2023 Employer Satisfaction Survey (ESS)

National Report – Accessible

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The 2023 ESS was led by Graham Challice and the project team consisted of Lisa Bolton, Natasha Vickers, James Morrison, Cynthia Kim, Benjamin Desta, Javed Mohib, Joe Feng, Rawan Habibeh, Patrick Scott and Serena Kim.

For more information on the conduct and results of the 2023 ESS, see the QILT website: [www.qilt.edu.au](http://www.qilt.edu.au/). The QILT team can be contacted by email at [qilt@srcentre.com.au](mailto:qilt@srcentre.com.au).



Contents

[Acknowledgements ii](#_Toc154133131)

[1. Introduction 1](#_Toc154133132)

[2. Time series 1](#_Toc154133133)

[3. Broad field of education 3](#_Toc154133134)

[4. Type of institution and course characteristics 5](#_Toc154133135)

[5. Demographic and labour market characteristics 6](#_Toc154133136)

[6. Employer satisfaction by institution 8](#_Toc154133137)

[7. Skills relevance and utilisation 12](#_Toc154133138)

[Appendix 1 Methodology 20](#_Toc154133139)

[1.1 Methodological summary 20](#_Toc154133140)

[1.1.1 Overview 20](#_Toc154133141)

[1.1.2 Sample build 22](#_Toc154133142)

[1.1.3 Data collection 22](#_Toc154133143)

[1.2 Response bias 22](#_Toc154133144)

[1.3 Graduate Attributes Scale - Employer 25](#_Toc154133145)

[Appendix 2 ESS questionnaire 26](#_Toc154133146)

[2.1 Core instrument 26](#_Toc154133147)

[Appendix 3 Institutional participation 29](#_Toc154133148)

[Appendix 4 Calculation of confidence intervals 34](#_Toc154133149)

[4.1 Introduction 34](#_Toc154133150)

[4.2 Data sources, variables and coverage 34](#_Toc154133151)

[4.2.1 Data sources 34](#_Toc154133152)

[4.2.2 Data variability 36](#_Toc154133153)

[4.3 Calculation of indicators and confidence intervals 37](#_Toc154133154)

[4.3.1 Overall satisfaction 37](#_Toc154133155)

[4.3.2 Foundation skills 38](#_Toc154133156)

[4.3.3 Adaptive skills 38](#_Toc154133157)

[4.3.4 Collaborative skills 39](#_Toc154133158)

[4.3.5 Technical skills 40](#_Toc154133159)

[4.3.6 Employability skills 41](#_Toc154133160)

List of Tables

[Table 1 Employer satisfaction, 2016-2023 (%) 2](#_Toc154133161)

[Table 2 Employer satisfaction by broad field of education, 2023 (%) 4](#_Toc154133162)

[Table 3 Employer satisfaction by type of institution and course characteristics, 2023 (%) 5](#_Toc154133163)

[Table 4 Employer satisfaction by demographic characteristics, 2023 (%) 6](#_Toc154133164)

[Table 5 Employer satisfaction by labour market characteristics, 2023 (%) 7](#_Toc154133165)

[Table 6 Employer satisfaction by institution (universities only), pooled 2021-2023 (%) 9](#_Toc154133166)

[Table 7 Importance of qualification for current employment, 2023 (%) 13](#_Toc154133167)

[Table 8 Importance of qualification for current employment by broad field of education, 2023 (%) 13](#_Toc154133168)

[Table 9 Importance of qualification for current employment, by occupation, 2023 (%) 16](#_Toc154133169)

[Table 10 Extent to which qualification prepared graduate for current employment, 2023 (%) 16](#_Toc154133170)

[Table 11 Extent to which qualification prepared graduate well or very well for current employment, by broad field of education, 2023 (%) 17](#_Toc154133171)

[Table 12 Extent to which qualification prepared graduate well or very well for current employment, by occupation, 2023 (%) 18](#_Toc154133172)

[Table 13 Main ways that the qualification prepared the graduate for employment, 2023 (%) 19](#_Toc154133173)

[Table 14 Main ways that the qualification could have better prepared the graduate for employment, 2023 (%) 19](#_Toc154133174)

[Table 15 ESS operational overview, 2021-2023 20](#_Toc154133175)

[Table 16 Respondents by broad field of education, 2023 22](#_Toc154133176)

[Table 17 Respondents by type of institution and course characteristics, 2023 23](#_Toc154133177)

[Table 18 Respondents by demographic characteristics, 2023 24](#_Toc154133178)

[Table 19 Respondents by labour market characteristics, 2023 25](#_Toc154133179)

[Table 20 Questionnaire item summary 26](#_Toc154133180)

[Table 21 Number of completed surveys by University, 2021-2023 29](#_Toc154133181)

[Table 22 Number of completed surveys by NUHEI, 2021-2023 31](#_Toc154133182)

[Table 23 Data coverage for the ESS based indicators 35](#_Toc154133183)

## Introduction

The 2023 Employer Satisfaction Survey (ESS) measures employer views of the attributes of recent graduates from Australian higher education institutions 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.

The 2023 ESS represents the largest survey of its kind, reporting the views of 2,992 employers about the attributes of recent graduates from Australian higher education institutions including universities and non-university higher education institutions (NUHEIs). 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 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. 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 survey has been conducted annually since 2016.

The ESS has three design features. First, the ESS is the only national survey in Australia that 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 recent graduates. Third, the ESS is large enough to provide comparisons by broad field of education, employment characteristics, occupation, demographic group, and overall institution.   
  
However, one disadvantage of this more precise 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 ongoing reluctance of graduates to pass on contact details of their direct supervisor with 7.1 per cent of responding graduates providing their direct supervisor details. Further details of the methodology and pattern of responses and possible bias are presented in **Appendix 1**.

Nonetheless, compared with the ESS, 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 2021 QS Graduate Employability Rankings are based on the views of approximately 1,000 Australian employers while the 2020 Times Higher Education Global University Employability Ranking is based on approximately 100 Australian responses.

The ESS is administered in parallel with the GOS and the first collection round for the 2023 ESS started in November 2022, the second in February 2023 and the third in May 2023.

## Time series

The 2023 ESS confirms the findings of earlier surveys that supervisors rate their graduates highly. In 2023, Overall satisfaction with graduates as rated by direct supervisors was 83.7 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?’ These results suggest employers are highly satisfied with the overall quality of graduates from Australia’s higher education system.

Employers were also requested to report the extent to which they agreed or disagreed that a graduates’ course had developed their skills and knowledge across five graduate attribute domains. For the purposes of this report, where employers agreed the course developed the graduate attribute, they are deemed to be ‘satisfied’ with that attribute.

Table 1 shows high levels of employer satisfaction across all attributes:

* 91.2 per cent satisfaction with foundation skills – general literacy, numeracy and communication skills and the ability to investigate and integrate knowledge.
* 88.7 per cent satisfaction with adaptive skills – the ability to adapt and apply skills/knowledge and work independently.
* 86.0 per cent satisfaction with collaborative skills – teamwork and interpersonal skills.
* 92.2 per cent satisfaction with technical skills – application of professional and technical knowledge and standards.
* 84.1 per cent satisfaction with employability skills – the ability to perform and innovate in the workplace.

Table 1 Employer satisfaction, 2016-2023 (%)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Year | **Foundation** | **Adaptive** | **Collaborative** | **Technical** | **Employability** | **Overall satisfaction** |
| **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) |
| **2019** | 92.7 (92.0, 93.3) | 89.3 (88.5, 90.1) | 87.8 (86.9, 88.5) | 92.7 (92.0, 93.3) | 85.4 (84.5, 86.2) | 84.0 (83.1, 84.9) |
| **2020** | 93.7 (93.0, 94.4) | 90.1 (89.2, 91.0) | 88.1 (87.1, 89.0) | 93.8 (93.1, 94.5) | 86.8 (85.8, 87.8) | 84.7 (83.6, 85.7) |
| **2021** | 93.5 (92.8, 94.2) | 90.3 (89.4, 91.1) | 89.3 (88.3, 90.1) | 93.7 (93.0, 94.4) | 86.6 (85.6, 87.6) | 85.3 (84.3, 86.3) |
| **2022** | 93.0 (92.2, 93.7) | 90.1 (89.2, 91.0) | 88.2 (87.2, 89.1) | 92.7 (91.9, 93.4) | 86.8 (85.8, 87.8) | 84.1 (83.0, 85.1) |
| **2023** | 91.2 (90.3, 92.0) | 88.7 (87.7, 89.7) | 86.0 (84.9, 87.1) | 92.2 (91.3, 93.0) | 84.1 (82.9, 85.2) | 83.7 (82.6, 84.8) |

Note: Numbers presented in brackets are the lower and upper confidence intervals. The calculation of these confidence intervals is detailed in **Appendix 4**.

As shown by **Figure 1**, Overall satisfaction and employer satisfaction with the Foundation, Adaptive, Collaborative, and Technical skills attributes decreased slightly between 2022 and 2023. Employer satisfaction with the Employability skills attribute decreased between 2022 and 2023, by 2.7 percentage points. Within the limitations of the survey, employer satisfaction overall, can be considered to be stable in 2023.

Figure 1 Employer satisfaction, 2016-2023 (%)

Note: Data labels are only shown for Overall satisfaction.

## Broad field of education

In 2023, employers reported highest Overall satisfaction with Agriculture and environmental studies graduates at 90.8 per cent. Supervisors also reported high levels of satisfaction with Engineering and related technologies and Education graduates, with 88.8 per cent and 87.4 per cent respectively. On the other hand, employer satisfaction, while still relatively high, appears lower for Creative arts graduates, 75.4 per cent, and Management and Commerce graduates, 78.7 per cent.

Overall satisfaction was significantly higher for Agriculture and environmental studies graduates than for Management and commerce, and Creative arts, as demonstrated by the presentation of confidence intervals in **Figure 2**. This indicates the ESS instrument is capable of discriminating across fields of education.

Figure 2 Employer overall satisfaction by broad field of education\*, 2023 (% satisfied, with 90% confidence intervals)

\* Only fields of education with sufficient data (i.e. n>25) are presented in this figure.

As shown in **Table 2**, employer satisfaction with different graduate attributes varies across fields of education. Employers of Agriculture and environmental studies graduates, and employers of Engineering and related technologies graduates rated graduates above average across all attributes. Employers of Information technology graduates rated graduates below average across all attributes.

Employers of Architecture and building graduates rated graduates highly for their Collaborative skills (95.5 per cent) and Technical skills (96.9 per cent), whereas Information technology graduates received the lowest ratings on these same attributes from their employers (83.9 per cent and 86.0 per cent respectively).

Across all fields of education, the least variation in employer satisfaction occurred in the Foundation skills attribute (7.1 percentage points).

Table 2 Employer satisfaction by broad field of education, 2023 (%)

| **Field of education** | **Foundation** | **Adaptive** | **Collaborative** | **Technical** | **Employability** | **Overall satisfaction** |
| --- | --- | --- | --- | --- | --- | --- |
| Natural and physical sciences | 92.0 (88.5, 94.6) | 87.8 (83.7, 91.0) | 86.4 (82.2, 89.7) | 91.9 (88.3, 94.5) | 84.0 (79.4, 87.7) | 84.8 (80.4, 88.3) |
| Information technology | 89.5 (84.0, 93.3) | 87.0 (81.1, 91.3) | 83.9 (77.7, 88.6) | 86.0 (79.9, 90.4) | 80.0 (73.3, 85.4) | 80.8 (74.3, 86.0) |
| Engineering and related technologies | 95.0 (92.0, 97.0) | 90.9 (87.2, 93.7) | 86.6 (82.4, 90.0) | 95.3 (92.2, 97.2) | 87.3 (82.9, 90.6) | 88.8 (84.9, 91.9) |
| Architecture and building | 92.4 (85.0, 96.5) | 90.5 (82.4, 95.2) | 95.5 (88.8, 98.5) | 96.9 (90.6, 99.4) | 85.7 (76.9, 91.6) | 85.3 (76.8, 91.1) |
| Agriculture and environmental studies | 96.6 (91.4, 98.9) | 96.4 (91.0, 98.8) | 90.7 (84.1, 94.8) | 96.5 (91.3, 98.9) | 90.4 (83.5, 94.6) | 90.8 (84.3, 94.9) |
| Health | 91.3 (89.2, 93.0) | 86.6 (84.2, 88.8) | 87.0 (84.5, 89.1) | 92.2 (90.1, 93.8) | 82.0 (79.2, 84.5) | 85.8 (83.3, 88.0) |
| Education | 90.7 (88.0, 92.8) | 89.6 (86.9, 91.9) | 85.2 (82.1, 87.9) | 93.0 (90.6, 94.8) | 85.5 (82.4, 88.1) | 87.4 (84.5, 89.9) |
| Management and commerce | 90.1 (87.6, 92.2) | 88.3 (85.6, 90.6) | 85.5 (82.6, 88.0) | 90.8 (88.3, 92.8) | 87.1 (84.2, 89.5) | 78.7 (75.4, 81.7) |
| Society and culture | 90.2 (88.0, 92.0) | 88.6 (86.3, 90.5) | 84.7 (82.2, 86.9) | 92.5 (90.6, 94.1) | 82.2 (79.5, 84.6) | 82.4 (79.7, 84.7) |
| Creative arts | 91.1 (85.5, 94.7) | 88.4 (82.4, 92.6) | 86.5 (80.2, 91.0) | 90.7 (85.0, 94.5) | 82.9 (75.9, 88.1) | 75.4 (68.4, 81.3) |
| **All fields** | **91.2 (90.3, 92.0)** | **88.7 (87.7, 89.7)** | **86.0 (84.9, 87.1)** | **92.2 (91.3, 93.0)** | **84.1 (82.9, 85.2)** | **83.7 (82.6, 84.8)** |
| Standard deviation | 2.3 | 2.8 | 3.4 | 3.2 | 3.1 | 4.7 |

Note: The Food, hospitality and personal services broad field of education is not shown as no data was available. Numbers presented in brackets are the lower and upper confidence intervals. The calculation of these confidence intervals is detailed in **Appendix 4**.

## Type of institution and course characteristics

**Table 3** shows that employer Overall satisfaction with graduates from universities (83.7 per cent) is the same for graduates from NUHEIs (83.7 per cent).

Supervisors expressed higher levels of Overall satisfaction with graduates who studied internally (85.5 per cent), in comparison with graduates who studied externally (80.3 per cent). This continues the trend where supervisors rate satisfaction with internal or multi-mode graduates (attended some or all their classes on-campus) more highly than external (undertaken all their study off-campus) graduates. The gap in satisfaction ratings has increased slightly in 2023, with a difference of 5.2 percentage points compared to a 3.1 percentage point difference in 2022, and a 2.0 percentage point difference in 2021. Consistent with previous years, supervisors rated internal graduates significantly higher on Collaborative skills relative to external graduates.

Employers appear less satisfied overall with postgraduate coursework graduates, 82.7 per cent, than with undergraduates, 84.2 per cent, and postgraduate research graduates, 86.1 per cent.

Supervisors rated postgraduate coursework graduates slightly lower than undergraduates across all attributes. This difference is statistically significant for Collaborative skills, where employers rated postgraduate coursework graduates at 83.1 per cent compared with 88.6 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, as observed by the Student Experience Survey Learner Engagement focus area.

Similarly, employers rated postgraduate coursework graduates lower than postgraduate research graduates for all attributes. Employer satisfaction with postgraduate research graduates is higher in terms of Foundation, Adaptive, Technical, and Employability skills, compared to graduates at the postgraduate coursework or undergraduate level.

Table 3 Employer satisfaction by type of institution and course characteristics, 2023 (%)

| Category | **Foundation** | **Adaptive** | **Collaborative** | **Technical** | **Employability** | **Overall satisfaction** |
| --- | --- | --- | --- | --- | --- | --- |
| **Type of institution** | **Foundation** | **Adaptive** | **Collaborative** | **Technical** | **Employability** | **Overall satisfaction** |
| University | 91.3 (90.4, 92.2) | 88.9 (87.9, 89.9) | 86.2 (85.0, 87.2) | 92.3 (91.4, 93.1) | 84.2 (82.9, 85.3) | 83.7 (82.5, 84.9) |
| NUHEI | 89.6 (85.4, 92.6) | 86.4 (81.9, 90.0) | 84.4 (79.7, 88.2) | 90.9 (86.9, 93.8) | 82.7 (77.8, 86.8) | 83.7 (79.0, 87.6) |
| **Study mode\*** | **Foundation** | **Adaptive** | **Collaborative** | **Technical** | **Employability** | **Overall satisfaction** |
| Internal/Mixed mode | 92.1 (91.0, 93.1) | 88.9 (87.6, 90.0) | 88.3 (87.0, 89.5) | 93.5 (92.4, 94.3) | 84.7 (83.2, 86.0) | 85.5 (84.1, 86.8) |
| External study mode | 89.4 (87.6, 90.9) | 88.5 (86.7, 90.1) | 81.9 (79.7, 83.9) | 90.0 (88.2, 91.5) | 83.1 (81.0, 85.1) | 80.3 (78.0, 82.3) |
| **Course level** | **Foundation** | **Adaptive** | **Collaborative** | **Technical** | **Employability** | **Overall satisfaction** |
| Undergraduate | 91.6 (90.3, 92.8) | 88.6 (87.2, 90.0) | 88.6 (87.2, 90.0) | 92.4 (91.1, 93.5) | 84.8 (83.1, 86.4) | 84.2 (82.5, 85.7) |
| Postgraduate coursework | 89.3 (87.8, 90.7) | 87.6 (85.9, 89.1) | 83.1 (81.2, 84.8) | 90.9 (89.3, 92.2) | 82.5 (80.5, 84.3) | 82.7 (80.8, 84.4) |
| Postgraduate research | 97.0 (94.6, 98.3) | 94.3 (91.4, 96.3) | 85.2 (81.3, 88.5) | 97.3 (95.1, 98.6) | 87.1 (83.2, 90.2) | 86.1 (82.2, 89.2) |
| **Total** | **91.2 (90.3, 92.0)** | **88.7 (87.7, 89.7)** | **86.0 (84.9, 87.1)** | **92.2 (91.3, 93.0)** | **84.1 (82.9, 85.2)** | **83.7 (82.6, 84.8)** |

\*Internal mode of attendance is where (i) the study is undertaken through attendance at the higher education provider on a regular basis, or (ii) for higher degree unit enrolments, where regular attendance is not required but the student attends the higher education provider on an agreed schedule for the purposes of supervision and/or instruction. External mode of attendance is where lesson materials, assignments, etc. are delivered to the student, and any associated attendance at the institution is of an incidental, irregular, special or voluntary nature. Mixed mode of attendance is where study is undertaken partially on an internal mode of attendance and partially on an external mode of attendance.

Note: Numbers presented in brackets are the lower and upper confidence intervals. The calculation of these confidence intervals is detailed in **Appendix 4**.

## Demographic and labour market characteristics

**Table 4** shows that overall employer satisfaction with female graduates (84.2 per cent) is slightly higher than for male graduates (83.0 per cent). Employers are more satisfied with female graduates across all attributes, exceeding males by at least two percentage points.

Employers tended to rate the skills of graduates aged 30 years or under marginally higher than those of graduates aged over 30 years across all attributes, with a statistically significant difference noted for Collaborative skills.

Employers tended to rate graduates from a non-English speaking background more highly than graduates from an English-speaking background across all attributes, however, none of the differences were statistically significant.

Differences in employer ratings for Indigenous and non-Indigenous graduates should be treated with caution due to the relatively small number of responses from employers of Indigenous graduates.

Table 4 Employer satisfaction by demographic characteristics, 2023 (%)

| **Category** | **Foundation** | **Adaptive** | **Collaborative** | **Technical** | **Employability** | **Overall satisfaction** |
| --- | --- | --- | --- | --- | --- | --- |
| **Gender** | **Foundation** | **Adaptive** | **Collaborative** | **Technical** | **Employability** | **Overall satisfaction** |
| Male | 90.0 (88.5, 91.4) | 86.4 (84.7, 88.0) | 83.8 (81.9, 85.5) | 90.5 (89.0, 91.9) | 82.0 (80.0, 83.8) | 83.0 (81.1, 84.8) |
| Female | 92.0 (90.8, 93.0) | 90.3 (89.0, 91.4) | 87.5 (86.1, 88.8) | 93.3 (92.2, 94.3) | 85.4 (83.9, 86.8) | 84.2 (82.7, 85.6) |
| **Age** | **Foundation** | **Adaptive** | **Collaborative** | **Technical** | **Employability** | **Overall satisfaction** |
| 30 years or under | 92.2 (90.9, 93.2) | 88.8 (87.4, 90.1) | 88.8 (87.4, 90.1) | 92.6 (91.4, 93.7) | 84.2 (82.6, 85.8) | 85.3 (83.7, 86.8) |
| Over 30 years | 90.1 (88.7, 91.4) | 88.7 (87.2, 90.0) | 82.9 (81.2, 84.6) | 91.8 (90.4, 92.9) | 83.9 (82.1, 85.5) | 82.0 (80.2, 83.6) |
| **Indigenous** | **Foundation** | **Adaptive** | **Collaborative** | **Technical** | **Employability** | **Overall satisfaction** |
| Indigenous | 95.7 (87.1, 99.1) | 89.1 (79.0, 94.9) | 89.1 (79.0, 94.9) | 93.2 (83.7, 97.7) | 79.1 (67.2, 87.5) | 85.7 (74.4, 92.7) |
| Non-Indigenous | 91.1 (90.2, 92.0) | 88.7 (87.7, 89.7) | 86.0 (84.9, 87.0) | 92.2 (91.3, 93.0) | 84.1 (82.9, 85.3) | 83.7 (82.5, 84.8) |
| **Home language** | **Foundation** | **Adaptive** | **Collaborative** | **Technical** | **Employability** | **Overall satisfaction** |
| English | 91.0 (90.1, 91.9) | 88.7 (87.6, 89.7) | 85.6 (84.4, 86.7) | 92.0 (91.1, 92.9) | 83.7 (82.4, 84.9) | 83.5 (82.3, 84.7) |
| Other | 92.4 (89.5, 94.6) | 89.4 (86.1, 92.0) | 89.9 (86.7, 92.5) | 93.8 (91.0, 95.8) | 87.1 (83.5, 90.1) | 85.4 (81.8, 88.4) |
| **Disability** | **Foundation** | **Adaptive** | **Collaborative** | **Technical** | **Employability** | **Overall satisfaction** |
| Reported disability | 90.9 (87.5, 93.5) | 87.1 (83.2, 90.3) | 84.0 (79.8, 87.5) | 92.3 (89.0, 94.7) | 79.9 (75.3, 83.8) | 82.7 (78.4, 86.3) |
| No disability | 91.2 (90.3, 92.1) | 88.9 (87.8, 89.9) | 86.2 (85.1, 87.3) | 92.2 (91.3, 93.0) | 84.5 (83.2, 85.6) | 83.8 (82.6, 85.0) |
| **Total** | **91.2 (90.3, 92.0)** | **88.7 (87.7, 89.7)** | **86.0 (84.9, 87.1)** | **92.2 (91.3, 93.0)** | **84.1 (82.9, 85.2)** | **83.7 (82.6, 84.8)** |

Note: Numbers presented in brackets are the lower and upper confidence intervals. The calculation of these confidence intervals is detailed in **Appendix 4**.

Employers reported the highest Overall satisfaction with graduates working in Professional occupations, at 86.2 per cent (see **Table 5**). Most employer responses in 2023 were for graduates working in Professional occupations, and Overall satisfaction has remained relatively consistent for this group over time.

Employers’ Overall satisfaction with graduates who were working full-time was slightly higher compared to those graduates that worked part-time, 83.9 per cent and 83.1 per cent respectively. Employers rated part-time employed workers marginally higher on all other graduate attributes, although no statistically significant differences were noted.

Employers’ Overall satisfaction was highest for graduates who had been working for three months to less than one year, 85.7 per cent. Employers rated these graduates significantly higher than those who had been working one year or more. Further, employers rated the Adaptive skills of graduates who had work histories of one year or more significantly higher than graduates who had been with their employer less than three months.

Table 5 Employer satisfaction by labour market characteristics, 2023 (%)

| **Categ****ory** | **Foundation** | **Adaptive** | **Collaborative** | **Technical** | **Employability** | **Overall satisfaction** |
| --- | --- | --- | --- | --- | --- | --- |
| **Occupation** | **Foundation** | **Adaptive** | **Collaborative** | **Technical** | **Employability** | **Overall satisfaction** |
| Managers | 89.9 (86.7, 92.4) | 90.2 (87.0, 92.7) | 82.9 (79.0, 86.2) | 90.1 (86.9, 92.6) | 85.1 (81.4, 88.2) | 82.2 (78.2, 85.5) |
| Professionals | 91.6 (90.4, 92.6) | 87.6 (86.3, 88.9) | 85.5 (84.0, 86.8) | 92.9 (91.8, 93.9) | 83.5 (81.9, 84.9) | 86.2 (84.8, 87.5) |
| Technicians and trades workers | 89.8 (84.4, 93.5) | 89.4 (83.9, 93.2) | 85.0 (79.1, 89.6) | 90.5 (85.2, 94.0) | 79.0 (72.2, 84.5) | 79.5 (73.0, 84.8) |
| Community and personal service workers | 89.4 (85.1, 92.6) | 91.1 (87.0, 94.0) | 87.6 (83.1, 91.0) | 90.7 (86.5, 93.7) | 83.6 (78.7, 87.6) | 75.4 (69.9, 80.2) |
| Clerical and administrative workers | 91.1 (88.0, 93.4) | 90.3 (87.0, 92.8) | 88.4 (85.0, 91.1) | 90.8 (87.7, 93.3) | 86.1 (82.4, 89.1) | 79.6 (75.5, 83.2) |
| Other workers | 95.8 (91.5, 98.1) | 94.6 (89.8, 97.4) | 95.2 (90.9, 97.6) | 94.7 (90.0, 97.4) | 91.5 (86.1, 94.9) | 80.2 (73.5, 85.5) |
| **Employment status** | **Foundation** | **Adaptive** | **Collaborative** | **Technical** | **Employability** | **Overall satisfaction** |
| Full-time | 90.8 (89.7, 91.8) | 88.5 (87.3, 89.6) | 85.4 (84.1, 86.6) | 92.0 (91.0, 92.9) | 83.6 (82.2, 84.9) | 83.9 (82.6, 85.2) |
| Part-time | 92.5 (90.6, 94.0) | 89.4 (87.3, 91.2) | 88.0 (85.8, 89.9) | 92.8 (91.0, 94.3) | 85.4 (83.0, 87.6) | 83.1 (80.6, 85.3) |
| **Duration of job with current employer** | **Foundation** | **Adaptive** | **Collaborative** | **Technical** | **Employability** | **Overall satisfaction** |
| Less than 3 months | 90.6 (87.1, 93.2) | 85.2 (81.1, 88.5) | 87.0 (83.1, 90.1) | 91.1 (87.6, 93.7) | 80.2 (75.6, 84.1) | 82.9 (78.6, 86.4) |
| 3 months to < 1 year | 91.2 (89.8, 92.4) | 88.0 (86.3, 89.4) | 88.0 (86.4, 89.4) | 93.0 (91.7, 94.1) | 84.4 (82.6, 86.0) | 85.7 (84.0, 87.2) |
| 1 year or more | 91.3 (89.9, 92.5) | 90.1 (88.7, 91.4) | 84.0 (82.3, 85.6) | 91.6 (90.3, 92.8) | 84.5 (82.8, 86.1) | 82.1 (80.3, 83.7) |
| **Total** | **91.2 (90.3, 92.0)** | **88.7 (87.7, 89.7)** | **86.0 (84.9, 87.1)** | **92.2 (91.3, 93.0)** | **84.1 (82.9, 85.2)** | **83.7 (82.6, 84.8)** |

Note: Numbers presented in brackets are the lower and upper confidence intervals. The calculation of these confidence intervals is detailed in **Appendix 4**.

## Employer satisfaction by institution

This report combines results from the 2021, 2022 and 2023 Employer Satisfaction Surveys to publish results for Table A and B universities at institution level as shown in **Table 6**. This is consistent with the approach utilised on the QILT website where results are pooled across survey years to increase the number of responses, and improve the robustness and validity of the data. The number of employer responses in the 2021 to 2023 surveys across institutions is shown in **Appendix 3**. There are 9,141 employer responses across universities, ranging from 669 responses for The University of Melbourne to 14 responses for Avondale University. The QILT reports and website do not publish results where there are fewer than 25 survey responses. For this reason, results for individual NUHEIs are not shown since for most NUHEIs (and for Avondale University) the number of employer responses is too small.

Employer satisfaction is broadly similar across most of the Table A and B universities, with consistently high levels of satisfaction. Nonetheless, **Table 6** demonstrates the ESS has the capacity to discriminate between universities, with Overall satisfaction ranging from 90.1 per cent to 74.3 per cent. Employers’ Overall satisfaction was rated highest for graduates from Curtin University and The University of Sydney, at 90.1 per cent and 89.6 per cent respectively. Other universities with high Overall satisfaction ratings by employers include Australian Catholic University, Southern Cross University and University of the Sunshine Coast, with 88.9 per cent, 88.8 per cent and 88.2 per cent respectively. Note, however, the small number of responses for most universities means there are wide confidence intervals associated with these estimates. Where confidence intervals overlap between institutions, we cannot infer that there is or is not a significant difference in a statistical sense. Differences in the study area and demographic profile of institutions may also influence results.

Table 6 Employer satisfaction by institution (universities only), pooled 2021-2023 (%)

| **University** | **Foundation** | **Adaptive** | **Collaborative** | **Technical** | **Employability** | **Overall satisfaction** |
| --- | --- | --- | --- | --- | --- | --- |
| Australian Catholic University | 94.0 (90.9, 96.2) | 90.1 (86.4, 92.9) | 92.6 (89.3, 95.0) | 93.5 (90.2, 95.7) | 87.8 (83.7, 90.9) | 88.9 (85.1, 91.9) |
| Avondale University\* | n/a | n/a | n/a | n/a | n/a | n/a |
| Bond University | 79.5 (67.0, 88.2) | 76.9 (64.2, 86.2) | 79.5 (67.0, 88.2) | 87.2 (75.6, 93.9) | 78.9 (66.2, 87.9) | 78.9 (66.2, 87.9) |
| Central Queensland University | 95.2 (91.7, 97.4) | 89.6 (84.9, 92.9) | 93.5 (89.6, 96.1) | 95.7 (92.1, 97.7) | 85.2 (80.0, 89.2) | 86.4 (81.4, 90.2) |
| Charles Darwin University | 92.0 (85.8, 95.8) | 88.8 (82.0, 93.3) | 81.8 (74.1, 87.7) | 92.6 (86.1, 96.3) | 78.6 (70.3, 85.0) | 86.0 (78.7, 91.2) |
| Charles Sturt University | 92.2 (89.2, 94.4) | 89.7 (86.3, 92.3) | 83.9 (80.0, 87.1) | 91.7 (88.6, 94.0) | 84.6 (80.7, 87.8) | 85.8 (82.0, 88.8) |
| Curtin University | 93.4 (90.0, 95.7) | 89.3 (85.4, 92.3) | 88.3 (84.2, 91.4) | 95.5 (92.6, 97.4) | 84.8 (80.2, 88.4) | 90.1 (86.3, 93.0) |
| Deakin University | 93.0 (90.8, 94.6) | 89.5 (87.0, 91.6) | 88.2 (85.6, 90.4) | 92.1 (89.8, 93.9) | 86.2 (83.4, 88.6) | 84.2 (81.4, 86.7) |
| Edith Cowan University | 91.2 (87.7, 93.8) | 91.1 (87.5, 93.7) | 87.1 (83.1, 90.3) | 91.8 (88.3, 94.3) | 86.0 (81.7, 89.4) | 83.2 (78.8, 86.8) |
| Federation University Australia | 88.1 (81.9, 92.4) | 84.9 (78.3, 89.8) | 85.0 (78.5, 89.9) | 89.5 (83.5, 93.6) | 80.8 (73.6, 86.4) | 84.3 (77.4, 89.4) |
| Flinders University | 89.6 (85.0, 93.0) | 84.7 (79.4, 88.8) | 81.1 (75.6, 85.6) | 88.0 (83.0, 91.7) | 78.9 (73.1, 83.7) | 78.0 (72.1, 82.9) |
| Griffith University | 92.3 (88.6, 94.9) | 85.9 (81.4, 89.4) | 83.7 (79.0, 87.6) | 89.9 (85.8, 92.9) | 83.7 (78.8, 87.6) | 80.1 (75.1, 84.3) |
| James Cook University | 83.6 (77.3, 88.4) | 80.2 (73.5, 85.5) | 86.7 (80.7, 91.0) | 90.6 (85.1, 94.3) | 82.1 (75.5, 87.2) | 84.7 (78.6, 89.3) |
| La Trobe University | 93.3 (90.1, 95.6) | 89.1 (85.3, 92.0) | 88.0 (84.1, 91.0) | 94.1 (91.0, 96.2) | 83.8 (79.5, 87.4) | 85.9 (81.9, 89.2) |
| Macquarie University | 93.5 (89.9, 95.9) | 89.3 (85.1, 92.4) | 89.8 (85.6, 92.9) | 93.3 (89.6, 95.7) | 86.4 (81.8, 90.0) | 83.5 (78.6, 87.4) |
| Monash University | 94.7 (92.8, 96.1) | 92.4 (90.2, 94.1) | 89.9 (87.6, 91.9) | 94.4 (92.5, 95.9) | 88.4 (85.8, 90.5) | 83.9 (81.1, 86.4) |
| Murdoch University | 89.7 (83.8, 93.7) | 82.4 (75.3, 87.8) | 83.2 (76.4, 88.3) | 93.0 (87.4, 96.3) | 79.8 (72.6, 85.5) | 74.3 (66.7, 80.7) |
| Queensland University of Technology | 93.5 (91.1, 95.3) | 90.0 (87.1, 92.3) | 87.8 (84.7, 90.3) | 92.2 (89.6, 94.3) | 85.7 (82.3, 88.5) | 83.2 (79.7, 86.1) |
| RMIT University | 94.5 (92.2, 96.1) | 89.1 (86.2, 91.5) | 91.0 (88.3, 93.2) | 93.6 (91.2, 95.4) | 86.2 (83.0, 88.9) | 84.7 (81.4, 87.5) |
| Southern Cross University | 88.6 (83.0, 92.6) | 91.0 (85.7, 94.5) | 85.7 (79.8, 90.1) | 91.7 (86.6, 95.1) | 86.5 (80.7, 90.8) | 88.8 (83.2, 92.7) |
| Swinburne University of Technology | 92.3 (88.6, 94.9) | 91.3 (87.5, 94.1) | 87.0 (82.6, 90.4) | 92.1 (88.3, 94.7) | 88.1 (83.7, 91.4) | 84.2 (79.5, 88.0) |
| The Australian National University | 95.7 (92.2, 97.8) | 93.8 (89.8, 96.3) | 88.3 (83.4, 91.9) | 92.5 (88.3, 95.3) | 85.1 (79.7, 89.2) | 84.2 (79.0, 88.4) |
| The University of Adelaide | 89.9 (86.1, 92.7) | 84.5 (80.1, 88.2) | 88.4 (84.4, 91.5) | 92.3 (88.7, 94.8) | 83.6 (79.1, 87.3) | 83.8 (79.3, 87.4) |
| The University of Melbourne | 94.4 (92.6, 95.7) | 91.2 (89.1, 92.9) | 87.6 (85.3, 89.6) | 93.3 (91.4, 94.7) | 85.8 (83.3, 87.9) | 85.4 (82.9, 87.5) |
| The University of Notre Dame Australia | 91.4 (84.1, 95.7) | 92.8 (85.6, 96.7) | 88.4 (80.4, 93.5) | 97.1 (91.1, 99.4) | 84.8 (76.1, 90.8) | 84.9 (76.7, 90.7) |
| The University of Queensland | 94.3 (91.7, 96.1) | 89.5 (86.2, 92.0) | 86.9 (83.4, 89.7) | 92.2 (89.3, 94.4) | 83.4 (79.6, 86.6) | 82.2 (78.5, 85.5) |
| The University of South Australia | 91.6 (88.2, 94.1) | 91.9 (88.6, 94.4) | 88.9 (85.2, 91.8) | 93.5 (90.3, 95.7) | 89.7 (86.0, 92.5) | 81.0 (76.5, 84.7) |
| The University of Sydney | 95.7 (93.1, 97.4) | 96.1 (93.5, 97.7) | 92.0 (88.7, 94.5) | 96.8 (94.3, 98.2) | 90.0 (86.4, 92.8) | 89.6 (86.1, 92.4) |
| The University of Western Australia | 94.3 (90.1, 96.9) | 90.6 (85.6, 94.0) | 88.7 (83.5, 92.4) | 92.1 (87.5, 95.2) | 91.1 (86.2, 94.5) | 84.3 (78.5, 88.7) |
| Torrens University | 94.1 (89.3, 96.9) | 93.8 (88.8, 96.7) | 90.8 (85.3, 94.4) | 92.2 (86.9, 95.5) | 92.5 (87.4, 95.7) | 80.7 (73.9, 86.1) |
| University of Canberra | 88.9 (83.1, 92.9) | 87.0 (80.9, 91.4) | 88.8 (83.0, 92.8) | 93.0 (87.9, 96.1) | 82.6 (75.8, 87.8) | 78.3 (71.5, 83.9) |
| University of Divinity | 91.2 (79.4, 96.9) | 93.9 (82.6, 98.6) | 84.8 (71.7, 92.7) | 85.3 (72.4, 93.0) | 83.9 (70.1, 92.2) | 87.1 (73.8, 94.5) |
| University of New England | 90.5 (86.0, 93.6) | 90.5 (86.1, 93.7) | 85.9 (80.9, 89.7) | 93.5 (89.6, 96.0) | 84.8 (79.7, 88.9) | 85.9 (80.9, 89.7) |
| University of New South Wales | 94.3 (91.0, 96.5) | 91.4 (87.6, 94.1) | 89.0 (85.0, 92.1) | 95.7 (92.6, 97.5) | 85.0 (80.4, 88.6) | 85.5 (81.1, 89.1) |
| University of Newcastle | 92.9 (88.3, 95.8) | 91.3 (86.4, 94.6) | 91.4 (86.5, 94.6) | 96.3 (92.4, 98.3) | 90.4 (85.4, 93.9) | 85.0 (79.3, 89.3) |
| University of Southern Queensland | 91.4 (87.4, 94.3) | 89.7 (85.4, 92.9) | 84.1 (79.1, 88.1) | 93.9 (90.2, 96.3) | 86.8 (82.1, 90.4) | 85.6 (80.8, 89.4) |
| University of Tasmania | 90.0 (87.0, 92.4) | 89.5 (86.3, 91.9) | 84.8 (81.3, 87.8) | 89.2 (86.0, 91.7) | 86.7 (83.3, 89.5) | 83.7 (80.1, 86.8) |
| University of Technology Sydney | 94.7 (91.7, 96.6) | 89.3 (85.5, 92.1) | 90.4 (86.7, 93.1) | 95.0 (92.1, 96.9) | 90.3 (86.6, 93.0) | 86.5 (82.4, 89.7) |
| University of the Sunshine Coast | 90.0 (83.5, 94.2) | 86.7 (79.6, 91.6) | 90.9 (84.4, 94.9) | 93.1 (87.0, 96.6) | 86.5 (79.4, 91.5) | 88.2 (81.5, 92.7) |
| University of Wollongong | 96.6 (92.4, 98.6) | 94.8 (90.1, 97.4) | 89.7 (84.0, 93.5) | 93.8 (88.8, 96.7) | 91.2 (85.8, 94.8) | 86.0 (79.9, 90.4) |
| Victoria University | 94.6 (90.6, 97.0) | 89.9 (85.0, 93.3) | 89.3 (84.3, 92.8) | 94.6 (90.5, 97.0) | 83.2 (77.4, 87.8) | 85.5 (80.0, 89.7) |
| Western Sydney University | 90.2 (85.6, 93.4) | 92.5 (88.3, 95.3) | 91.5 (87.1, 94.5) | 92.5 (88.3, 95.4) | 87.3 (82.2, 91.1) | 81.0 (75.4, 85.5) |
| **Total universities** | **92.7 (92.3, 93.2)** | **89.9 (89.3, 90.4)** | **88.1 (87.5, 88.6)** | **93.0 (92.5, 93.4)** | **86.0 (85.4, 86.6)** | **84.4 (83.8, 85.1)** |
| Standard deviation | 3.5 | 3.8 | 3.2 | 2.7 | 3.4 | 4 |

Note: Numbers presented in brackets are the lower and upper confidence intervals. The calculation of these confidence intervals is detailed in **Appendix 4**. \*In ESS reports prior to 2022, Avondale University was reported as a NUHEI.

Figure 3 Employers’ Overall satisfaction by university, pooled 2021-2023 (% satisfied, with 90% confidence intervals)

\* Only institutions with sufficient data (i.e. n>25) are presented in this figure.

## Skills relevance and utilisation

The Employer Satisfaction Survey provides valuable evidence on employers’ perceptions on the relevance and utilisation of higher education graduates’ skills and qualifications. It is important to monitor these assessments over time to be aware of the various aspects of recent graduates’ skill-matching in the labour market.

Overall, supervisors tend to view the completed qualification as more important for current employment than the graduates themselves, as shown at **Table 7**. Almost two-thirds of supervisors (62.9 per cent) indicated that the qualification was ‘very important’ or ‘important’ and only 6.0 per cent indicated that it was ‘not at all important’ for the graduate’s current job. On the other hand, 53.6 per cent of graduates considered their qualification to be ‘very important’ or ‘important’ to their current job, and approximately one in ten (11.5 per cent) felt that it was ‘not at all important’.

Over half of graduates employed (50.8 per cent) had been with their employer 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. Between 2016 and 2023 there has been a downward trend in ‘very important’ ratings among both supervisors and graduates, with a shift towards ‘important’ or ‘fairly important’ ratings. It should be noted that in this response frame “fairly important” is not a neutral category and may be considered a lower strength positive rating of importance.

Table 7 Importance of qualification for current employment, 2023 (%)

| Category | **Graduates** | **Supervisors** |
| --- | --- | --- |
| Very important | 35.6 (34.1, 37.1) | 39.8 (38.4, 41.3) |
| Important | 18.0 (16.9, 19.2) | 23.0 (21.8, 24.3) |
| Fairly important | 19.2 (18.0, 20.4) | 18.5 (17.4, 19.7) |
| Not that important | 15.6 (14.6, 16.8) | 12.6 (11.7, 13.7) |
| Not at all important | 11.5 (10.6, 12.6) | 6.0 (5.3, 6.8) |
| **Total** | **100.0 (99.9, 100.0)** | **100.0 (99.9, 100.0)** |

Note: Numbers presented in brackets are the lower and upper confidence intervals. The calculation of these confidence intervals is detailed in **Appendix 4**.

As seen in **Table 8**, Education, Architecture and building, and Health qualifications were rated by graduates and supervisors as being 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, 69.8 per cent of graduates and 78.2 per cent of supervisors thought that Health qualifications were important for current employment. Similarly, 66.5 per cent of graduates and 80.0 per cent of supervisors thought that Education qualifications were important for current employment.

Supervisors of Creative arts, Management and commerce, and Information technology graduates were least likely to think that the qualification was important for current employment at 38.1 per cent, 48.0 per cent, and 48.9 per cent respectively.

Table 8 Importance of qualification for current employment by broad field of education, 2023 (%)

| **Field** **of education** | **Graduates** | **Supervisors** |
| --- | --- | --- |
| Natural and physical sciences | 43.2 (37.9, 48.6) | 52.6 (47.2, 57.9) |
| Information technology | 36.6 (30.0, 43.8) | 48.9 (42.0, 55.9) |
| Engineering and related technologies | 57.5 (51.9, 62.8) | 67.1 (61.8, 72.0) |
| Architecture and building | 60.3 (50.3, 69.5) | 78.3 (69.0, 85.3) |
| Agriculture and environmental studies | 42.7 (34.4, 51.4) | 64.4 (55.8, 72.2) |
| Health | 69.8 (66.6, 72.8) | 78.2 (75.4, 80.8) |
| Education | 66.5 (62.6, 70.2) | 80.0 (76.6, 82.9) |
| Management and commerce | 41.5 (37.8, 45.2) | 48.0 (44.3, 51.8) |
| Society and culture | 49.3 (46.1, 52.5) | 54.9 (51.7, 58.1) |
| Creative arts | 36.7 (29.8, 44.1) | 38.1 (31.3, 45.4) |
| **Total** | **53.6 (52.1, 55.1)** | **62.9 (61.4, 64.3)** |
| Standard deviation | 12.3 | 14.7 |

Note: The Food, hospitality and personal services broad field of education is not shown as no data was available. Refers to the percentage of graduates and supervisors rating the qualification as ‘very important’ or ‘important’ for current employment. Numbers presented in brackets are the lower and upper confidence intervals. The calculation of these confidence intervals is detailed in **Appendix 4**.

As shown in **Figure 4**, the largest discrepancy between the views of graduates and employers was in Agriculture, environmental and related studies where 42.7 per cent of graduates rated their qualification as being important compared with 64.4 per cent of supervisors, a difference of 21.7 percentage points. Other areas where supervisors rated the qualification higher than graduates included in Architecture and building, Education, and Information technology with differences larger than 10 percentage points. Creative arts was the only field of education where graduates rated the importance of the qualification similar to supervisors, a difference of 1.4 per cent.

Figure 4 Importance of qualification for current employment by broad field of education, 2023 (%, with 90% confidence intervals)

\* Only fields of education with sufficient data (i.e. n>25) are presented in this figure.

Graduates and supervisors of those working in Professional occupations were most likely to state that the qualification was important for the job at 64.9 per cent and 75.1 per cent respectively (see **Table 9**). Higher education qualifications are aimed at Professional occupations, so it is expected that those in Professional occupations would rate the course as important for their current employment. Jobs at lower skill levels were associated with lower ratings for the importance of the graduates’ qualification by both graduates and supervisors.

These findings are consistent with the classification of occupations[[1]](#footnote-2) used by the ABS, where most Managerial and Professional occupations have a skill level that is commensurate with qualifications at the bachelor level or higher.

Table 9 Importance of qualification for current employment, by occupation, 2023 (%)

| **Occ****upation** | **Graduates** | **Supervisors** |
| --- | --- | --- |
| Managers | 41.2 (36.7, 45.8) | 55.6 (51.0, 60.1) |
| Professionals | 64.9 (63.0, 66.7) | 75.1 (73.4, 76.7) |
| Technicians and trades workers | 37.9 (31.2, 45.0) | 41.8 (35.0, 48.9) |
| Community and personal service workers | 38.7 (33.1, 44.5) | 47.1 (41.4, 52.8) |
| Clerical and administrative workers | 33.7 (29.4, 38.2) | 36.3 (32.0, 40.8) |
| Other workers | 15.3 (10.7, 21.4) | 21.5 (16.2, 28.0) |
| **Total** | **53.6 (52.1, 55.1)** | **62.9 (61.4, 64.3)** |
| Standard deviation | 15.9 | 18.2 |

Note: Refers to the percentage of graduates and supervisors rating the qualification as ‘very important’ or ‘important’ for current employment. Almost two-thirds of respondents were supervising graduates in professional occupations, with the remainder spread evenly across all other occupations. Numbers presented in brackets are the lower and upper confidence intervals. The calculation of these confidence intervals is detailed in **Appendix 4**.

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 thought the qualification prepared the graduate well or very well for the job, at 86.9 per cent and 94.0 per cent respectively (see **Table 10)**. The proportion of supervisors who thought the qualification prepared the graduate for the job has remained consistently high since this survey was first conducted in 2016, ranging between 92 per cent and 94 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 10 Extent to which qualification prepared graduate for current employment, 2023 (%)

| **Response** | **Graduates** | **Supervisors** |
| --- | --- | --- |
| Very well | 41.3 (39.7, 42.8) | 52.6 (51.1, 54.2) |
| Well | 45.6 (44.0, 47.2) | 41.4 (39.8, 42.9) |
| Not well | 8.0 (7.2, 8.9) | 3.2 (2.7, 3.8) |
| Not at all | 5.1 (4.5, 5.9) | 2.8 (2.3, 3.4) |
| **Total** | **100.0 (99.9, 100.0)** | **100.0 (99.9, 100.0)** |

Note: Numbers presented in brackets are the lower and upper confidence intervals. The calculation of these confidence intervals is detailed in **Appendix 4**.

Taken in conjunction with the findings regarding the importance of the qualification, it is 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 whose employers responded to the survey 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.

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 11**. Fields of education with the largest differences between graduate and supervisor ratings were Architecture and building (17.6 percentage point difference), Natural and physical sciences (11.8 percentage points) and Agriculture and environmental studies (10.8 percentage points).

Graduates from Architecture and building, Information and technology, and Natural and physical sciences reported lower ratings on the extent to which their qualification prepared them for their job, at 74.2 per cent, 78.9 per cent, and 80.3 per cent respectively. While still high, supervisors of graduates from Creative arts, Information technology, and Architecture and building reported lower ratings on graduates’ preparedness for their current job, at 85.6 per cent, 89.6 per cent, and 91.8 per cent 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, with a standard deviation of 3.2 (see **Table 11**), than amongst supervisors stating the qualification was important for the job, with a higher standard deviation of 14.7 (see **Table 8**). This supports the previous observation that while higher education qualifications may not be ‘important’ in the sense they are not ‘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 broad field of education, 2023 (%)

| **Fiel****d of education** | **Graduates** | **Supervisors** |
| --- | --- | --- |
| Natural and physical sciences | 80.3 (75.2, 84.5) | 92.1 (88.5, 94.7) |
| Information technology | 78.9 (72.2, 84.3) | 89.6 (84.2, 93.4) |
| Engineering and related technologies | 87.9 (83.6, 91.2) | 96.8 (94.0, 98.3) |
| Architecture and building | 74.2 (64.5, 82.1) | 91.8 (83.9, 96.2) |
| Agriculture and environmental studies | 81.6 (73.8, 87.5) | 92.4 (85.8, 96.2) |
| Health | 92.3 (90.3, 94.0) | 94.8 (93.0, 96.1) |
| Education | 89.3 (86.4, 91.6) | 94.6 (92.4, 96.2) |
| Management and commerce | 87.5 (84.7, 89.9) | 95.2 (93.2, 96.6) |
| Society and culture | 85.9 (83.4, 88.1) | 94.6 (92.8, 96.0) |
| Creative arts | 81.8 (75.0, 87.1) | 85.8 (79.3, 90.6) |
| **Total** | **86.9 (85.8, 87.9)** | **94.0 (93.2, 94.7)** |
| Standard deviation | 5.5 | 3.2 |

Note: The Food, hospitality and personal services broad field of education is not shown as no data was available. Numbers presented in brackets are the lower and upper confidence intervals. The calculation of these confidence intervals is detailed in **Appendix 4**.

**Table 12** shows that supervisors of graduates working in Managerial and Professional occupations were most likely to state that the qualification had prepared the graduate well or very well for current employment, at 97.9 per cent and 95.6 per cent respectively. The difference in ratings of preparedness by graduates and supervisors for Technicians and trades workers was very low at 1.1 percentage points. Differences between graduates working in Professional, Managerial, and Community and personal service occupations were also quite low at around 5 to 7 percentage points. Differences between graduate and supervisor ratings for Clerical and administrative workers, and graduates in ‘Other’ occupations were 12.3 percentage points and 33.5 percentage points respectively. This suggests that those employed in lower skill occupations were less likely than their supervisors to see how their qualification had prepared them for a job which may require a lower skill level than they had acquired.

Table 12 Extent to which qualification prepared graduate well or very well for current employment, by occupation, 2023 (%)

| **Occup****ation** | **Graduates** | **Supervisors** |
| --- | --- | --- |
| Managers | 90.6 (87.4, 93.1) | 97.9 (95.9, 99.0) |
| Professionals | 90.2 (88.9, 91.3) | 95.6 (94.8, 96.4) |
| Technicians and trades workers | 85.1 (79.0, 89.7) | 86.2 (80.2, 90.6) |
| Community and personal service workers | 81.7 (76.4, 86.0) | 88.1 (83.3, 91.7) |
| Clerical and administrative workers | 78.8 (74.5, 82.6) | 91.1 (87.9, 93.6) |
| Other workers | 49.5 (41.2, 57.8) | 83.0 (75.9, 88.3) |
| **Total** | **86.9 (85.8, 87.9)** | **94.0 (93.2, 94.7)** |
| Standard deviation | 15.3 | 5.7 |

Note: Numbers presented in brackets are the lower and upper confidence intervals. The calculation of these confidence intervals is detailed in **Appendix 4**.

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 13**. There were over 4,300 comments across eight themes. The most common themes mentioned by supervisors were Domain-specific skills and knowledge, Employability and enterprise skills, and Technical and professional skills.

Table 13 Main ways that the qualification prepared the graduate for employment, 2023 (%)

| **Th****eme** | **Supervisors** |
| --- | --- |
| Domain-specific skills and knowledge | 56.7 (54.9, 58.5) |
| Employability and enterprise skills | 43.0 (41.2, 44.8) |
| Technical and professional skills | 29.9 (28.2, 31.5) |
| Adaptive skills | 22.8 (21.3, 24.3) |
| Foundation skills | 21.1 (19.7, 22.6) |
| Institutional and course attributes | 15.3 (14.1, 16.7) |
| Personal attributes | 11.1 (10.0, 12.3) |
| Teamwork and interpersonal skills | 10.0 (8.9, 11.1) |

Note: Percentages do not add up to 100 percent as supervisors were able to provide more than one comment. Numbers presented in brackets are the lower and upper confidence intervals. The calculation of these confidence intervals is detailed in **Appendix 4**.

There were fewer comments (1,555) regarding the ways in which the qualification could have better prepared the graduate for employment, suggesting most supervisors felt that the graduate had been well prepared for the workplace. These observations are consistent with the generally very positive supervisor ratings of graduate preparedness.

As seen in **Table 14**, the greatest number of comments related to the ways in which the qualification could have better prepared the graduate for employment were made in relation to Domain-specific skills and knowledge (38.4 per cent), Employability and enterprise skills (36.3 per cent), and Technical and professional skills (27.7 per cent).

Table 14 Main ways that the qualification could have better prepared the graduate for employment, 2023 (%)

| **The****me** | **Supervisors** |
| --- | --- |
| Domain-specific skills and knowledge | 38.4 (36.0, 41.0) |
| Employability and enterprise skills | 36.3 (33.8, 38.8) |
| Technical and professional skills | 27.7 (25.5, 30.1) |
| Institutional and course attributes | 27.5 (25.2, 29.8) |
| Foundation skills | 9.6 (8.2, 11.2) |
| Teamwork and interpersonal skills | 8.1 (6.8, 9.7) |
| Personal attributes | 2.5 (1.8, 3.4) |
| Adaptive skills | n/a |

Note: Percentages do not add up to 100 percent as supervisors were able to provide more than one comment. Numbers presented in brackets are the lower and upper confidence intervals. The calculation of these confidence intervals is detailed in **Appendix 4**.

# Appendix 1 Methodology

## Methodological summary

### 1.1.1 Overview

Graduates of 126 higher education institutions, including all 42 Table A and B universities, and 84 NUHEIs, were in scope to provide contact details for supervisors to participate in the 2023 ESS. Of these institutions, supervisors of graduates from 42 universities and 67 NUHEIs were included in the 2023 ESS sample. In all, supervisors responded with data for 42 universities and 53 NUHEIs.

The population frame for the 2023 ESS comprised 93,521 graduates, domestic and international, who responded in the 2023 GOS and indicated they were employed. Of these, 7,076 employed graduates provided sufficient contact details to approach 6,647 supervisors, yielding a supervisor referral rate of 7.1 per cent. This is lower than the 7.9, 8.2 and 7.8 per cent supervisor referral rate achieved in the 2022, 2021 and 2020 ESS respectively. As in previous years, there remains a strong reluctance among graduates to pass on their supervisor contact details.

In the 2023 ESS, a total of 2,992 valid survey responses from direct supervisors were collected across all study levels, representing a supervisor response rate of 45.0 per cent. This is higher than the 41.9 per cent supervisor response rate achieved in 2022. Further information on institutional responses is included at **Appendix 3**. A copy of the generic survey items (i.e., excluding any department or institution specific items) is included at **Appendix 2**.

Table 15 ESS operational overview, 2021-2023

| Category | **2021 November** | **2021**  **February** | **2021**  **May** | **2021**  **Total** | **2022 November** | **2022 February** | **2022  May** | **2022**  **Total** | **2023 November** | **2023 February** | **2023 May** | **2023**  **Total** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Number of in-scope supervisors[[2]](#footnote-3)** | 2,589 | 727 | 4,527 | 7,843 | 2,713 | 799 | 4,717 | 8,229 | 1,974 | 692 | 3,981 | 6,647 |
| **Number of completed surveys** | 1,181 | 285 | 1,984 | 3,450 | 1,206 | 365 | 1,881 | 3,452 | 903 | 341 | 1,748 | 2,992 |
| **Supervisor response rate** | 45.6 | 39.2 | 43.8 | 44.0 | 44.5 | 45.7 | 39.9 | 41.9 | 45.7 | 49.3 | 43.9 | 45.0 |
| **Analytic unit** | Supervisor | | | | | | | | | | | |
| **Mode of data collection** | Online and CATI | | | | | | | | | | | |

### 1.1.2 Sample build

The collection of supervisor details occurred each round at the end of the GOS. 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 that the supervisor could be invited to take part in the ESS.

Several strategies were implemented in an attempt to increase the number of graduates providing valid contact details for their supervisor, such as calls to graduates to correct inaccurate or incomplete supervisor contact information and follow up calls to graduates who requested more information prior to agreeing to provide supervisor contact details.

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.

### 1.1.3 Data collection

The main collection periods for the ESS start in November, February, and May, with the ESS fieldwork period extending beyond the GOS fieldwork period to facilitate ESS sample build and ESS response maximisation activities. The survey was fielded in English only.

Online was the primary mode of collection for the ESS, with Computer Assisted Telephone Interviewing (CATI) a secondary mode. If a valid email address was provided by the graduate, the supervisor would receive an email invitation to the online ESS on the following working day. If the graduate only provided a phone number for their supervisor, the supervisor was called in an attempt to complete the ESS via CATI.

The email invitation was followed by up to six reminder emails and one SMS reminder to non-responding supervisors. Where a phone number as well as an email address was provided by the graduate, non-responding supervisors after the second reminder email were channelled into the CATI workflow.

Refer to the 2023 ESS Methodological Report for further information on target population definition, sample design and preparation, survey design and procedures, response maximisation strategies, data preparation processes, final field outcomes and response analysis.

## Response bias

The tables that follow compare the course, demographic, and labour market characteristics of employed graduate respondents to the GOS (regardless of whether they provided the details of their supervisor), with the characteristics of supervisors who 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 all 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 the distribution of all employed graduates by broad field of education from the GOS with the distribution of supervisor responses to the ESS suggests that Education graduates, and to a lesser degree Engineering and related technologies and Agriculture and environmental studies graduates, are overrepresented in the achieved ESS responses. Health, Management and commerce, and Information technology graduates are marginally underrepresented in the ESS, as shown by **Table 16**.

Table 16 Respondents by broad field of education, 2023 (%)

| **F****ield of education** | **Employed graduates** | **Supervisors** |
| --- | --- | --- |
| Natural and physical sciences | 8.3 | 8.0 |
| Information technology | 5.9 | 4.3 |
| Engineering and related technologies | 5.7 | 7.2 |
| Architecture and building | 2.3 | 2.4 |
| Agriculture and environmental studies | 1.8 | 3.1 |
| Health | 23.0 | 20.9 |
| Education | 9.9 | 14.5 |
| Management and commerce | 16.9 | 14.8 |
| Society and culture | 21.4 | 20.9 |
| Creative arts | 4.8 | 3.8 |

Note: Food, hospitality and personal services is not shown as there were no Supervisor responses for this field of education in the 2023 ESS.

There is a slightly higher proportion of responses from supervisors of external graduates in the ESS, as seen in **Table 17**. Supervisors of external graduates report lower Overall satisfaction (see **Table 3**) so that overrepresentation of the supervisors of external graduates could lead to a downward bias in reported Overall satisfaction in the 2023 ESS.

Supervisors of postgraduate coursework and postgraduate research graduates are somewhat overrepresented by 1.2 percentage points and 3.6 percentage points respectively, while undergraduate supervisors are underrepresented by 4.5 percentage points.

Table 17 Respondents by type of institution and course characteristics, 2023 (%)

| **Categor****y** | **Employed graduates** | **Supervisors** |
| --- | --- | --- |
| **Type of institution** | **Employed graduates** | **Supervisors** |
| University | 92.5 | 92.8 |
| NUHEI | 7.5 | 7.2 |
| **Study mode** | **Employed graduates** | **Supervisors** |
| Internal/Mixed mode | 68.8 | 65.1 |
| External study mode | 28.6 | 32.9 |
| **Course level** | **Employed graduates** | **Supervisors** |
| Undergraduate | 53.2 | 48.7 |
| Postgraduate coursework | 40.1 | 41.3 |
| Postgraduate research | 5.7 | 9.3 |

\* Internal mode of attendance is where (i) the study is undertaken through attendance at the higher education provider on a regular basis, or (ii) for higher degree unit enrolments, where regular attendance is not required but the student attends the higher education provider on an agreed schedule for the purposes of supervision and/or instruction. External mode of attendance is where lesson materials, assignments, etc. are delivered to the student, and any associated attendance at the institution is of an incidental, irregular, special or voluntary nature. Mixed mode of attendance is where study is undertaken partially on an internal mode of attendance and partially on an external mode of attendance.

**Table 18** compares the demographic characteristics of employed graduate respondents to the GOS with the demographic characteristics of graduates whose supervisors responded to the ESS. Supervisors of male graduates are overrepresented in the ESS by around 4.3 percentage points as seen in Table 18. From Table 4 earlier, there was little difference in reported Overall satisfaction among supervisors of male or female graduates, 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 10.5 percentage points. This is consistent with the overrepresentation of supervisors of postgraduate coursework and postgraduate research graduates as shown in **Table 17**. Employers of older graduates reported lower Overall satisfaction as shown in **Table 4**, so the overrepresentation of supervisors of older graduates is likely to lead to a small downward bias in reported Overall satisfaction.

Table 18 Respondents by graduate demographic characteristics, 2023 (%)

| **Category** | **Employed graduates** | **Supervisors** |
| --- | --- | --- |
| **Gender** | **Employed graduates** | **Supervisors** |
| Male | 35.6 | 39.9 |
| Female | 64.1 | 60.0 |
| **Age** | **Employed graduates** | **Supervisors** |
| 30 years or under | 62.8 | 52.3 |
| Over 30 years | 37.2 | 47.7 |
| **Indigenous** | **Employed graduates** | **Supervisors** |
| Indigenous | 1.3 | 1.6 |
| Non-Indigenous | 98.7 | 98.4 |
| **Home language** | **Employed graduates** | **Supervisors** |
| English | 86.4 | 89.4 |
| Other | 13.6 | 10.6 |
| **Disability** | **Employed graduates** | **Supervisors** |
| Reported disability | 7.2 | 8.9 |
| No disability | 92.8 | 91.1 |

As shown in **Table 19**, supervisors of graduates working in Professional occupations are overrepresented by 3.1 percentage points in the ESS. From **Table 5**, supervisors of graduates working in Professional occupations reported high Overall satisfaction. This would lead to a small upward bias in the reported Overall satisfaction in the 2023 ESS.

Conversely, supervisors of graduate Community and personal service workers were underrepresented by 3.0 percentage points in the 2023 ESS. From **Table 5** earlier, supervisors of graduate Community and personal service workers reported the lowest Overall satisfaction. This would lead to a very small downward bias in the reported Overall satisfaction in the 2023 ESS.

Supervisors of graduates employed full-time are represented in the achieved sample in proportion to the graduate population.

Supervisors of graduates who have worked in their current job for between three months and less than one year, are overrepresented in the 2023 ESS. Satisfaction with this group was higher than for those who had been employed for under three months or those who had been employed for 1 year or more (see **Table 5**) and so their overrepresentation may lead to a small upward bias in employer satisfaction.

Table 19 Respondents by labour market characteristics of employed graduates, 2023 (%)

| **Category** | **Employed graduates** | **Supervisors** |
| --- | --- | --- |
| **Occupation** | **Employed graduates** | **Supervisors** |
| Managers | 8.4 | 10.9 |
| Professionals | 59.5 | 62.6 |
| Technicians and trades workers | 3.7 | 4.6 |
| Community and personal service workers | 9.9 | 6.9 |
| Clerical and administrative workers | 10.1 | 10.7 |
| Other workers | 8.4 | 4.4 |
| **Employment status** | **Employed graduates** | **Supervisors** |
| Full-time | 75.3 | 75.7 |
| Part-time | 24.7 | 24.3 |
| **Duration of job with current employer** | **Employed graduates** | **Supervisors** |
| Less than 3 months | 11.6 | 9.0 |
| 3 months to < 1 year | 39.1 | 43.7 |
| 1 year or more | 49.2 | 47.3 |

## 1.3 Graduate Attributes Scale - Employer

The Graduate Attributes Scale – Employer (GAS-E) was developed as part of the original 2013–14 trial of the ESS. The project team synthesised several 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 include:

* Foundation skills
* Adaptive skills
* Collaborative skills
* Technical skills
* Employability skills

Information on the items that are included in each of these domains is provided in **Appendix 2**.

Additional information on how the scales and confidence intervals are calculated is provided in **Appendix 4**

The GAS-E forms the core of the ESS. Graduates responding to the GOS had previously been asked to assess their Foundation, Adaptive and Collaborative skills using the GAS, however these items were removed from the core GOS in 2021 and are now institution opt-in items.

# Appendix 2 ESS questionnaire

## 2.1 Core instrument

A summary of all items included in the 2023 ESS core instrument are provided in **Table 20** below. A copy of the core survey instrument (i.e., excluding any institution specific items) and screenshots of the survey are included in the 2023 ESS Methodological Report.

Table 20 Questionnaire item summary

|  |  |  |
| --- | --- | --- |
| **Question ID** | **Question** | **Response frame** |
|  | **Module A: Screening and confirmation** |  |
| QS1 | First, we have a few questions about your role and <**E403**> <**E402**>’s role, so we can understand your relationship to <**E403**>. | 1. Yes |
| Just to check, do you currently supervise <**E403**>? | 2. No, but I used to be their supervisor |
| By supervisor, we mean a person who has the authority to direct someone to do certain tasks and who has a good idea of the work that the person does in their job. | 3. No, I have never been their supervisor |
| QS2 | And, how long have you been <**E403**>’s 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 |
| QS3 | Before today, were you aware that <**E403**> completed a qualification from <**E306C>**? | 1. Yes |
| 2. No |
| QS4 | And, before today, were you aware that the qualification <**E403**> completed was a <**E308**>? | 1. Yes |
| 2. No |
| QS5 | What is **<E403>**’s occupation in your business? | 1. <verbatim text box> |
| QS6 | What are the main tasks that they usually perform in their job? | 1. <verbatim text box> |
| QS7 | What is your occupation in your business? | 1. <verbatim text box> |
| QS8 | What are the main tasks that you usually perform in this job? | 1. <verbatim text box> |
|  | **Module B: Overall graduate preparation** |  |
| QOP1 | Is a <**E308**> or similar qualification a formal requirement for <**E403**> to do their job? | 1. Yes |
| 2. No |
| QOP2 | To what extent is it important for <**E403**> to have a <**E308**> or similar qualification to be 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 |
| QOP3 | Overall, how well did <**E403**>’s <**E308**> prepare <him/her> for their job? | 1. Not at all |
| 2. Not well |
| 3. Well |
| 4. Very well |
| 5. Don’t know / unsure |
| QOP4 | What are the MAIN ways that <**E306C**> prepared <**E403**> for employment? | 1. <verbatim text box> 2. Don't know/Unsure |
| QOP5 | And what are the **MAIN** ways that | 1. <verbatim text box> 2. Don't know/Unsure |
| <**E306C**> could have **better prepared** <**E403**> for employment? |
| QS11 | Based on your experience with <**E403**>, how likely are you to consider hiring another <**E308**> graduate from <**E306C**>, if you had a relevant vacancy? | 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 C: Graduate attributes scale** |  |
| GAS Stem | For each skill or attribute, to what extent do you agree or disagree that <**E403**>’s <**E308**> from <**E306C**> prepared them for their job? |  |
| If the skill is not required by <**E403**> in their role, you can answer ‘Not applicable’. |
| GAS (Foundation skills) | 1. Oral communication skills | 1. Strongly disagree |
| 2. Written communication skills | 2. Disagree |
| 3. Numeracy skills | 3. Neither disagree nor agree |
| 4. Ability to develop relevant knowledge | 4. Agree |
| 5. Ability to develop relevant skills | 5. Strongly agree |
| 6. Ability to solve problems | 9. Not applicable |
| 7. Ability to integrate knowledge |  |
| 8. Ability to think independently about problems |  |
| GAS (Adaptive skills) | 9. Broad background knowledge | 1. Strongly disagree |
| 10. Ability to develop innovative ideas | 2. Disagree |
| 11. Ability to identify new opportunities | 3. Neither disagree nor agree |
| 12. Ability to adapt knowledge to different contexts | 4. Agree |
| 13. Ability to apply skills in different contexts | 5. Strongly agree |
| 14. Capacity to work independently | 9. Not applicable |
| GAS (Collaborative skills) | 15. Working well in a team | 1. Strongly disagree |
| 16. Getting on well with others | 2. Disagree |
| in the workplace | 3. Neither disagree nor agree |
| 17. Working collaboratively with colleagues to complete tasks | 4. Agree |
| 18. Understanding different points of view | 5. Strongly agree |
| 19. Ability to interact with co-workers from different or multi-cultural backgrounds | 9. Not applicable |
| GAS (Technical skills) | 20. Applying professional knowledge to job tasks | 1. Strongly disagree |
| 21. Using technology effectively | 2. Disagree |
| 22. Applying technical skills in the workplace | 3. Neither disagree nor agree |
| 23. Maintaining professional standards | 4. Agree |
| 24. Observing ethical standards | 5. Strongly agree |
| 25. Using research skills to gather evidence | 9. Not applicable |
| GAS (Employability skills) | 26. Ability to work under pressure | 1. Strongly disagree |
| 27. Capacity to be flexible in the workplace | 2. Disagree |
| 28. Ability to meet deadlines | 3. Neither disagree nor agree |
| 29. Understanding the nature of your business or organisation | 4. Agree |
| 30. Demonstrating leadership skills | 5. Strongly agree |
| 31. Demonstrating management skills | 9. Not applicable |
| 32. Taking responsibility for personal professional development |  |
| 33. Demonstrating initiative in the workplace |  |
|  | **Module E: Institution specific issues** |  |
|  | **Module F: Close** |  |
| C3 | Would you like to be notified when the national data is released on the Quality Indicators for Learning and Teaching (QILT) website? We will also provide a one page summary of the outcomes of the study. | 1. Yes |
| 2. No |
| C4 | Would you like your organisation to be acknowledged on the QILT website for supporting this important research? | 1. Yes |
| 2. No |
| C2 | Can we confirm the best email address to contact you on? | 1. My email address is <**supemail**> |
| 2. The best email address to contact me on is: <verbatim text box> |
| C5 | So that we can properly acknowledge your business on the QILT website, can you please confirm your business name as you would like it to appear on the site? | 1. <verbatim text box> |
| C6 | Would you be willing to have your contact information (name, email and/or phone) passed to <E306CTXT> for further research, industry engagement, accreditation processes and other internal purposes like careers services, placements, or student presentations? | 1. Yes  2. No |
| END | Thank you for your time today and support in ensuring that graduates are well equipped to meet the needs of organisations like yours. If you would like further information about the ESS, including previous year’s results you can go to www.qilt.edu.au/ess |  |

# Appendix 3 Institutional participation

The tables below show institutions that participated in the GOS with one or more responses in the ESS between 2021 and 2023.

Table 21 Number of completed surveys by University, 2021-2023

| **University** | **2021** | **2022** | **2023** | **Total** |
| --- | --- | --- | --- | --- |
| Australian Catholic University | 100 | 72 | 75 | 247 |
| Avondale University | 8 | <5 | <5 | 14 |
| Bond University | 16 | 11 | 13 | 40 |
| Central Queensland University | 72 | 53 | 51 | 176 |
| Charles Darwin University | 34 | 32 | 26 | 92 |
| Charles Sturt University | 83 | 128 | 102 | 313 |
| Curtin University | 84 | 77 | 74 | 235 |
| Deakin University | 162 | 208 | 158 | 528 |
| Edith Cowan University | 83 | 92 | 77 | 252 |
| Federation University Australia | 41 | 41 | 33 | 115 |
| Flinders University | 25 | 88 | 59 | 172 |
| Griffith University | 88 | 83 | 44 | 215 |
| James Cook University | 44 | 42 | 44 | 130 |
| La Trobe University | 105 | 82 | 72 | 259 |
| Macquarie University | 63 | 75 | 66 | 204 |
| Monash University | 202 | 195 | 161 | 558 |
| Murdoch University | 35 | 42 | 34 | 111 |
| Queensland University of Technology | 152 | 136 | 102 | 390 |
| RMIT University | 152 | 143 | 106 | 401 |
| Southern Cross University | 39 | 40 | 52 | 131 |
| Swinburne University of Technology | 93 | 67 | 57 | 217 |
| The Australian National University | 47 | 67 | 58 | 172 |
| The University of Adelaide | 78 | 86 | 74 | 238 |
| The University of Melbourne | 238 | 243 | 188 | 669 |
| The University of Notre Dame Australia | 27 | 27 | 19 | 73 |
| The University of Queensland | 110 | 107 | 116 | 333 |
| The University of South Australia | 100 | 76 | 84 | 260 |
| The University of Sydney | 103 | 99 | 67 | 269 |
| The University of Western Australia | 27 | 59 | 60 | 146 |
| Torrens University | 40 | 50 | 36 | 126 |
| University of Canberra | 41 | 46 | 38 | 125 |
| University of Divinity | 12 | 15 | 10 | 37 |
| University of New England | 55 | 60 | 67 | 182 |
| University of New South Wales | 101 | 52 | 69 | 222 |
| University of Newcastle | 53 | 49 | 45 | 147 |
| University of Southern Queensland | 58 | 65 | 65 | 188 |
| University of Tasmania | 118 | 129 | 112 | 359 |
| University of Technology Sydney | 96 | 81 | 79 | 256 |
| University of the Sunshine Coast | 32 | 33 | 30 | 95 |
| University of Wollongong | 45 | 41 | 37 | 123 |
| Victoria University | 56 | 57 | 44 | 157 |
| Western Sydney University | 55 | 47 | 70 | 172 |

Note: <5 indicates a suppressed value (n < 5).

Table 22 Number of completed surveys by NUHEI, 2021-2023

| **Institution** | **2021** | **2022** | **2023** | **Total** |
| --- | --- | --- | --- | --- |
| Academies Australasia Polytechnic Pty Limited | - | <5 | - | <5 |
| Academy of Information Technology | <5 | <5 | <5 | 9 |
| Adelaide Central School of Art | - | <5 | <5 | <5 |
| Adelaide College of Divinity | - | <5 | - | <5 |
| Alphacrucis College | 7 | <5 | - | np |
| Asia Pacific International College | <5 | <5 | <5 | 6 |
| Australian Academy of Music and Performing Arts | - | <5 | - | <5 |
| Australian College of Applied Professions | <5 | 7 | 5 | np |
| Australian College of Christian Studies | - | - | - | - |
| Australian College of Nursing | 16 | 15 | <5 | np |
| Australian College of Theology Limited | 18 | 15 | 22 | 55 |
| Australian Institute of Business Pty Ltd | 13 | 15 | 14 | 42 |
| Australian Institute of Higher Education | <5 | <5 | - | 5 |
| Australian Institute of Management Education & Training | 11 | 11 | 6 | 28 |
| Australian Institute of Professional Counsellors | <5 | - | - | <5 |
| BBI - The Australian Institute of Theological Education | <5 | <5 | <5 | 6 |
| Box Hill Institute | <5 | <5 | - | 5 |
| Campion College Australia | - | <5 | <5 | <5 |
| Canberra Institute of Technology | - | <5 | - | <5 |
| Chisholm Institute | <5 | <5 | - | <5 |
| Christian Heritage College | 7 | <5 | 8 | np |
| CIC Higher Education | <5 | <5 | - | <5 |
| Collarts (Australian College of the Arts) | <5 | <5 | <5 | <5 |
| Eastern College Australia | <5 | <5 | - | <5 |
| Endeavour College of Natural Health | <5 | - | <5 | 5 |
| Engineering Institute of Technology | <5 | <5 | <5 | 11 |
| Excelsia College | 5 | <5 | <5 | np |
| Gestalt Therapy Brisbane | <5 | - | <5 | <5 |
| Health Education & Training Institute | <5 | - | <5 | <5 |
| HEPCO The Tax Institute Higher Education | <5 | <5 | <5 | <5 |
| Holmes Institute | 19 | 14 | 7 | 40 |
| Holmesglen Institute | <5 | <5 | <5 | 7 |
| ICHM | <5 | <5 | <5 | 9 |
| Ikon Institute of Australia | <5 | <5 | <5 | 6 |
| Institute of Health & Management Pty Ltd | - | <5 | <5 | <5 |
| International College of Management, Sydney | <5 | <5 | <5 | 10 |
| Kaplan Business School | 17 | 11 | 7 | 35 |
| Kaplan Higher Education Pty Ltd | 7 | 9 | 13 | 29 |
| Kent Institute Australia | 5 | 5 | - | 10 |
| King's Own Institute | <5 | <5 | 8 | 14 |
| LCI Melbourne | <5 | <5 | - | <5 |
| Le Cordon Bleu Australia | - | <5 | - | <5 |
| Leo Cussen Centre for Law | 8 | <5 | - | np |
| Macleay College | <5 | - | - | <5 |
| Marcus Oldham College | <5 | <5 | <5 | 9 |
| Melbourne Institute of Technology | 7 | 6 | <5 | np |
| Melbourne Polytechnic | <5 | <5 | <5 | 10 |
| Montessori World Educational Institute (Australia) | <5 | <5 | - | <5 |
| Moore Theological College | <5 | <5 | <5 | 9 |
| Morling College | - | <5 | - | <5 |
| Nan Tien Institute | - | <5 | - | <5 |
| National Art School | - | <5 | - | <5 |
| Perth Bible College | - | - | - | - |
| SAE Institute | <5 | 8 | 5 | np |
| SP Jain School of Management | - | <5 | <5 | 6 |
| Stott's College | - | <5 | - | <5 |
| Sydney College of Divinity | - | 5 | 6 | 11 |
| Tabor College of Higher Education | <5 | <5 | 5 | 10 |
| TAFE NSW | 5 | 8 | <5 | np |
| TAFE Queensland | - | - | <5 | <5 |
| TAFE South Australia | - | <5 | - | <5 |
| The Australian College of Physical Education | - | - | <5 | <5 |
| The Australian Institute of Music | <5 | - | <5 | <5 |
| The Cairnmillar Institute | <5 | <5 | - | <5 |
| The College of Law Limited | 46 | 27 | 35 | 108 |
| The MIECAT Institute | - | <5 | - | <5 |
| Think Education | <5 | <5 | - | <5 |
| UTS College | - | - | <5 | <5 |
| VIT (Victorian Institute of Technology) | 8 | 6 | <5 | np |
| Wentworth Institute of Higher Education | <5 | - | <5 | <5 |
| Whitehouse Institute of Design, Australia | - | <5 | <5 | <5 |
| William Angliss Institute | - | <5 | <5 | 6 |

Note: Blank cells represent no completed surveys for that collection year, <5 indicates a suppressed value (n < 5), and np indicates a value that is not published to prevent disclosure of a suppressed value.

# Appendix 4 Calculation of confidence intervals

## 4.1 Introduction

The technical details about the calculations used for institution level estimates from the ESS are provided below. It is intended for an audience with some technical and data background who wish to understand the statistical details of the calculations.

## 4.2 Data sources, variables and coverage

### 4.2.1 Data sources

**Employer Satisfaction Survey (ESS)**

The ESS is Australia’s first national survey that directly links the experiences of graduates to the views of their supervisors. Employed graduates who participated in the Graduate Outcomes Survey are asked to provide the contact details of their supervisor for follow up. The following ESS data are used:

* Overall satisfaction (item): the proportion of supervisors who expressed overall satisfaction with their graduate;
* Foundation skills (scale): the proportion of supervisors who were satisfied with the foundation skills of their graduates measured by the items in the foundation skills scale;
* Adaptive skills (scale): the proportion of supervisors who were satisfied with the adaptive skills of their graduate as measured by the items in the adaptive skills scale;
* Collaborative skills (scale): the proportion of supervisors who were satisfied with the collaborative skills of their graduate as measured by the items in the collaborative skills scale;
* Technical skills (scale): the proportion of supervisors who were satisfied with the technical skills of their graduate as measured by the items in the technical skills scale; and
* Employability skills (scale): the proportion of supervisors who were satisfied with the employability skills of their graduate as measured by the items in the employability skills scale.

When calculating institution level indicators, ESS indicators are calculated from three years of pooled data. This incorporates the most recent year of published data and the two immediately preceding years. For example, institution level indicators released in association with the 2023 ESS were based on results from the 2021, 2022 and 2023 surveys. In this appendix these years are notated as Y1, Y2 and Y3, where Y1 is the most recent year of published data.

The variables that were used to filter the data can be found in **Table 23** below. The coverage for each variable is applied before the calculation of the indicators and the SAS code used is provided in brackets after each variable in the table. The full code to create the indicators is available from the Social Research Centre (SRC) on request.

Table 23 Data coverage for the ESS based indicators

| **Variables (coverage) ESS Survey data file:** | **Indicator:**  **Overall Satisfaction** | **Indicator:**  **Foundation skills** | **Indicator:**  **Adaptive skills** | **Indicator:**  **Collaborative skills** | **Indicator:**  **Technical skills** | **Indicator:**  **Employability skills** |
| --- | --- | --- | --- | --- | --- | --- |
| Undergraduate level  **(if e310 in (8,9,10,13,20,21,22))** | **X** | **X** | **X** | **X** | **X** | **X** |
| Postgraduate coursework level  **(if e310 in (4,5,6,7,11,12,14))** | **X** | **X** | **X** | **X** | **X** | **X** |
| Postgraduate research level  **(if e310 in (1,2,3))** | **X** | **X** | **X** | **X** | **X** | **X** |
| In scope including different study areas for double degree students **(if analysis in (1,2))** | **X** | **X** | **X** | **X** | **X** | **X** |
| Valid likelihood of hiring another graduate with the same qualification from the same institution  **(ehire in (1,2,3,4,5))** | **X** | **-** | **-** | **-** | **-** | **-** |
| Valid foundation skills scale score **(if egfound in (0,100))** | **-** | **X** | **-** | **-** | **-** | **-** |
| Valid adaptive skills scale score **(if egadapt in (0,100))** | **-** | **-** | **X** | **-** | **-** | **-** |
| Valid collaborative skills scale score **((if egcollb in (0,100))** | **-** | **-** |  | **X** | **-** | **-** |
| Valid technical skills scale score **(if egtech in (0,100))** | **-** | **-** | **-** | **-** | **X** | **-** |
| Valid employability skills scale score **(if egemply in (0,100))** | **-** | **-** | **-** | **-** | **-** | **X** |
| Total minimum sample size of 25 **(if n ≥ 25)** | **X** | **X** | **X** | **X** | **X** | **X** |

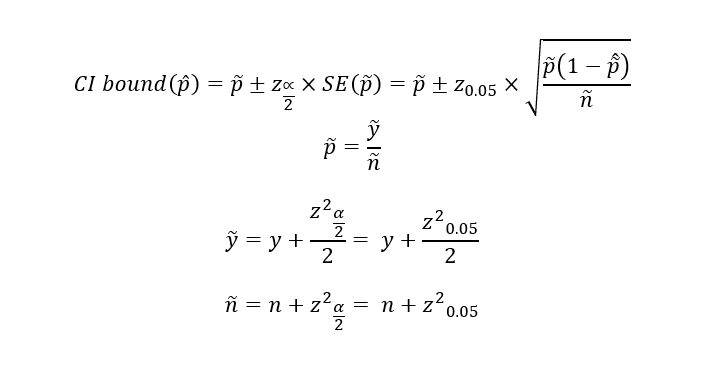
**X** Indicates that the restriction is applied to the data before a particular indicator is calculated.

### 4.2.2 Data variability

As the ESS sampling fraction, the proportion of the population sampled, is relatively small, there is no need to apply Finite Population Correction (FPC) to the standard error, and the 90% confidence interval calculations, as opposed to other QILT related surveys.

In order to calculate the standard errors for the survey estimates, no non-response bias was assumed and the Agresti-Coull method for confidence intervals for proportions was used.

The general formula used for confidence intervals for proportions was:



Where:

is the estimated proportion from the survey data

is an adjusted estimated proportion used only in confidence interval calculations

is the 95th quantile from the standard Normal distribution ~ N(0,1)

*y* is the number with the characteristic in question in the sample in the relevant strata over the three pooled years

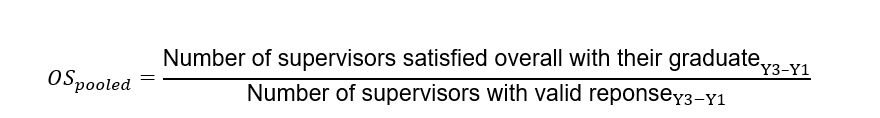
*n* is the number in the sample in the relevant strata over the three pooled years

## 4.3 Calculation of indicators and confidence intervals

### 4.3.1 Overall satisfaction

The overall satisfaction indicator is defined as the proportion of supervisors who indicated they were likely or very likely to consider hiring another graduate from the same course and institution. The indicator can be expressed as ‘the proportion of supervisors who expressed overall satisfaction with their graduate’.

The overall satisfaction indicator is calculated as follows:

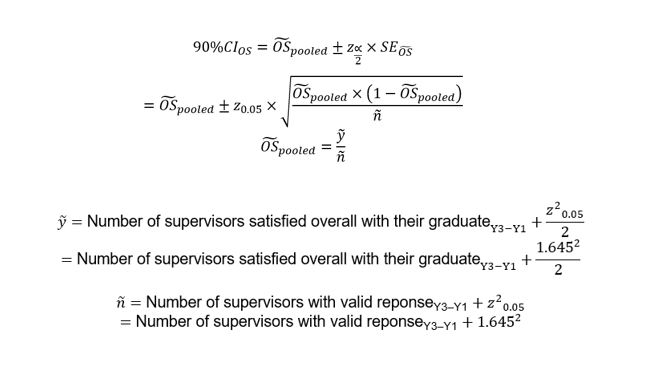


Where:

*Number of supervisors satisfied overall with their graduateY3–Y1* is the total number of supervisors who responded with a 4 or 5 (likely to consider or very likely to consider) to the overall satisfaction 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?’ in the three pooled years, after filters are applied. It should be noted that this item is reported on a five point scale.

*Number of supervisors with a valid responseY3­–Y1* is the total number of supervisors who responded to the overall satisfaction item in the three pooled years, after filters are applied.

The 90% confidence interval for the overall satisfaction indicator is calculated as follows:



Where:

is an adjusted estimated proportion used only in confidence interval calculations

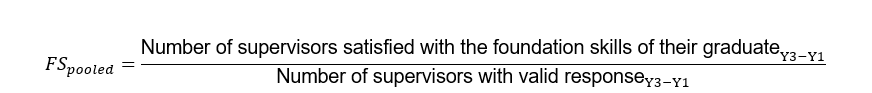
is the 95th quantile from the standard Normal distribution ~ N(0,1)

The restrictions for this indicator can be found in **Table 23**.

### 4.3.2 Foundation skills

The foundation skills indicator is defined as the proportion of supervisors who indicated they were satisfied with the foundation skills of their graduate. The indicator can be expressed as ‘the proportion of supervisors who were satisfied with the foundation skills of their graduate’.

The foundation skills indicator is calculated as follows:

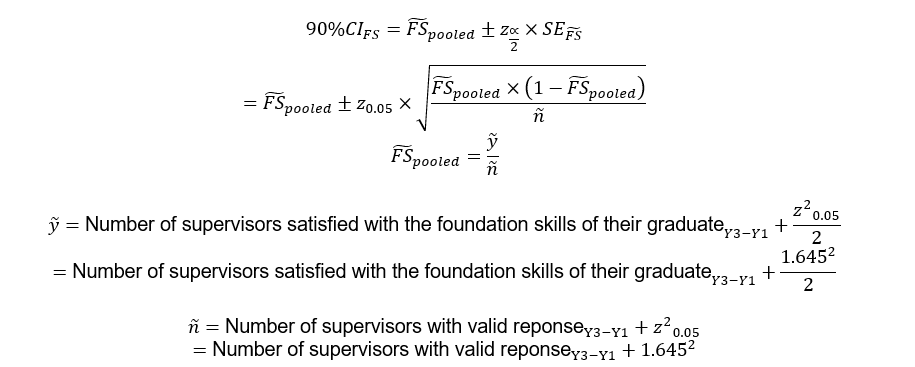


Where:

*Number of supervisors who were satisfied with the foundation skills of their graduateY3-Y1* is the total number of supervisors whose foundation skills scale score was at least 55 out of 100 **(foundation\_skills=100)** in the three pooled years, after filters are applied

*Number of supervisors with a valid responseY3–Y1* is the total number of supervisors who had a valid response **(foundation\_skills in (0,100))**, i.e. responded to at least six of the eight foundation skills items in the three pooled years, after filters are applied.

The 90% confidence interval for the foundation skills indicator is calculated as follows:



Where:

is an adjusted estimated proportion used only in confidence interval calculations

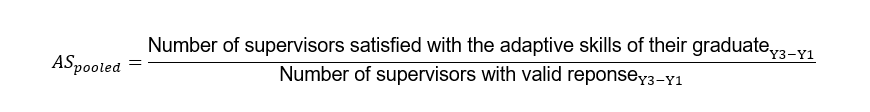
is the 95th quantile from the standard Normal distribution ~ N(0,1)

The data sources and restrictions for this indicator can be found in **Table 23**.

### 4.3.3 Adaptive skills

The adaptive skills indicator is defined as the proportion of supervisors who were satisfied with the adaptive skills of their graduate. The indicator can be expressed as ‘the proportion of supervisors who were satisfied with the adaptive skills of their graduate’.

The adaptive skills indicator is calculated as follows:

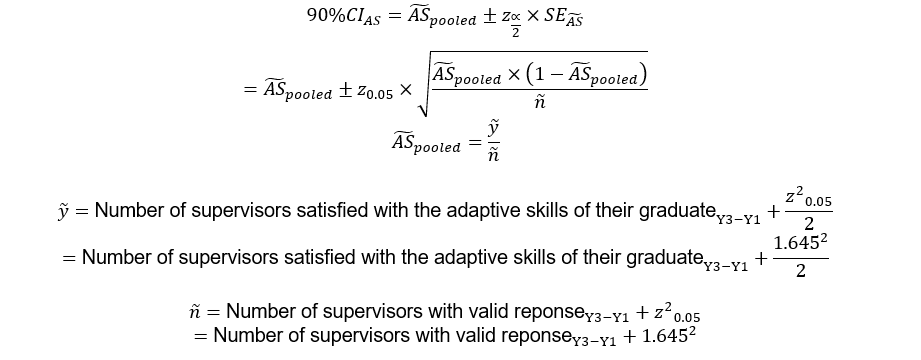


Where:

*Number of supervisors satisfied with the adaptive skills of their graduateY3-Y1* is the total number of supervisors whose adaptive skills scale score was at least 55 out of 100 **(adapative\_skills=100)** in the three pooled years, after filters are applied

*Number of supervisors with a valid responseY3-Y1* is the total number of supervisors who had a valid response **(adapative\_skills in (0,100))**, i.e. responded to at least four of the six adaptive skills items in the three pooled years, after filters are applied

The 90% confidence interval for the adaptive skills indicator is calculated as follows:



Where:

is an adjusted estimated proportion used only in confidence interval calculations

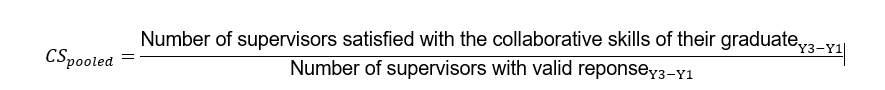
is the 95th quantile from the standard Normal distribution ~ N(0,1)

The restrictions for this indicator can be found in **Table 23**.

### 4.3.4 Collaborative skills

The collaborative skills indicator is defined as the proportion of supervisors who indicated they were satisfied with the collaborative skills of their graduate. The indicator can be expressed as ‘the proportion of supervisors who were satisfied with the collaborative skills of their graduate’.

The collaborative skills indicator is calculated as follows:

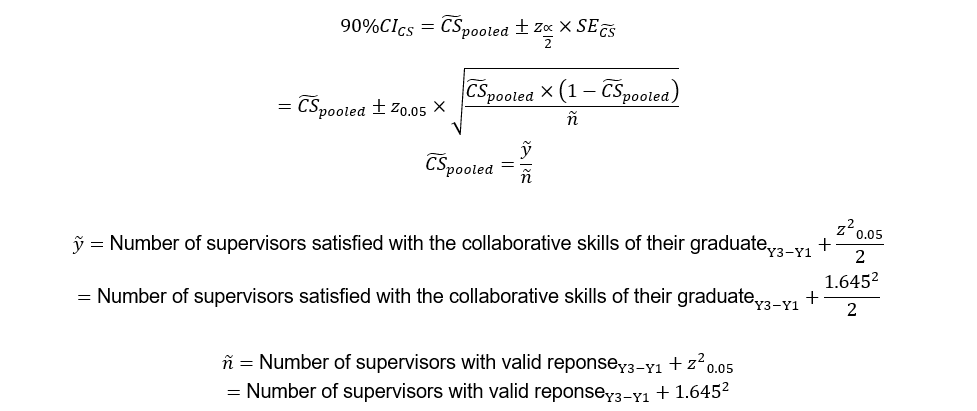


Where:

*Number of supervisors who were satisfied with the collaborative skills of their graduateY3-Y1* is the total number of supervisors whose collaborative skills scale score was at least 55 out of 100 **(collaborative\_skills = 100)** in the three pooled years, after filters are applied

*Number of supervisors with a valid responseY3-Y1* is the total number of supervisors who had a valid response **(collaborative\_skills in (0,100))**, i.e. responded to at least three of the five collaborative skills items in the three pooled years, after filters are applied.

The 90% confidence interval for the collaborative skills indicator is calculated as follows:



Where:

is an adjusted estimated proportion used only in confidence interval calculations

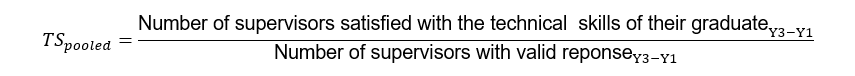
is the 95th quantile from the standard Normal distribution ~ N(0,1)

The restrictions for this indicator can be found in **Table 23**.

### 4.3.5 Technical skills

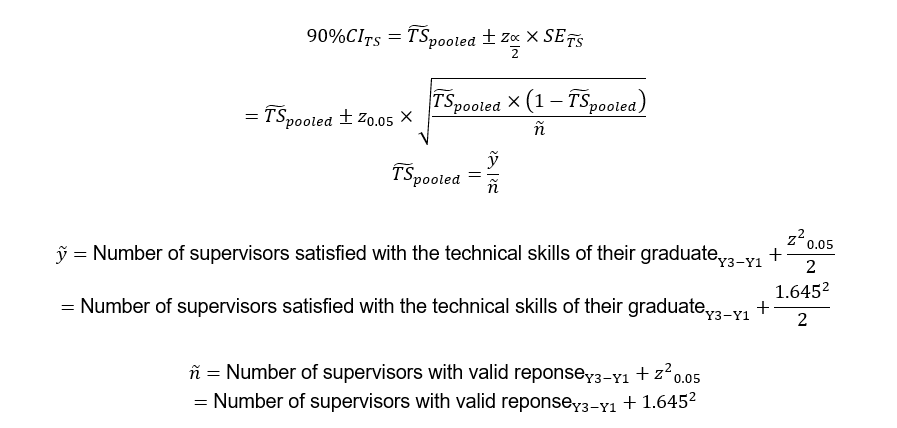
The technical skills indicator is defined as the proportion of supervisors who were satisfied with the technical skills of their graduate. The indicator can be expressed as ‘the proportion of supervisors who were satisfied with the technical skills of their graduate’.

The technical skills indicator is calculated as follows:



Where:

*Number of supervisors satisfied with the technical skills of their graduateY3-Y1* is the total number of supervisors whose technical skills scale score was at least 55 out of 100 **(technical\_skills = 100)** in the three pooled years, after filters are applied

*Number of supervisors with a valid responseY3-Y1* is the total number of supervisors who had a valid response **(technical\_skills in (0,100))**, i.e. responded to at least four of the six technical skills items in the three pooled years, after filters are applied.  
  
The 90% confidence interval for the technical skills indicator is calculated as follows:  


Where:

is an adjusted estimated proportion used only in confidence interval calculations

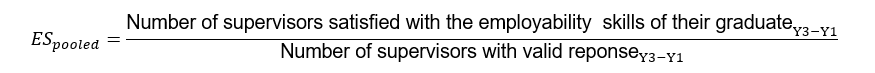
is the 95th quantile from the standard Normal distribution ~ N(0,1)

The restrictions for this indicator can be found in **Table 23**.

### 4.3.6 Employability skills

The employability skills indicator is defined as the proportion of supervisors who indicated they were satisfied with the employability skills of their graduate. The indicator can be expressed as ‘the proportion of supervisors who were satisfied with the employability skills of their graduate’.

The employability skills indicator is calculated as follows:

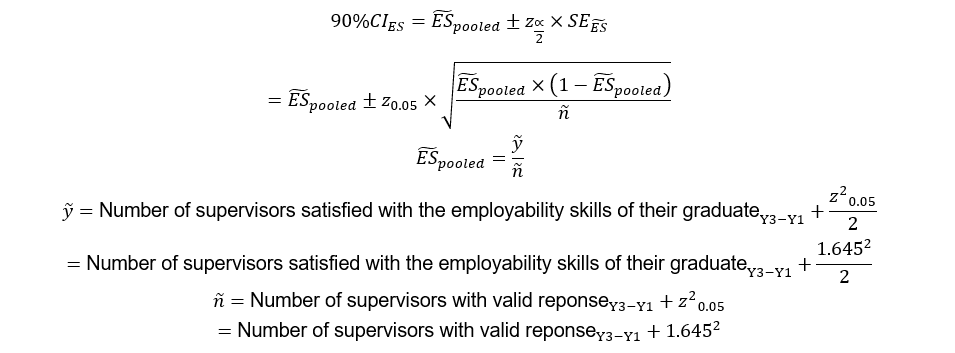


Where:

*Number of supervisors satisfied with the employability skills of their graduateY3-Y1* is the total number of supervisors whose employability skills scale score was at least 55 out of 100 **(employability\_skills = 100)** in the three pooled years, after filters are applied

*Number of supervisors with a valid responseY3-Y1* is the total number of supervisors who had a valid response **(employability\_skills in (0,100))**, i.e. responded to at least six of the eight employability skills items in the three pooled years, after filters are applied.

The 90% confidence interval for the employability skills indicator is calculated as follows:



Where:

is an adjusted estimated proportion used only in confidence interval calculations

is the 95th quantile from the standard Normal distribution ~ N(0,1)

The restrictions for this indicator can be found in **Table 23**.

1. The Australian and New Zealand Standard Classification of Occupations (ANZSCO). The ANZSCO was jointly developed by the ABS, Stats NZ and the then Australian Government Department of Education, Employment and Workplace Relations. [↑](#footnote-ref-2)
2. Excludes opt outs, disqualified and out of scope surveys [↑](#footnote-ref-3)