satisfaction with graduates that studied internally, 85 per cent, in comparison with graduates that studied externally, 81 per cent, as shown by Figure 4. Supervisors also rated internal graduates' collaborative skills more highly than those of external graduates, as shown by Table 3.

Employers appear less satisfied with postgraduate coursework graduates, 83 per cent than with undergraduates, 85 per cent, and postgraduate research graduates, 86 per cent. However, differences in overall satisfaction by level of course were relatively minor and not significant, as shown by Figure 4. Supervisors rated postgraduate coursework graduates lower than undergraduates on their collaborative skills and lower than postgraduate research graduates on their foundation, adaptive and technical skills, as shown by Table 3.

85%

Employer satisfaction – internal graduates

81%

Employer satisfaction – external graduates

Figure 4 Overall satisfaction by type of institution and course characteristics, 2016 (%)

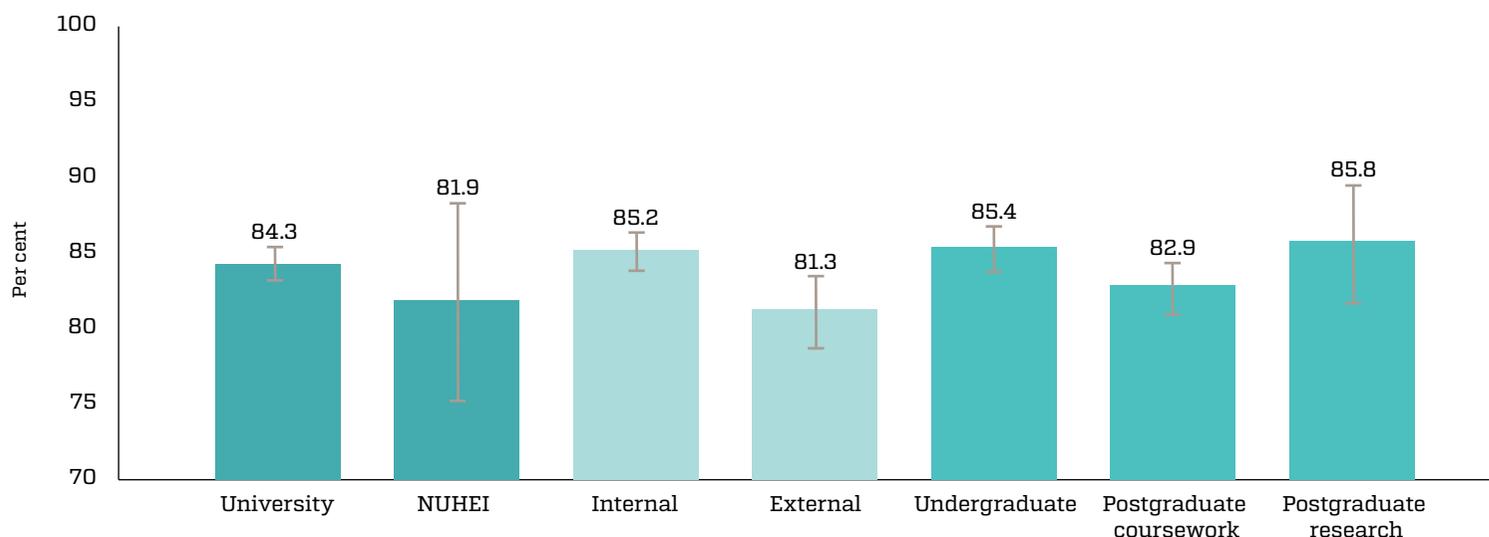
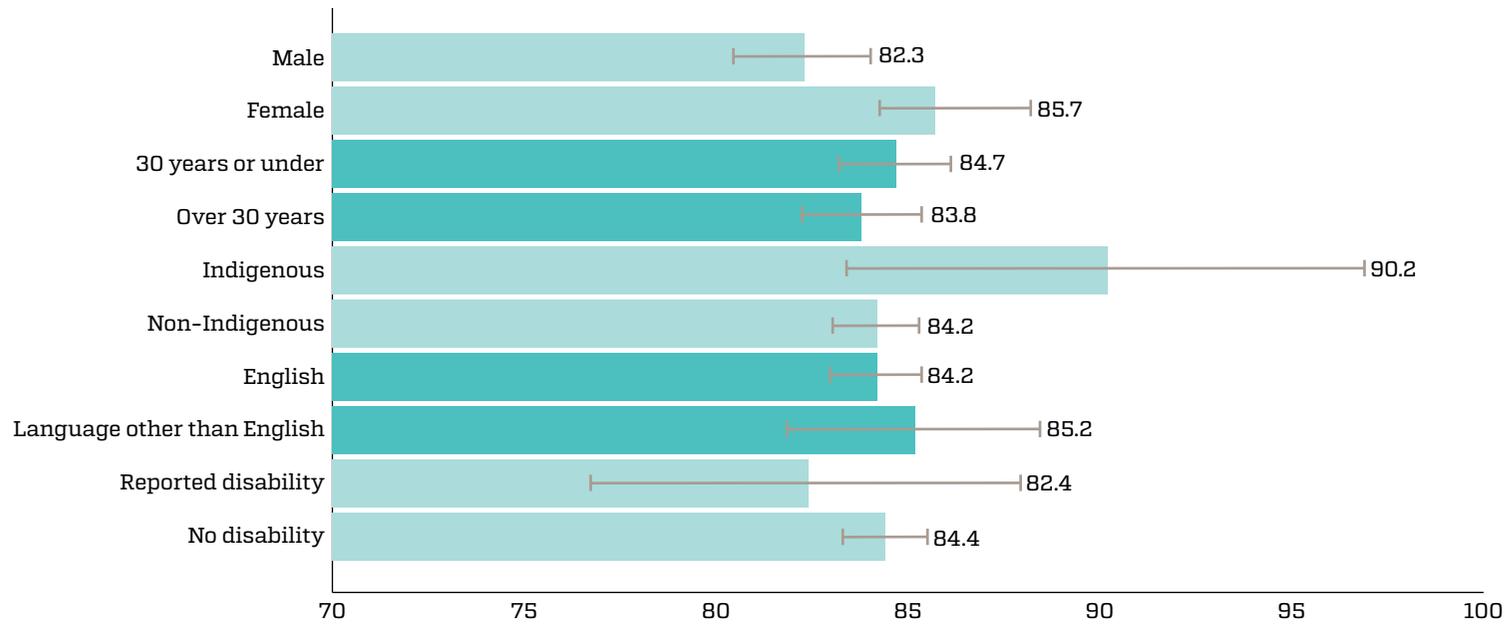


Figure 5 Overall satisfaction by demographic group, 2016 (%)



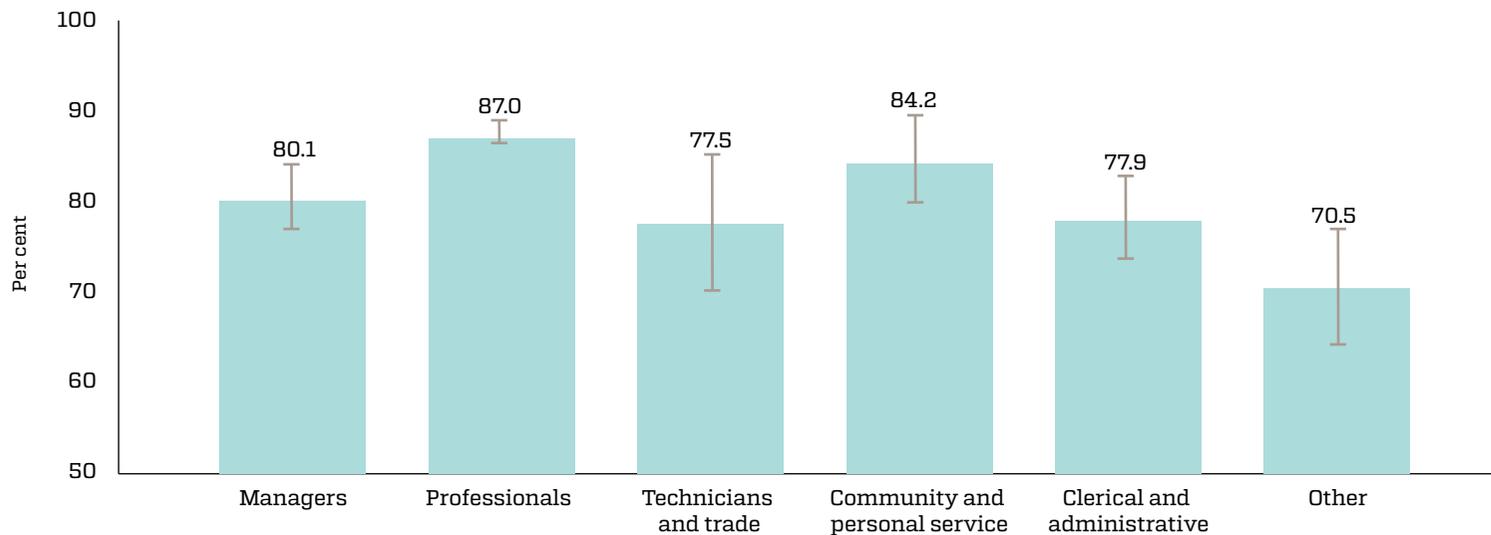
**86%**

Employer satisfaction - female graduates

**82%**

Employer satisfaction - male graduates

Figure 6 Overall satisfaction by occupation, 2016 (%)



Employers appear more satisfied with female graduates, 86 per cent, than with male graduates, 82 per cent, as shown by Figure 5. However, there was no significant difference between male and female graduates in supervisor ratings of other graduate attributes, as shown by Table 4. Supervisors rated the collaborative skills of younger graduates, those 30 years or under, graduates whose home language was other than English and graduates reporting a disability more highly at 89 per cent, 92 per cent and 89 per cent respectively, as shown by Table 4. While employers reported higher overall satisfaction with Indigenous graduates, 90 per cent, than with non-Indigenous graduates, 84 per cent, due to the low level of responses this difference was not significant.

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. Employer satisfaction with graduates working in all other occupations was significantly lower with the exception of those working in community and personal service occupations, as shown by Figure 6. Employers rated the collaborative skills of graduates working in community and personal service occupations highest at 94 per cent, though this was not significantly higher than for graduates working in 'other' occupations, as shown by Table 5.

Although employers overall satisfaction with graduates working full-time, 85 per cent, was higher than with graduates who worked part-time, 83 per cent, this difference was not significant, as shown by Figure 7. Similarly, employers overall satisfaction with graduates who had been working with them for less than 3 months was higher, 86 per cent, than graduates who had been working with them for one year or more, 83 per cent, though this difference was not significant.

Employers reported higher overall satisfaction with graduates working in professional occupations

Figure 7 Overall satisfaction by employment characteristics, 2016 (%)

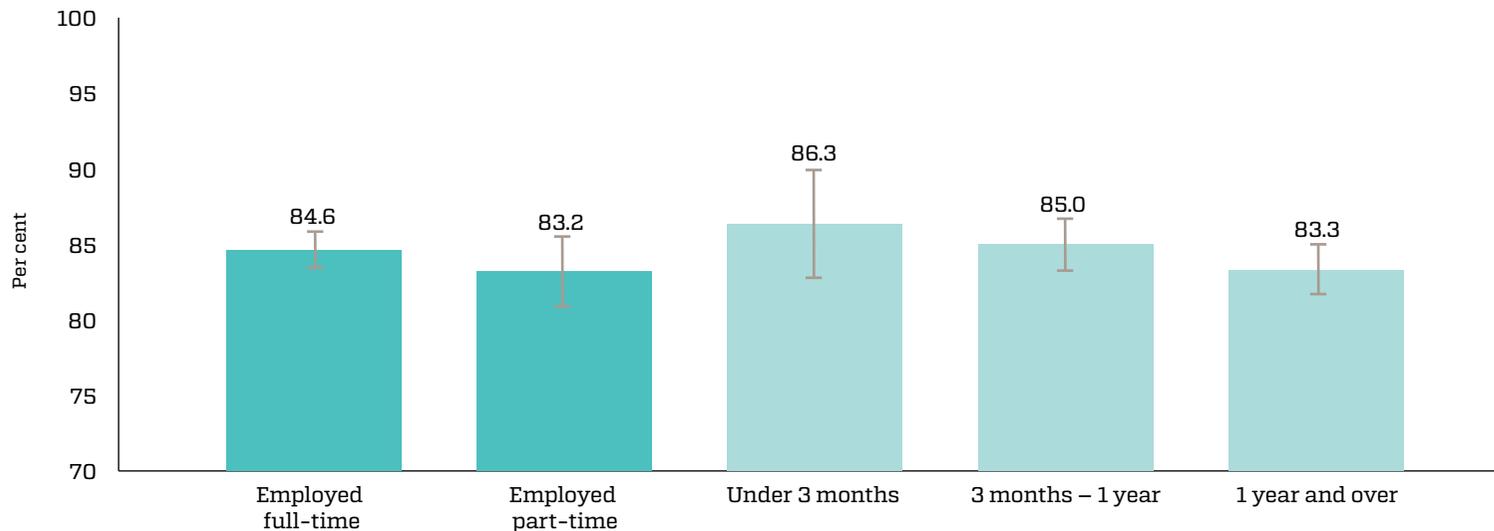


Table 2 Employer satisfaction by broad field of education, 2016

	Foundation		Adaptive		Collaborative		Technical		Employability		Overall satisfaction	
	%	CI	%	CI	%	CI	%	CI	%	CI	%	CI
Natural and Physical Sciences	94.8	(92.2, 97.4)	89.7	(86.0, 93.4)	86.1	(82.0, 90.2)	91.3	(87.9, 94.7)	82.8	(78.1, 87.5)	83.1	(78.7, 87.5)
Information Technology	91.3	(86.8, 95.8)	89.7	(84.6, 94.8)	82.7	(76.4, 89.0)	92.8	(88.5, 97.1)	83.7	(77.4, 90.0)	86.5	(81.0, 92.0)
Engineering and Related Technologies	95.0	(92.5, 97.5)	89.8	(86.2, 93.4)	88.3	(84.5, 92.1)	93.7	(90.8, 96.6)	86.3	(82.2, 90.4)	88.7	(85.0, 92.4)
Architecture and Building	87.3	(80.4, 94.2)	87.1	(80.1, 94.1)	82.0	(73.9, 90.1)	88.7	(82.1, 95.3)	74.2	(65.1, 83.3)	84.1	(76.5, 91.7)
Agriculture and Environmental Studies	100.0	(100.0, 100.0)	94.9	(90.2, 99.6)	95.0	(90.4, 99.6)	96.6	(92.7, 100.0)	93.1	(87.6, 98.6)	84.7	(77.0, 92.4)
Health	91.7	(90.0, 93.4)	86.5	(84.4, 88.6)	85.0	(82.8, 87.2)	92.5	(90.8, 94.2)	81.1	(78.6, 83.6)	88.5	(86.5, 90.5)
Education	91.7	(89.7, 93.7)	90.9	(88.8, 93.0)	83.2	(80.4, 86.0)	94.5	(92.8, 96.2)	85.5	(82.9, 88.1)	85.7	(83.1, 88.3)
Management and Commerce	91.8	(89.9, 93.7)	87.2	(84.9, 89.5)	82.6	(79.9, 85.3)	90.0	(87.9, 92.1)	85.0	(82.5, 87.5)	80.2	(77.4, 83.0)
Society and Culture	91.5	(89.5, 93.5)	88.5	(86.2, 90.8)	85.8	(83.3, 88.3)	92.9	(91.1, 94.7)	84.3	(81.7, 86.9)	83.1	(80.5, 85.7)
Creative Arts	91.7	(87.6, 95.8)	89.0	(84.3, 93.7)	87.6	(82.7, 92.5)	89.6	(84.9, 94.3)	84.5	(78.8, 90.2)	78.2	(72.1, 84.3)
<b>Total</b>	<b>92.0</b>	<b>(91.2, 92.8)</b>	<b>88.4</b>	<b>(87.4, 89.4)</b>	<b>84.6</b>	<b>(83.5, 85.7)</b>	<b>92.2</b>	<b>(91.4, 93.0)</b>	<b>83.8</b>	<b>(82.7, 84.9)</b>	<b>84.3</b>	<b>(83.2, 85.4)</b>

Table 3 Employer satisfaction by type of institution and course characteristics, 2016 (%)

		Foundation		Adaptive		Collaborative		Technical		Employability		Overall satisfaction	
		%	CI	%	CI	%	CI	%	CI	%	CI	%	CI
<b>Type of institution</b>	University	92.1	(91.3, 92.9)	88.6	(87.6, 89.6)	84.7	(83.6, 85.8)	92.3	(91.5, 93.1)	83.8	(82.6, 85.0)	84.3	(83.2, 85.4)
	NUHEI	89.9	(84.9, 94.9)	83.5	(77.3, 89.7)	81.6	(75.2, 88.0)	90.7	(85.8, 95.6)	82.3	(75.9, 88.7)	81.9	(75.4, 88.4)
<b>Mode</b>	Internal	92.5	(91.6, 93.4)	88.7	(87.6, 89.8)	86.4	(85.2, 87.6)	92.8	(91.9, 93.7)	84.5	(83.2, 85.8)	85.2	(84.0, 86.4)
	External	90.4	(88.6, 92.2)	87.5	(85.5, 89.5)	79.1	(76.6, 81.6)	90.5	(88.7, 92.3)	81.5	(79.1, 83.9)	81.3	(78.9, 83.7)
<b>Course level</b>	Undergraduate	92.7	(91.6, 93.8)	87.2	(85.7, 88.7)	88.5	(87.1, 89.9)	93.1	(92.0, 94.2)	84.3	(82.7, 85.9)	85.4	(83.9, 86.9)
	Postgraduate coursework	90.5	(89.2, 91.8)	88.6	(87.2, 90.0)	80.4	(78.6, 82.2)	90.8	(89.5, 92.1)	82.8	(81.1, 84.5)	82.9	(81.2, 84.6)
	Postgraduate research	96.7	(94.7, 98.7)	94.8	(92.3, 97.3)	85.2	(81.2, 89.2)	96.2	(94.0, 98.4)	86.3	(82.3, 90.3)	85.8	(81.9, 89.7)
<b>Total</b>		<b>92.0</b>	<b>(91.2, 92.8)</b>	<b>88.4</b>	<b>(87.4, 89.4)</b>	<b>84.6</b>	<b>(83.5, 85.7)</b>	<b>92.2</b>	<b>(91.4, 93.0)</b>	<b>83.8</b>	<b>(82.7, 84.9)</b>	<b>84.3</b>	<b>(83.2, 85.4)</b>

Table 4 Employer satisfaction by demographic characteristics, 2016 (%)

		Foundation		Adaptive		Collaborative		Technical		Employability		Overall satisfaction	
		%	CI	%	CI	%	CI	%	CI	%	CI	%	CI
<b>Gender</b>	Male	91.9	(90.6, 93.2)	88.3	(86.8, 89.8)	83.6	(81.8, 85.4)	91.1	(89.7, 92.5)	82.8	(81.0, 84.6)	82.3	(80.5, 84.1)
	Female	92.1	(91.0, 93.2)	88.5	(87.2, 89.8)	85.4	(84.0, 86.8)	93.1	(92.1, 94.1)	84.4	(82.9, 85.9)	85.7	(84.3, 87.1)
<b>Age</b>	30 years or under	93.1	(92.0, 94.2)	88.2	(86.8, 89.6)	89.0	(87.7, 90.3)	93.2	(92.1, 94.3)	84.8	(83.3, 86.3)	84.7	(83.2, 86.2)
	Over 30 years	90.8	(89.5, 92.1)	88.7	(87.3, 90.1)	79.9	(78.1, 81.7)	91.2	(90.0, 92.4)	82.7	(81.0, 84.4)	83.8	(82.2, 85.4)
<b>Indigenous</b>	Indigenous	92.0	(85.7, 98.3)	89.8	(82.7, 96.9)	80.9	(71.5, 90.3)	98.0	(94.7, 100.0)	83.3	(74.4, 92.2)	90.2	(83.4, 97.0)
	Not Indigenous	92.0	(91.2, 92.8)	88.4	(87.4, 89.4)	84.7	(83.6, 85.8)	92.1	(91.3, 92.9)	83.8	(82.6, 85.0)	84.2	(83.1, 85.3)
<b>Home language</b>	English	91.9	(91.0, 92.8)	88.4	(87.4, 89.4)	83.7	(82.5, 84.9)	92.0	(91.1, 92.9)	83.3	(82.1, 84.5)	84.2	(83.0, 85.4)
	Language other than English	93.2	(90.8, 95.6)	88.2	(85.2, 91.2)	92.3	(89.8, 94.8)	94.6	(92.4, 96.8)	87.9	(84.8, 91.0)	85.2	(81.9, 88.5)
<b>Disability</b>	Reported disability	94.2	(90.7, 97.7)	83.8	(78.2, 89.4)	89.3	(84.7, 93.9)	94.9	(91.6, 98.2)	82.3	(76.4, 88.2)	82.4	(76.8, 88.0)
	No disability	91.9	(91.1, 92.7)	88.6	(87.6, 89.6)	84.4	(83.3, 85.5)	92.1	(91.3, 92.9)	83.8	(82.6, 85.0)	84.4	(83.3, 85.5)
<b>Total</b>		<b>92.0</b>	<b>(91.2, 92.8)</b>	<b>88.4</b>	<b>(87.4, 89.4)</b>	<b>84.6</b>	<b>(83.5, 85.7)</b>	<b>92.2</b>	<b>(91.4, 93.0)</b>	<b>83.8</b>	<b>(82.7, 84.9)</b>	<b>84.3</b>	<b>(83.2, 85.4)</b>

Table 5 Employer satisfaction by labour market characteristics, per cent

		Foundation		Adaptive		Collaborative		Technical		Employability		Overall satisfaction	
		%	CI	%	CI	%	CI	%	CI	%	CI	%	CI
<b>Occupation</b>	Managers	90.4	(87.7, 93.1)	91.3	(88.7, 93.9)	82.9	(79.4, 86.4)	89.9	(87.1, 92.7)	87.1	(84.0, 90.2)	80.1	(76.5, 83.7)
	Professionals	92.3	(91.3, 93.3)	88.4	(87.2, 89.6)	83.9	(82.5, 85.3)	93.1	(92.2, 94.0)	82.6	(81.2, 84.0)	87.0	(85.8, 88.2)
	Technicians and trades workers	89.9	(84.6, 95.2)	84.4	(78.1, 90.7)	82.4	(75.8, 89.0)	90.8	(85.7, 95.9)	86.0	(79.8, 92.2)	77.5	(70.2, 84.8)
	Community and personal service workers	92.0	(88.6, 95.4)	91.8	(88.3, 95.3)	93.9	(91.0, 96.8)	94.7	(91.9, 97.5)	86.3	(81.9, 90.7)	84.2	(79.7, 88.7)
	Clerical and administrative workers	92.8	(90.1, 95.5)	84.8	(81.0, 88.6)	83.7	(79.9, 87.5)	89.3	(86.0, 92.6)	82.8	(78.8, 86.8)	77.9	(73.5, 82.3)
	Other workers	91.6	(87.6, 95.6)	88.6	(83.9, 93.3)	91.1	(87.1, 95.1)	91.5	(87.3, 95.7)	90.2	(85.8, 94.6)	70.5	(64.1, 76.9)
<b>Employment status</b>	Employed full-time	92.3	(91.4, 93.2)	88.9	(87.8, 90.0)	83.8	(82.5, 85.1)	92.4	(91.5, 93.3)	83.9	(82.6, 85.2)	84.6	(83.4, 85.8)
	Employed part-time	91.2	(89.4, 93.0)	86.6	(84.4, 88.8)	87.2	(85.1, 89.3)	91.7	(89.9, 93.5)	83.3	(80.9, 85.7)	83.2	(80.9, 85.5)
<b>Duration of job with current employer</b>	Less than 3 months	90.7	(87.7, 93.7)	86.7	(83.2, 90.2)	86.4	(82.9, 89.9)	91.0	(88.1, 93.9)	81.5	(77.4, 85.6)	86.3	(82.8, 89.8)
	3 months to < 1 year	91.6	(90.3, 92.9)	87.2	(85.6, 88.8)	88.0	(86.5, 89.5)	92.6	(91.4, 93.8)	84.1	(82.4, 85.8)	85.0	(83.3, 86.7)
	1 year or more	92.6	(91.5, 93.7)	89.8	(88.5, 91.1)	81.2	(79.5, 82.9)	92.1	(90.9, 93.3)	83.9	(82.3, 85.5)	83.3	(81.7, 84.9)
<b>Total</b>		<b>92.0</b>	<b>(91.2, 92.8)</b>	<b>88.4</b>	<b>(87.4, 89.4)</b>	<b>84.6</b>	<b>(83.5, 85.7)</b>	<b>92.2</b>	<b>(91.4, 93.0)</b>	<b>83.8</b>	<b>(82.7, 84.9)</b>	<b>84.3</b>	<b>(83.2, 85.4)</b>

### 3.2 Skills relevance and utilisation

There are concerns that the demand driven funding system may be leading to an oversupply of graduates. This manifests itself in the 'overeducation' 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.<sup>3</sup> The Employer Satisfaction Survey provides valuable evidence on employers' perceptions on the relevance and utilisation of higher education graduates' skills and qualifications. It will be important to monitor these assessments over time.

Overall, graduates tended to view their qualification as less important for their current employment than did their supervisors, as shown by Table 6. Over half of the graduates, 58 per cent, considered their qualification to be 'very important' or 'important' to their current job. Just over one in ten graduates, 11 per cent, felt that it was 'not at all important'. On the other hand, around two-thirds, 66 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 current job. Given that half of the graduates had been employed for a relatively short period of time after completing their qualification, it is possible that they did not fully comprehend the extent to which their qualification is important for their job.

**58%**

% of graduates indicating their qualification was important for their current job

**66%**

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

Table 6 Importance of qualification for current employment, 2016

	Graduates		Supervisors	
	%	CI	%	CI
Very important	38.5	(37.1, 39.9)	42.8	(41.3, 44.3)
Important	19.3	(18.1, 20.5)	22.9	(21.6, 24.2)
Fairly important	18.0	(16.9, 19.1)	16.3	(15.2, 17.4)
Not that important	13.5	(12.5, 14.5)	11.3	(10.4, 12.2)
Not at all important	10.7	(9.8, 11.6)	6.8	(6.1, 7.5)
<b>Total</b>	<b>100.0</b>		<b>100.0</b>	

<sup>3</sup> For example, see Mavromaras, K., McGuinness, S., & O'Leary, N. (2009). Job mismatches and labour market outcomes, 1–26. Retrieved from <http://www.econstor.eu/handle/10419/50157> on the match between graduates and their jobs.

Table 7 Importance of qualification for current employment by broad field of education, 2016\*

	Graduates		Supervisors	
	%	CI	%	CI
Natural and Physical Sciences	47.3	(41.5, 53.1)	63.2	(57.6, 68.8)
Information Technology	40.6	(32.8, 48.4)	56.6	(48.7, 64.5)
Engineering and Related Technologies	51.2	(45.5, 56.9)	61.0	(55.4, 66.6)
Architecture and Building	66.7	(56.9, 76.5)	77.8	(69.2, 86.4)
Agriculture and Environmental Studies	40.3	(30.1, 50.5)	51.6	(41.2, 62.0)
Health	76.9	(74.3, 79.5)	81.4	(79.0, 83.8)
Education	72.9	(69.7, 76.1)	78.6	(75.6, 81.6)
Management and Commerce	42.2	(38.8, 45.6)	51.9	(48.5, 55.3)
Society and Culture	50.4	(47.0, 53.8)	60.7	(57.4, 64.0)
Creative Arts	43.8	(36.6, 51.0)	41.7	(34.5, 48.9)
<b>Total</b>	<b>57.8</b>	<b>(56.3, 59.3)</b>	<b>65.7</b>	<b>(64.3, 67.1)</b>
<b>Standard deviation (percentage points)</b>	<b>14.0</b>		<b>13.0</b>	

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

Health and Education qualifications were rated by graduates and supervisors as being more important for their current position, which is consistent with earlier findings showing higher employer satisfaction with graduates with more vocationally oriented qualifications. These qualifications may be a requirement for employment. For example, 77 per cent of graduates and 81 per cent of supervisors thought that Health qualifications were important for current employment, as shown by Table 7.

Similarly, 73 per cent of graduates and 79 per cent of supervisors thought that Education qualifications were important for current employment. Note that Health and Education estimates are not significantly higher than for Architecture and Building graduates. Supervisors of Creative Arts, Agriculture and Environmental Studies and Management and Commerce graduates were least likely to think that the qualification was important for current employment, 42 per cent, 52 per cent and 52 per cent respectively.

Health and Education qualifications were rated by graduates and supervisors as being more important for their current position

Table 8 Importance of qualification for current employment, by occupation group, 2016\*

	Graduates		Supervisors	
	%	CI	%	CI
Managers	50.1	(45.6, 54.6)	58.4	(54.0, 62.8)
Professionals	68.4	(66.7, 70.1)	76.7	(75.2, 78.2)
Technicians and trades workers	39.8	(31.4, 48.2)	48.4	(39.9, 56.9)
Community and personal service workers	35.7	(29.9, 41.5)	37.0	(31.1, 42.9)
Clerical and administrative workers	28.8	(24.2, 33.4)	45.5	(40.4, 50.6)
Other workers	na	na	na	na
<b>Total</b>	<b>57.7</b>	<b>(56.2, 59.2)</b>	<b>65.7</b>	<b>(64.3, 67.1)</b>

\*Refers to the percentage of graduates and supervisors rating the qualification as 'very important' or 'important' for current employment. na indicates suppression due to the number of responses being less than 25.

Table 9 Extent to which qualification prepared graduate for current employment, 2016

	Graduates		Supervisors	
	%	CI	%	CI
Very well	45.2	(43.7, 46.7)	50.5	(48.9, 52.1)
Well	43.4	(41.9, 44.9)	42.0	(40.5, 43.5)
Not well	5.5	(4.8, 6.2)	3.7	(3.1, 4.3)
Not at all	6.0	(5.3, 6.7)	3.8	(3.2, 4.4)
<b>Total</b>	<b>100.0</b>		<b>100.0</b>	

Graduates and their supervisors were also asked to indicate the extent to which the recent qualification prepared the graduate for their job. More than nine out of ten graduates and supervisors, 89 per cent 93 per cent respectively, thought the qualification prepared the graduate for the job, as shown in Table 9. 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.

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 well 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.

93%

% of supervisors stating the qualification prepared the graduate well for their current job

Table 10 Extent to which qualification prepared graduate well or very well for current employment, by broad field of education, 2016

	Graduates		Supervisors	
	%	CI	%	CI
Natural and Physical Sciences	83.9	(79.5, 88.3)	91.9	(88.7, 95.2)
Information Technology	86.0	(80.3, 91.7)	95.8	(92.5, 99.2)
Engineering and Related Technologies	80.8	(76.1, 85.5)	90.5	(87.0, 94.0)
Architecture and Building	90.2	(83.9, 96.5)	91.5	(85.6, 97.5)
Agriculture and Environmental Studies	89.8	(83.3, 96.3)	89.7	(83.1, 96.2)
Health	93.7	(92.2, 95.2)	94.3	(92.8, 95.7)
Education	92.2	(90.2, 94.2)	93.9	(92.0, 95.7)
Management and Commerce	89.4	(87.2, 91.6)	91.9	(89.9, 93.8)
Society and Culture	84.6	(82.1, 87.1)	90.3	(88.2, 92.4)
Creative Arts	79.2	(73.1, 85.3)	90.7	(86.0, 95.3)
<b>Total</b>	<b>88.5</b>	<b>(87.5, 89.5)</b>	<b>92.5</b>	<b>(91.7, 93.3)</b>
<b>Standard deviation (percentage points)</b>	<b>5.0</b>		<b>2.0</b>	

In general, graduates across all fields of education were less likely than their supervisors to indicate they felt their qualification prepared them for their current job, as shown by Table 10. Creative Arts graduates were least likely to state that their qualification prepared them for their job, 79 per cent and much less likely than their supervisors, 91 per cent, to state this was the case. It should also be noted there was less variation across fields of education

among supervisors stating the qualification prepared the graduate for current employment, 2 percentage points, than among those stating the qualification was important for the job, 13 percentage points (see Table 7). 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.

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 11 Extent to which qualification prepared graduate well or very well for current employment, by occupation, 2016 (%)

	Graduates		Supervisors	
	%	CI	%	CI
Managers	91.8	(89.3, 94.3)	94.7	(92.6, 96.8)
Professionals	92.4	(91.4, 93.4)	94.6	(93.7, 95.5)
Technicians and trades workers	88.4	(82.7, 94.1)	84.7	(78.3, 91.1)
Community and personal service workers	75.7	(70.3, 81.1)	87.3	(83.0, 91.6)
Clerical and administrative workers	78.8	(74.4, 83.2)	90.1	(86.8, 93.4)
Other workers	55.3	(47.9, 62.7)	71.3	(64.4, 78.2)
<b>Total</b>	<b>88.5</b>	<b>(87.5, 89.5)</b>	<b>92.5</b>	<b>(91.7, 93.3)</b>

na indicates suppression due to the number of responses being less than 25.

Table 11 shows that supervisors of graduates working in professional occupations were most likely, 95 per cent, to state that the qualification had prepared the graduate well or very well for current employment.

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 12 and 2,135 or 70 per cent of supervisors provided a comment. Around half of the supervisors, 51 per cent, 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 Employability skills, 36 per cent, Adaptive skills, 33 per cent, and Technical skills, 29 per cent. Positive feedback was also provided in relation to specific attributes of the higher education institution or the course, 12 per cent, and the Personal attributes of the graduate, 7 per cent.

Fewer supervisors, 35 per cent provided feedback when asked about the main ways that the qualification could have better prepared the graduate for employment suggesting the majority felt that the graduate had been well prepared for the workplace, as shown by Table 13. Although not shown in Table 13, an additional 421 supervisors indicated that this question was 'not applicable' as they believed that there was nothing else that the graduate required with respect to preparation for employment. These observations are consistent with the very positive supervisor ratings of graduate preparation.

The greatest number of comments were again made in relation to Domain specific skills and knowledge, 38 per cent. Supervisor feedback regarding how to better prepare graduates for employment also focused on Technical skills, 32 per cent, and Employability skills, 30 per cent.

**Table 12 Main ways that the qualification prepared the graduate for employment, 2016\***

	%	CI
Domain specific skills and knowledge	50.9	(49.1, 52.7)
Employability skills	36.1	(34.4, 37.8)
Adaptive skills	32.8	(31.1, 34.5)
Technical skills	29.0	(27.4, 30.6)
Foundation skills	20.0	(18.6, 21.4)
Institutional and course attributes	12.2	(11.0, 13.4)
Teamwork and interpersonal skills	8.9	(7.9, 9.9)
Personal attributes	7.4	(6.5, 8.3)

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

**Table 13 Main ways that the qualification could have better prepared the graduate for employment, 2016\***

	%	CI
Domain specific skills and knowledge	37.7	(35.2, 40.2)
Technical skills	32.2	(29.8, 34.6)
Employability skills	29.6	(27.3, 31.9)
Institutional and course attributes	16.6	(14.7, 18.5)
Foundation skills	7.5	(6.2, 8.8)
Adaptive skills	5.4	(4.3, 6.5)
Teamwork and interpersonal skills	5.1	(4.0, 6.2)
Personal attributes	2.6	(1.8, 3.4)

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

# 4 Methodology

## 4.1 Institutions and responses

The 2016 ESS was primarily conducted as a national online survey among 96 higher education institutions including all 40 Table A and B universities and 56 Non-University Higher Education Institutions (NUHEIs). The population frame for the ESS comprised 89,349 graduates, domestic and international, who responded in the 2016 GOS they were employed. Of these, 6,882 employed graduates provided sufficient contact details to approach supervisors, yielding a graduate referral rate of 7.7 per cent. Once again, there appears to be a continuing 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 3,061 valid survey responses from direct supervisors were collected across all study levels, representing a supervisor response rate of 44.5 per cent. Further information on survey methodology and institutional responses is included in Appendices 1 and 3.

## 4.2 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 Health and Education are overrepresented in the survey while Society and Culture, Management and Commerce and Creative Arts are underrepresented in the ESS, as shown by Table 14. From Figure 3 before, supervisors of Education and Health graduates reported higher overall satisfaction while supervisors of Society and Culture, Management and Commerce and Creative Arts graduates reported lower overall satisfaction. Therefore, the bias in supervisor responses by field of education, all other things equal, raises reported overall satisfaction.

Table 15 suggests there is little difference in the pattern of university and non-university responses but there is a disproportionately higher level of response from supervisors of external and postgraduate coursework graduates in the ESS. Figure 3 shows that supervisors of external graduates report lower overall satisfaction so that overrepresentation of the supervisors of external graduates would lead to a downward bias in reported overall satisfaction in the 2016 ESS. There was little significant difference in reported overall satisfaction by course level. Therefore the overrepresentation of supervisors of postgraduate coursework graduates is unlikely to materially impact on reported overall satisfaction levels in the ESS.

Table 14 Respondents by broad field of education\*

	Employed graduates			Supervisors		
	n	%	CI	n	%	CI
Natural and Physical Sciences	6,662	7.4	(7.3, 7.6)	185	5.9	(5.3, 6.8)
Information Technology	3,079	3.4	(3.3, 3.5)	103	3.4	(2.8, 3.9)
Engineering and Related Technologies	5,380	6.0	(5.9, 6.2)	201	6.6	(5.8, 7.3)
Architecture and Building	2,022	2.3	(2.2, 2.3)	63	2.1	(1.6, 2.5)
Agriculture and Environmental Studies	1,515	1.7	(1.6, 1.8)	62	2.0	(1.6, 2.4)
Health	18,086	20.2	(20.0, 20.5)	713	23.3	(22.0, 24.5)
Education	10,378	11.5	(11.4, 11.8)	498	16.0	(15.2, 17.4)
Management and Commerce	17,704	19.6	(19.6, 20.0)	545	17.7	(16.7, 18.9)
Society and Culture	19,178	21.1	(21.2, 21.7)	564	18.2	(17.3, 19.6)
Creative Arts	5,336	5.9	(5.8, 6.1)	126	4.1	(3.5, 4.7)
<b>Total</b>	<b>89,349</b>	<b>100.0</b>		<b>3,061</b>	<b>100.0</b>	

\*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.

Table 15 Respondents by type of institution and course characteristics

		Employed graduates			Supervisors		
		n	%	CI	n	%	CI
<b>Type of Institution</b>	University	85,944	96.2	(96.1, 96.3)	2,959	96.7	(96.2, 97.2)
	Non-university	3,405	3.8	(3.7, 3.9)	102	3.3	(2.8, 3.8)
<b>Mode</b>	Internal	74,632	84.0	(83.8, 84.2)	2,328	76.0	(74.7, 77.3)
	External	14,539	16.0	(15.8, 16.2)	732	24.0	(22.7, 25.3)
<b>Course level</b>	Undergraduate	49,958	55.9	(55.6, 56.2)	1,440	47.0	(45.5, 48.5)
	Postgraduate coursework	34,716	38.9	(38.6, 39.2)	1,394	45.5	(44.0, 47.0)
	Postgraduate research	4,675	5.2	(5.1, 5.3)	227	7.4	(6.6, 8.2)

Table 16 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 and they reported lower overall satisfaction, as shown by Figure 6. All other things equal, this would lead to a downward bias in reported overall satisfaction.

Supervisors of graduates aged 30 years and over are overrepresented in the ESS. This is consistent with the overrepresentation of supervisors of postgraduates shown in Table 15. From Figure 6 earlier, there was little significant difference in reported overall satisfaction of supervisors of younger and older graduates. Therefore the overrepresentation of supervisors of older graduates is unlikely to materially impact on reported overall satisfaction levels in the ESS. Note that

supervisors of older graduates reported lower satisfaction for collaborative skills. Therefore, this would lead to a downward bias in reported satisfaction for collaboration skills in the ESS.

Supervisors of graduates whose home language is English are overrepresented in the ESS. From Figure 6 earlier, there was little significant difference in reported overall satisfaction of supervisors of graduates who did or did not speak English at home. Therefore the overrepresentation of supervisors of graduates whose home language is English is unlikely to materially impact on reported overall satisfaction levels in the ESS. Note that supervisors of graduates whose home language is English reported lower satisfaction for collaborative skills. Therefore, this would lead to a downward bias in reported satisfaction for collaboration skills in the ESS.

Table 16 Respondents by demographic characteristics

		Employed graduates			Supervisors		
		n	%	CI	n	%	CI
<b>Gender</b>	Male	33,963	38.1	(37.8, 38.4)	1,270	41.5	(40.0, 43.0)
	Female	55,205	61.9	(61.6, 62.2)	1,790	58.5	(57.0, 60.0)
<b>Age</b>	30 years or under	62,127	69.5	(69.2, 69.8)	1,596	52.1	(50.6, 53.6)
	Over 30 years	27,220	30.5	(30.2, 30.8)	1,465	47.9	(46.4, 49.4)
<b>Indigenous</b>	Indigenous	712	0.8	(0.8, 0.8)	52	1.7	(1.3, 2.1)
	Not Indigenous	88,459	99.2	(99.2, 99.2)	3,008	98.3	(97.9, 98.7)
<b>Home language</b>	English	78,008	87.3	(87.1, 87.5)	2,730	89.2	(88.3, 90.1)
	Language other than English	11,341	12.7	(12.5, 12.9)	331	10.8	(9.9, 11.7)
<b>Disability</b>	Reported disability	3,615	4.1	(4.0, 4.2)	128	4.2	(3.6, 4.8)
	No disability	85,554	95.9	(95.8, 96.0)	2,932	95.8	(95.2, 96.4)

Table 17 Respondents by labour market characteristics

		Employed graduates			Supervisors		
		n	%	CI	n	%	CI
<b>Occupation</b>	Managers	8,046	9.0	(8.8, 9.2)	339	11.1	(10.2, 12.0)
	Professionals	50,450	59.0	(58.7, 59.3)	2,025	66.5	(65.1, 67.9)
	Technicians and trades workers	2,260	3.0	(2.9, 3.1)	93	3.1	(2.6, 3.6)
	Community and personal service workers	7,078	8.0	(7.8, 8.2)	185	6.1	(5.4, 6.8)
	Clerical and administrative workers	8,089	10.0	(9.8, 10.2)	257	8.4	(7.6, 9.2)
	Other workers	8,962	11.0	(10.8, 11.2)	145	4.8	(4.2, 5.4)
	<b>Total</b>	<b>84,885</b>	<b>100.0</b>		<b>3,044</b>	<b>100.0</b>	
<b>Employment status</b>	Employed full-time	60,638	67.9	(67.6, 68.2)	2,345	76.6	(75.3, 77.9)
	Employed part-time	28,711	32.1	(31.8, 32.4)	716	23.4	(22.1, 24.7)
	<b>Total</b>	<b>89,349</b>	<b>100.0</b>		<b>3,061</b>	<b>100.0</b>	
<b>Duration of job with current employer*</b>	Less than 3 months	10,997	12.3	(12.1, 12.5)	270	8.9	(8.0, 9.6)
	3 months to < 1 year	33,733	37.8	(37.5, 38.0)	1,301	42.6	(41.1, 44.1)
	1 year or more	44,619	49.9	(49.7, 50.2)	1,484	48.6	(47.1, 50.1)
	<b>Total</b>	<b>89,349</b>	<b>100.0</b>		<b>3,055</b>	<b>100.0</b>	

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

Supervisors of graduates working in professional occupations are overrepresented in the ESS. From Figure 7 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 2016 ESS.

Supervisors of graduates employed full-time are overrepresented in the ESS. From Figure 8 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 one year

or more are slightly underrepresented in the ESS. However, their reported overall satisfaction levels are not significantly different, so their underrepresentation is unlikely to materially impact on reported overall satisfaction levels.

In summary, overrepresentation of supervisors of Health and Education graduates and graduates working in professional occupations is likely to lead to an upward bias in reported overall satisfaction. Conversely, overrepresentation of supervisors of external and male graduates is likely to lead to a downward bias in reported overall satisfaction.

### 4.3 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 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 18 shows 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 is expected to lead to upward bias in reported levels of employer satisfaction in the 2016 ESS.

For purposes of comparison, supervisor assessment of these graduate attributes is repeated in the final column. 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 provided lower ratings of graduate attributes, Table 18 demonstrates this was not of a substantially lower order of magnitude. Notwithstanding potential upward bias in reported employer satisfaction, results in the 2016 ESS provide evidence of the likely high quality of graduates from the Australian higher education system.

Table 18 Graduate attributes of graduates who did and did not provide contact details

	Graduates not providing supervisor details		Graduates providing supervisor details		Supervisors	
	%	CI	%	CI	%	CI
Foundation skills	84.3	(84.0, 84.6)	89.6	(89.0, 90.2)	92.0	(91.2, 92.8)
Adaptive skills	82.7	(82.4, 83.0)	88.2	(87.6, 88.8)	88.4	(87.4, 89.4)
Collaborative skills	75.1	(74.8, 75.4)	80.6	(79.8, 81.4)	84.6	(83.5, 85.7)



# Appendices

# Appendix 1

## 2016 ESS

### methodological summary

The collection periods were November 2015 to February 2016 and May to July 2016, with a minor collection taking place in February 2016 to April 2016 to accommodate institutions running an academic calendar of trimesters. 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 instrument (i.e. excluding any department or institution specific items) and screenshots of the survey are included in the full methodology report.

Table 19 ESS project overview

Project element	Total	November 2015 <sup>1</sup>	May 2016
Number of supervisors approached <sup>2</sup>	6,882	2,089	4,793
Number of completed surveys	3,061	840	2,221
Supervisor response rate	44.5%	40.2%	46.3%
Data collection period	2015 – 2016	November 2015 – February 2016 <sup>3</sup>	May – July 2016
Data collection mode	Online and CATI		
Analytic unit	Supervisor		

<sup>1</sup> Includes February supplementary round outcomes.

<sup>2</sup> Excludes opt outs, disqualified and out of scope surveys.

<sup>3</sup> February data collection took place from February to April 2016.

## 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. This sample collection question went through cognitive testing with recent graduates to ensure the most effective text was used.

During May data collection, three different versions of the sample collection question were trialled, and a final version created based on outcomes. During this period a refusal conversion email was also trialled. This involved emailing a subset of those who refused to give supervisor details with specific messages according to their reason for refusing to give details. The emails were not very effective, with 0.2 per cent of graduates providing their supervisor's details in response to the email.

All details entered were manually checked by Social Research Centre staff, and where a graduate had entered invalid contact details they were called to obtain valid 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.

## Call procedures

Call procedures for telephone non-response follow-up for the 2016 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; and
- Providing an automatic email containing a direct link if respondents preferred to complete online rather than complete a telephone interview.
- 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 November 4 2015, February 9 2016 and May 3 2016.

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. 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

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 attempt to complete a CATI survey.

The email workflow included an invitation followed up by a reminder 4 working days later.

Table 20 **Email and reminder schedule**

<b>Email invitation sent</b>	<b>Email reminder sent</b>
Monday	Friday the same week
Tuesday	Following Monday
Wednesday	Following Tuesday
Thursday	Following Wednesday
Friday	Following Thursday

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 2016 ESS was conducted as a national online or CATI survey. A total of 3,061 valid surveys were collected, representing a supervisor response rate of 44.5 per cent overall. Of the valid surveys, 1,344 were completed online and 1,717 were completed over the phone.

# Appendix 2

## Summary of 2016 ESQ Items

Variable	Item Name	Item Label	Base – Detail	Values
Module	Module A: Screening and confirmation			
Text	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)	<ol style="list-style-type: none"> <li>1. Yes</li> <li>2. No, but I used to be their supervisor</li> <li>3. No, I have never been their supervisor (GO TO TERM)</li> </ol>
QS2	SUPERVISOR RELATIONSHIP DURATION	And, how long have you been <E403>'s supervisor?	*(CURRENT OR PREVIOUS SUPERVISOR)	<ol style="list-style-type: none"> <li>1. Less than 1 month</li> <li>2. At least 1 month but less than 3 months</li> <li>3. At least 3 months but less than 1 year</li> <li>4. 1 year or more</li> </ol>
QS5	GRADUATE'S OCCUPATION	How would you describe <E403>'s occupation?	*(ALL)	<ol style="list-style-type: none"> <li>1. Managers and administrators Hospitality, retail and service managers, Specialist managers, Farmers and farm managers, Chief executives, General managers and legislators</li> <li>2. Professionals &amp; 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</li> <li>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</li> <li>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</li> </ol>

Variable	Item Name	Item Label	Base – Detail	Values
<b>Module</b>	<b>Module A: Screening and confirmation</b>			
QS5	GRADUATE'S OCCUPATION	How would you describe <E403>'s occupation?	*(ALL)	<p>5. Community and personal service workers Sports and personal service workers, Protective service workers, Hospitality workers, Carers and aides, Health and welfare support workers</p> <p>6. Sales workers Sales support workers, Sales assistants and salespersons, Sales representatives and agents</p> <p>7. Machinery operators and drivers Store person, Road and rail drivers, Mobile plant operators, Machine and stationary plant operators</p> <p>8. Labourers and related workers Food preparation assistants, Farm, forestry and garden workers, Factory process workers, Construction and mining labourers, Cleaners and laundry workers</p> <p>9. Other (describe) (TEXT BOX)</p>
QS3	AWARENESS OF INSTITUTION	Before today, were you aware that <E403> completed a qualification from <E306C>?	*(ALL)	<p>1. Yes</p> <p>2. No</p>
QS4	AWARENESS OF INSTITUTION	And, before today, were you aware that the qualification <E403> completed was a <qualfinal>?	*(ALL)	<p>1. Yes</p> <p>2. No</p>
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 <b>main PAID</b> occupation? Please roll your cursor over each option to see a full description.	*(ALL)	<p>1. Managers and administrators Hospitality, retail and service managers, Specialist managers, Farmers and farm managers, Chief executives, General managers and legislators</p> <p>2. Professionals &amp; 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</p> <p>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</p>

Variable	Item Name	Item Label	Base – Detail	Values
<b>Module</b>	<b>Module A: Screening and confirmation</b>			
QS7	EMPLOYER OCCUPATION	How would you describe your <b>main PAID</b> occupation? Please roll your cursor over each option to see a full description.	*(ALL)	<p>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</p> <p>5. Community and personal service workers Sports and personal service workers, Protective service workers, Hospitality workers, Carers and aides, Health and welfare support workers</p> <p>6. Sales workers Sales support workers, Sales assistants and salespersons, Sales representatives and agents</p> <p>7. Machinery operators and drivers Store person, Road and rail drivers, Mobile plant operators, Machine and stationary plant operators</p> <p>8. Labourers and related workers Food preparation assistants, Farm, forestry and garden workers, Factory process workers, Construction and mining labourers, Cleaners and laundry workers</p> <p>9. Other (describe) (TEXT BOX)</p>
QS8	EMPLOYER DUTIES	What are the main tasks that you usually perform in this job?	*(ALL)	(VERBATIM RESPONSE TEXT BOX)
<b>Module</b>	<b>Module B: Overall graduate preparation</b>			
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)	<p>1. Yes</p> <p>2. No</p>
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...		<p>1. Not at all important</p> <p>2. Not that important</p> <p>3. Fairly important</p> <p>4. Important</p> <p>5. Very important</p>

Variable	Item Name	Item Label	Base – Detail	Values
<b>Module</b>	<b>Module B: Overall graduate preparation</b>			
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
<b>Module</b>	<b>Module C: Graduate attributes scale</b>			
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
<b>Module</b>	<b>Module C: Graduate attributes scale</b>			
GAS	FOUNDATION SKILLS	<ul style="list-style-type: none"> <li>1. Oral communication skills</li> <li>2. Written communication skills</li> <li>3. Numeracy skills</li> <li>4. Ability to develop relevant knowledge</li> <li>5. Ability to develop relevant skills</li> <li>6. Ability to solve problems</li> <li>7. Ability to integrate knowledge</li> <li>8. Ability to think independently about problems</li> </ul>	*(ALL)	<ul style="list-style-type: none"> <li>1. Strongly disagree</li> <li>2. Disagree</li> <li>3. Neither disagree nor agree</li> <li>4. Agree</li> <li>5. Strongly agree</li> <li>9. Not Applicable</li> </ul>
GAS	TEAMWORK SKILLS	<ul style="list-style-type: none"> <li>15. Working well in a team</li> <li>16. Getting on well with others in the workplace</li> <li>17. Working collaboratively with colleagues to complete tasks</li> <li>18. Understanding different points of view</li> <li>19. Ability to interact with co-workers from different or multi-cultural backgrounds</li> </ul>	*(ALL)	<ul style="list-style-type: none"> <li>1. Strongly disagree</li> <li>2. Disagree</li> <li>3. Neither disagree nor agree</li> <li>4. Agree</li> <li>5. Strongly agree</li> <li>9. Not Applicable</li> </ul>
GAS	TECHNICAL SKILLS	<ul style="list-style-type: none"> <li>20. Applying professional knowledge to job tasks</li> <li>21. Using technology effectively</li> <li>22. Applying technical skills in the workplace</li> <li>23. Maintaining professional standards</li> <li>24. Observing ethical standards</li> <li>25. Using research skills to gather evidence</li> </ul>	*(ALL)	<ul style="list-style-type: none"> <li>1. Strongly disagree</li> <li>2. Disagree</li> <li>3. Neither disagree nor agree</li> <li>4. Agree</li> <li>5. Strongly agree</li> <li>9. Not Applicable</li> </ul>
GAS	EMPLOYABILITY SKILLS	<ul style="list-style-type: none"> <li>26. Ability to work under pressure</li> <li>27. Capacity to be flexible in the workplace</li> <li>28. Ability to meet deadlines</li> <li>29. Understanding the nature of your business or organisation</li> <li>30. Demonstrating leadership skills</li> <li>31. Demonstrating management skills</li> <li>32. Taking responsibility for personal professional development</li> <li>33. Demonstrating initiative in the workplace</li> </ul>	*(ALL)	<ul style="list-style-type: none"> <li>1. Strongly disagree</li> <li>2. Disagree</li> <li>3. Neither disagree nor agree</li> <li>4. Agree</li> <li>5. Strongly agree</li> <li>9. Not Applicable</li> </ul>

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 <a href="mailto:ess@srcentre.com.au">ess@srcentre.com.au</a> .	*IF (QS1=3)	

# Appendix 3

## Institutional participation

Table A3a University participation

<b>Institution</b>
Australian Catholic University
Bond University
Central Queensland University
Charles Darwin University
Charles Sturt University
Curtin University of Technology
Deakin University
Edith Cowan University
Federation University Australia
Flinders University
Griffith University
James Cook University
La Trobe University
Macquarie University
Monash University
Murdoch University
Queensland University of Technology
RMIT University
Southern Cross University
Swinburne University of Technology
The Australian National University

<b>Institution</b>
The University of Adelaide
The University of Melbourne
The University of Notre Dame Australia
The University of Queensland
The University of Sydney
The University of Western Australia
University of Canberra
University of Divinity
University of New England
University of New South Wales
University of Newcastle
University of South Australia
University of Southern Queensland
University of Tasmania
University of Technology, Sydney
University of the Sunshine Coast
University of Wollongong
Victoria University
Western Sydney University
<b>Total</b>

Table A3b **NUHEI participation**

<b>Institution</b>
Adelaide College of Divinity
Australian College of Applied Psychology
Australian College of Theology
Avondale College of Higher Education
Blue Mountains International Hotel Management School
Box Hill Institute
Christian Heritage College
Endeavour College
Holmesglen Institute
Kaplan Business School
Macleay College
Melbourne Polytechnic
Montessori World Education Institute (Australia)
National Art School
SAE Institute and Qantm College
Tabor College of Higher Education
TAFE NSW
TAFE SA
William Angliss Institute
<b>Total</b>

# 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 8. The recoded item scores are not retained in the analysis file.

Because the reporting metric for the 2016 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 8.

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 8 **SPSS syntax used to compute EGAS scale 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 9 **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 10 **SPSS syntax used to compute item satisfaction variables**

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

