

2020 Employer Satisfaction Survey

Methodological Report

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Centre

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1. Introduction

1.1. About this report

This methodological report describes the sample preparation, data collection, data processing and reporting aspects of the 2020 Employer Satisfaction Survey (ESS, 'the survey'), conducted on behalf of the Australian Government Department of Education, Skills and Employment ('the department') by the Social Research Centre. This report is organised into the following sections:

- Section 1 introduces the survey background, objectives and provides a general overview.
- Section 2 describes the target audience and sample design.
- Section 3 documents the survey design and procedures for conducting the study.
- Section 4 outlines the questionnaire development phase and provides an overview of changes from the previous iteration including institution specific items.
- Section 5 describes the data processing procedures and deliverables.
- Section 6 documents the final dispositions and response rates.
- Section 7 presents an analysis of response.
- Section 8 notes considerations for future iterations of the ESS.

1.2. Background

The ESS is a component of the Quality Indicators for Learning and Teaching (QILT) suite of surveys, commissioned by the department. The ESS is the only national survey that measures the extent to which higher education institutions in Australia are preparing graduates to meet employer needs. Data from the ESS are used to better understand the specific skills and attributes needed in business today, how well higher education is preparing graduates for the workforce and the varied employment pathways graduates are taking after completing their study. ESS data can be linked with data from the Graduate Outcomes Survey (GOS) to compare perceptions of graduates and the views of their direct work supervisors ('supervisors'). For a detailed history of the ESS and its predecessor instruments, refer to the 2017 *ESS Methodological Report*.

The ESS involves three rounds of data collection each year, commencing in November, February and May, with supervisors of recent graduates. The collection of supervisor contact details ('contact details') occurs each round at the end of the GOS. All graduates in employment, except those who are self-employed or working in a family business ('employed graduates'), are asked to provide the name, email and / or phone number of their supervisor so that the supervisor can be invited to take part in the ESS.

The survey instrument deployed at each round in the 2020 ESS maintained consistency with previous years.

1.3. Objectives

The broad aim of the ESS is to collect insights and perceptions from employers about the attributes of recent graduates from Australian higher education institutions including universities and non-university higher education institutions (NUHEIs). Employer views of the technical skills, generic skills and work readiness of recent graduates provide assurance about the quality of Australia's higher education sector. The development, collection and reporting of these measures assists the department to monitor service delivery and improve higher education over time.

Specific research objectives of the ESS are to measure, monitor and better understand

- The specific skills and attributes employers need in their business.
- How well higher education is equipping graduates for the workforce.
- The varied employment pathways graduates are taking after completing their study.

1.4. Overview

A total of 3,430 surveys were completed. This was made up of 3,175 supervisors of graduates from 41 Australian universities and 255 supervisors of graduates from 53 NUHEIs (refer to Table 1 for further details).

The ESS is administered in parallel with the GOS and the first collection round for the ESS 2020 reporting year took place in November 2019, the second in February 2020 and the third in May 2020. The sample was drawn from graduates who responded to the 2020 GOS, were in paid employment the week prior to completing the GOS and consented to provide contact details. The survey was fielded primarily via online collection, with interviewing via Computer Assisted Telephone Interviewing (CATI) as a secondary mode. The survey was conducted in English only. Fieldwork dates are provided in Table 1 below. Supervisors were invited to participate via email or phone (using CATI) depending on the contact information provided by the graduate. Unlike the GOS and the Student Experience Survey (SES), completed ESS CATI surveys are included in the nationally reported data. The ESS asks questions on graduate preparedness for the workforce and the skills and attributes that are beneficial for employees to have.

Table 1 Key project statistics

	November 2019	February 2020	May 2020	Total
Total supervisors approached	2,976	547	4,525	8,048
Out-of-scope supervisors ¹	244	44	237	525
In-scope supervisors	2,732	503	4,288	7,523
Completed surveys ²	1,202	228	2,000	3,430
Overall response rate ³	44.0%	45.3%	46.6%	45.6%

¹ Includes opt-outs and out-of-scope surveys.

² Excludes non-HESA institutions for consistency with the GOS and ESS National Reports.

³ For the purpose of QILT projects, response rate is defined as completed surveys as a proportion of 'in-scope supervisors', where in-scope supervisors excludes unusable sample (e.g. no contact details), out-of-scope and opted-out.

1.5. Project milestones

Table 2 provides a summary of the key project milestones including tasks and dates for each round in the 2020 ESS collection cycle. In the 2020 ESS, for the first time, the ESS fieldwork period was extended, in response to the time required to first collect accurate contact details and then enumerate the supervisor. For employed graduates who completed the GOS in the November 2019 or February 2020 rounds, the supervisor could be enumerated up until 14 August 2020.

Table 2 Key project milestones

Task	November 2019	February 2020	May 2020
Start-up			
Questionnaire development	22-Oct to 25-Oct	17-Jan to 30-Jan	2-Apr to 15-Apr
Sample			
Ongoing collection of contact details	29-Oct to 29-Apr	29-Jan to 15-May	28-Apr to 17-Jul
Fieldwork			
Start online fieldwork	31-Oct	31-Jan	2-May
Fieldwork closes	-	-	14-Aug
Reporting			
Draft data and documentation to the department	-	-	16-Oct
Draft national report to the department	-	-	9-Nov
Final data and documentation to the department	-	-	9-Nov
Institutional data files delivered	-	-	9-Nov
Final national report to the department	-	-	27-Nov
Technical report to the department	-	-	4-Dec

2. Sample design

2.1. Population

The in-scope population for the ESS comprised supervisors of employed graduates who completed the GOS.

2.2. Institutional participation

The November round of the 2020 ESS included the supervisors of employed graduates from 40 universities and 32¹ NUHEIs. February was the smallest round and included supervisors of employed graduates from 23 universities and 15 NUHEIs. Finally, the May round included supervisors of employed graduates from 41 universities, and 54 NUHEIs. Please note the number of participating institutions in the ESS may be lower than those reported in the *2020 GOS Methodological Report* due to some institutions having no graduates who provided valid contact details.

Refer to Appendix 1 for a list of institutions that had graduates provide valid contact details and supervisors complete the ESS.

2.3. Sampling process overview

The initial method for building the ESS sample took place at the end of the GOS, where employed graduates were presented with the ESS bridging module (see Appendix 7). This module described the purpose, importance and relevance of the survey and asked graduates if they would be willing to provide their supervisor's contact details (name, business name, email address and/or phone number). Refer to Section 2.3.1 for further information on the function and outcomes of the ESS bridging module.

Due to relatively low levels of agreement at the ESS bridging module, a range of additional sample workflows were implemented to maximise sample for the ESS. The process and scope of each additional sample workflow used to build the ESS sample are detailed in Section 2.4. A summary of contact details collected from each sample workflow is provided below in Table 3. As can be seen, just under half (47.0 per cent) of all contact details were collected via the refusal conversion workflow. This was followed by the ESS bridging module (31.0 per cent) and GOS partial completers (13.6 per cent). Less than one-in-ten contact details were collected via the survey invitation pack (2.7 per cent) and CATI follow up (5.7 per cent). Given that sample workflows other than the ESS bridging module accounted for over two-thirds (69.0 per cent) of contact details collected, it will be very important to continue to review and possibly expand these workflows.

Table 3 Contact details collected by sampling workflow

Sampling workflow	November 2019		February 2020		May 2020		Total	
	n	%	n	%	n	%	n	%
Total contact details collected	2,976	100.0	547	100.0	4,525	100.0	8,048	100.0
ESS bridging module	860	28.9	183	33.5	1,455	32.2	2,498	31.0
Survey invitation pack	20	0.7	5	0.9	191	4.2	216	2.7
CATI follow up	221	7.4	39	7.1	196	4.3	456	5.7
Refusal conversion	1,511	50.8	249	45.5	2,024	44.7	3,784	47.0
GOS partial completers	364	12.2	71	13.0	659	14.6	1,094	13.6

¹ Excludes non-HESA NUHEIs for consistency with the GOS and ESS National Report.

2.3.1. ESS bridging module

The ESS bridging module was presented to employed graduates at the end of the online GOS. The script described the purpose and importance of the ESS, attempted to avert common graduate concerns and asked graduates to provide contact details. In the ESS bridging module, graduates could choose to:

- Provide contact details.
- Speak with their supervisor before responding and request a call from an interviewer if they had a query, entering the graduate into the CATI follow up workflow.
- Request further information about the ESS. This option presented the graduate with a set of frequently asked questions and answers.
- Request a survey invitation pack be sent by email. The survey invitation pack included the *ESS Brochure* and an ESS approach email for the graduate to forward to their supervisor. The approach email linked to an online form that allowed the supervisor to self-register for the ESS.
- Refuse to provide contact details.

A copy of the ESS bridging module and CATI follow up scripts are provided in Appendix 7.

A summary of graduate response to the request for contact details within the ESS bridging module is shown in Table 4. As can be seen, one-in-twenty-five graduates (4.0 per cent) indicated they would provide contact details. Results varied somewhat between rounds with February having the highest level of agreement (5.5 per cent) and May the lowest (3.7 per cent). The decline in graduate agreement (from 8.1 per cent in 2019) makes improving the level of agreement achieved in the ESS bridging module a key consideration for the future of the ESS (see Section 8).

It should be noted that the collection of contact details, particularly during the May round, may have been impacted by the COVID-19 pandemic due to the general disruption caused to employment.

Table 4 Graduate response to the ESS bridging module

Response to the ESS bridging module	November 2019		February 2020		May 2020		Total	
	n	%	n	%	n	%	n	%
Total graduates approached	25,781		4,332		51,950		82,063	
No response	2,162		391		4,372		6,925	
Total responses	23,619	100.0	3,941	100.0	47,578	100.0	75,138	100.0
I will provide their details	1,000	4.2	217	5.5	1,763	3.7	2,980	4.0
I want to speak with my supervisor before providing their details	1,714	7.3	336	8.5	4,091	8.6	6,141	8.2
I want more information about the Employer Satisfaction Survey	197	0.8	45	1.1	453	1.0	695	0.9
I do not wish to provide my supervisor's details	20,708	87.7	3,343	84.8	41,271	86.7	65,322	86.9

All graduates who responded with 'I do not wish to provide my supervisor's details' were asked the main reason for their refusal. As shown in Table 5 (on the next page), the most common reason for refusal was concern that the supervisor was too busy (27.5 per cent), followed by the graduate's job not being related to the study they did (14.7 per cent) and graduates having privacy concerns (12.9 per cent). To acknowledge the potential disruption to graduate employment caused by COVID-19, the refusal code 'Supervisor not working / Business closed due to COVID-19' was added for the May

round. However, few graduates in May (3.9 per cent) used this code and the most common reasons in May aligned with other rounds.

Table 5 Graduate reasons for refusal in the ESS bridging module

Graduate reason for refusal	November 2019		February 2020		May 2020		Total	
	n	%	n	%	n	%	n	%
Total refused	20,708		3,941		51,950		65,322	
No response	607		683		11,293		2,298	
Total responses	20,101	100.0	3,258	100.0	39,665	100.0	63,024	100.0
My supervisor is busy and does not have enough time	5,276	26.2	943	28.9	11,102	28.0	17,321	27.5
My job is not related to the study I did	3,309	16.5	493	15.1	5,487	13.8	9,289	14.7
I have privacy concerns	3,062	15.2	423	13.0	4,639	11.7	8,124	12.9
I do not have a direct supervisor	2,188	10.9	390	12.0	4,471	11.3	7,049	11.2
I have not been in my job long enough	1,870	9.3	331	10.2	4,647	11.7	6,848	10.9
My job is temporary only / casual only	2,309	11.5	293	9.0	4,189	10.6	6,791	10.8
Supervisor not working / Business closed due to COVID-19	-	-	-	-	1,531	3.9	1,531	2.4
I do not know the contact details of my supervisor	474	2.4	94	2.9	861	2.2	1,429	2.3
Other reasons	1,613	8.0	291	8.9	2,738	6.9	4,642	7.4

2.3.2. Sample quality

The data quality of each sample record was checked as it was collected and prior to the record being entered into the appropriate contact workflow (see Section 3.3).

To minimise data quality errors, the following validation processes were implemented:

- Validation of email addresses at the time of collection (via the 'Kickbox' platform).
- Checks on supervisor phone number, name and email address fields to ensure they did not match the graduate's sample information.
- Checks on domestic phone numbers to ensure they were 10 digits and international phone numbers to ensure they were formatted with a country code.
- A verification process whereby all supervisor records collected were manually reviewed for approval prior to the supervisor being invited to participate in the ESS.

A number of data quality issues were noted with the ESS sample, as outlined below:

- Incomplete contact information (e.g. missing name, email, phone, etc.).
- Graduate contact information being provided in place of supervisor contact information.
- Academic supervisor contact details being provided instead of the requested work supervisor contact details.
- Poor quality or missing contact information as a way of refusing to provide contact details.
- Incorrect email addresses due to erroneous domain names.

The quality of the sample provided was reviewed after each round to facilitate the continuing improvement of the ESS sample.

2.3.3. Sample cleaning

As noted in Section 2.3.2, all contact details were passed through a manual review process to ensure data quality. Records could be accepted or rejected, with accepted records forming the ESS sample. The majority (99.6 per cent) of records were accepted, with a minority (less than one per cent) rejected.

Light cleaning was undertaken throughout the manual review process to ensure optimal presentation of sample information throughout the survey.

The main components of sample record cleaning and manipulation were as follows:

- Email cleaning, e.g. correct domain formats.
- Phone cleaning, e.g. leading zeros.
- Name cleaning, e.g. correct capitalisation and salutations.
- Business name cleaning, e.g. correct capitalisation.

2.3.4. Type of contact details

Table 6 provides a summary of the type of valid contact details provided by graduates for the 2020 ESS.

The collection of both an email and a phone number allowed supervisors to be approached through both online and CATI workflows (see Section 3.3) and was an important component of maximising response to the ESS. The collection of both an email and phone number was a focus of interviewer training for the CATI follow up (see Section 2.4.3, Appendix 4) and the collection of both an email and phone increased in each round (up to 52.8 per cent in May). A continued focus on improving the collection of both email and phone contact details should be considered for the ESS in future years (see Section 8).

Table 6 Type of contact details collected

Type of contact details collected	November 2019		February 2020		May 2020		Total	
	n	%	n	%	n	%	n	%
Total valid contact details	2,976	100.0	547	100.0	4,525	100.0	8,048	100.0
Valid email only	1,513	50.8	281	51.4	1,899	42.0	3,693	45.9
Valid phone number only	280	9.4	25	4.6	236	5.2	541	6.7
Valid email and phone number	1,183	39.8	241	44.1	2,390	52.8	3,814	47.4

2.4. Additional sample workflows

To further build the ESS sample base and maximise response, several additional sample workflows were implemented in the 2020 ESS. Graduates were eligible for additional sample workflows in the following circumstances:

- Requested to be called before providing contact details.
- Requested an email containing the *ESS Brochure* or survey invitation pack (see Appendix 3) and had not provided contact details.
- Did not provide a response at the ESS bridging module.
- Provided a refusal reason at the ESS bridging module that was suitable for a refusal conversion attempt.

- Were an employed graduate who had only partially completed the GOS and had not been approached for the ESS.
- Provided contact details that were unusable or a repeat non-contact when approached through the ESS online workflow.

2.4.1. ESS bridging module non-response follow up

The ESS bridging module non-response follow up workflow was conducted with graduates who met the following conditions:

- Reached the ESS bridging module but stopped the survey without completing.
- Requested they be sent a copy of the *ESS Brochure* but did not subsequently return to complete the ESS bridging module.

The non-response follow up was conducted using both email and CATI. Graduates were sent up to two reminder emails prompting completion of the ESS bridging module. The initial reminder email was sent one day after the survey was stopped (or nine days after the *ESS Brochure* was sent) and the second email was sent following a further three-day delay. If the graduate had a phone number available, they were subsequently entered into the CATI follow up workflow (described in Section 2.4.3) after an additional four days.

Outcomes of the non-response follow up are shown in Table 7. The workflow yielded a consistent collection of contact details in each round (13.1 per cent in total of those followed up).

Table 7 ESS bridging module non-response follow up outcomes

	November 2019		February 2020		May 2020		Total	
	n	%	n	%	n	%	n	%
Total non-response follow up	1,254	100.0	390	100.0	1,867	100.0	3,511	100.0
Graduate provided valid contact details	166	13.2	54	13.8	241	12.9	461	13.1

2.4.2. Survey invitation pack

For the 2020 ESS collection cycle, an option was added to the ESS bridging module for graduates to request an email containing a survey invitation pack. The survey invitation pack contained a link to the *ESS Brochure* and an ESS approach email that the graduate could forward onto their supervisor. The approach email contained a unique link to an online form where the supervisor could self-register for the ESS by providing their own contact details.

This workflow was introduced as an alternative method of collecting contact details for graduates that preferred to give the option of registering for the ESS directly to their supervisor. The survey invitation pack was offered to graduates through a variety of pathways within the ESS bridging module. CATI follow up with graduates who requested the survey invitation pack, but whose supervisor had not registered, was conducted as part of the refusal conversion workflow (see Section 2.4.4).

Example copies of the *ESS Brochure* and survey invitation pack email are provided in Appendix 3. The script for the online registration form and refusal aversion scripting is included in Appendix 7.

Outcomes of requests for the survey invitation pack are shown in Table 8 (on the next page). The proportion of supervisors that self-registered contact details after graduates were sent the survey invitation pack increased round on round (from 2.1 per cent in November to 3.5 per cent in May). The survey invitation pack was made accessible earlier in the ESS bridging module for the May round, which led to an increase in packs sent during the May round.

Table 8 Survey invitation pack outcomes

Survey invitation pack outcomes	November 2019		February 2020		May 2020		Total	
	n	%	n	%	n	%	n	%
Total graduates requested survey invitation pack	933	100.0	152	100.0	5,454	100.0	6,539	100.0
Supervisor self-registered valid contact details	20	2.1	5	3.3	191	3.5	216	3.3

2.4.3. Requested CATI follow up

CATI follow up was conducted with graduates who requested contact, after responding with ‘*I want more information about the Employer Satisfaction Survey*’ at the ESS bridging module. This workflow allowed interviewers to offer personalised reassurance regarding graduate concerns about the ESS and attempt to collect contact details. Graduates who refused to provide contact details during CATI follow up were read a short, tailored script to try and avert the refusal (Appendix 7 contains a copy of the CATI follow up script).

A short call cycle of up to four used for the CATI follow up, with the majority of graduates contacted (97.8 per cent) receiving three or fewer calls.

As can be seen at Table 9, around one-in-ten (10.1 per cent) graduates who requested contact went on to provide valid contact details during the follow up phone call. It should be noted that the base size for graduates requesting CATI follow up is small relative to the other additional sample workflows.

Table 9 Requested CATI follow up outcomes

Requested CATI follow up outcomes	November 2019		February 2020		May 2020		Total	
	n	%	n	%	n	%	n	%
Total requested CATI follow up	44	100.0	7	100.0	38	100.0	89	100.0
Graduate provided valid contact details	2	4.5	1	14.3	6	15.8	9	10.1

2.4.4. Refusal conversion

To try and further increase the ESS sample base, a refusal conversion workflow was conducted using CATI. Only graduates with a phone number in the GOS sample were eligible for selection. Refusal reasons from the ESS bridging module were chosen for conversion based on their level of suitability, with some reasons deemed not suitable (e.g. ‘I don’t have a direct supervisor’). Six refusal reasons were selected for refusal conversion:

- My job is temporary only/casual only.
- My supervisor is busy and does not have enough time.
- My job is not related to the study I did.
- I have privacy concerns.
- I have not been in my job long enough.
- Supervisor not working / Business closed due to COVID-19 (in the May round only).

The delay between refusal and CATI follow up was dependent on operational needs, the nature of the refusal and strategies to maximise response. The refusal conversion script was customised to address common concerns associated with each refusal reason (see Appendix 8). Interviewer training for refusal conversion emphasised identifying and responding to the graduate’s personal concerns, rather than strict adherence to a predefined script. To minimise graduate burden, no more than four calls were placed to graduates to attempt to make contact and collect contact details.

The goal of this workflow was for interviewers to collect contact details directly from the graduate. However, interviewers also had the option of sending a survey invitation pack to the graduate's email, allowing supervisor self-registration. The survey invitation pack was offered only as a final refusal aversion technique. Non-response follow up to requests for the survey invitation pack was also conducted as part of the refusal conversion workflow.

Refusal conversion was the largest of the additional sample workflows undertaken as part of the 2020 ESS. Outcomes from refusal conversion are listed in Table 10, and as can be seen, approximately one-in-ten (11.4 per cent) graduates approached went on to provide contact details.

The proportion of graduates that provided valid contact details decreased in each round (12.7 per cent in November, down to 10.5 per cent in May). The shorter fieldwork period for the collection of contact details in May (see Section 1.5) could have contributed to this difference as there was less time available to conduct the refusal conversion call cycle. It is also possible that disruption caused by the COVID-19 pandemic influenced graduate response during the May round.

Table 10 Refusal conversion outcomes

	November 2019		February 2020		May 2020		Total	
	n	%	n	%	n	%	n	%
Total contacted for refusal conversion	11,939	100.0	2,072	100.0	19,340	100.0	33,351	100.0
Graduate provided valid contact details	1,512	12.7	251	12.1	2,029	10.5	3,792	11.4

2.4.5. GOS partial completers

To further increase the ESS sample base, CATI follow up was conducted with a select group of graduates who only partially completed the GOS ('GOS partial completers'). Employed graduates were selected for this workflow if they had completed enough of the GOS to be eligible for national reporting but did not complete enough of the GOS to reach the ESS bridging module. Graduates were also required to have a phone number in the GOS sample to be selected.

The GOS partial completers workflow was conducted after the end of fieldwork for each round of the GOS, and CATI follow up aligned with processes described in Section 2.4.3. The introduction of the CATI follow up script was customised for GOS partial completers and is included in Appendix 7.

Table 11 shows that fewer than one-in-ten (7.8 per cent) GOS partial completers provided valid contact details when approached as part of this workflow.

Table 11 GOS partial completers outcomes

GOS partial completers outcomes	November 2019		February 2020		May 2020		Total	
	n	%	n	%	n	%	n	%
Total GOS partial completers contacted	4,627	100.0	719	100.0	8,591	100.0	13,937	100.0
Graduate provided valid contact details	365	7.9	71	9.9	658	7.7	1,094	7.8

2.4.6. ESS boost

A CATI follow up workflow referred to as the ESS boost was implemented to recover ESS sample that had an unusable outcome (disconnected phone number or permanent failure to deliver email) or sample that was a repeat non-contact through the ESS online workflow. Records with contact details collected directly from supervisors (see Section 2.4.2) were not eligible for the ESS boost workflow and only records where the graduate had a phone number in the GOS sample were selected.

A short call cycle of up to three phone calls was employed for the ESS boost. Graduates were asked by interviewers to confirm if the original contact details provided were correct. Existing contact details could be confirmed or removed, and new details provided. In circumstances where new or updated information was provided, the contact protocol for the ESS record was reset and the record was entered anew into the appropriate online or CATI workflow (refer to Section 3.3). If no new contact information for a record was obtained, no adjustment was made to the ESS contact protocol.

Table 12 displays the outcomes of the ESS boost workflow. In total more than half of the graduates contacted confirmed the original contact details provided (38.0 per cent) or provided new contact details (18.8 per cent). Only one-in-ten (10.4 per cent) graduates provided new contact details in the May round, in comparison to one quarter of graduates (25.7 per cent) during November. This difference could be due to the shorter fieldwork period allowed in May (see Section 1.5) and is an important operational consideration if the ESS boost is to be conducted again.

Table 12 ESS boost outcomes

ESS boost outcomes	November 2019		February 2020		May 2020		Total	
	n	%	n	%	n	%	n	%
Total contacted for ESS boost	642	100.0	118	100.0	557	100.0	1,317	100.0
Confirmed original contact details	223	34.7	41	34.7	236	42.4	500	38.0
Provided new contact details	165	25.7	24	20.3	58	10.4	247	18.8

3. Survey design and procedures

3.1. Institutional engagement

Established strategies proven to support solid response rates from supervisors, including emails, CATI and website resources, were utilised for the ESS. These supervisor engagement strategies (see Section 3.2) and contact protocols (see Section 3.3) perform best when supported by the graduate. Higher education institutions are well placed to engage their graduates regarding the importance and legitimacy of the ESS. By extension, institutional engagement may increase the willingness of graduates to provide contact details and encourage supervisor participation in the ESS.

To build institutional engagement, the Social Research Centre employed a strategy based on the principles of stakeholder need, transparency, knowledge sharing and responsiveness. A comprehensive range of activities were designed to actively engage institutions with the ESS. The following activities and materials were included as part of the Social Research Centre's institutional engagement strategy:

- Planning resources such as the *QILT key dates calendar* and the *GOS Collection and Sample Guide*.
- Communications inviting institution participation in the GOS (and therefore ESS).
- Webinars and newsletters.
- Regular communications with institutions' nominated survey contacts throughout fieldwork.
- Ad hoc assistance from the QILT research and administrative teams for institution contacts as required.

3.1.1. Webinars and newsletters

As part of institutional engagement, a series of webinars and newsletters were provided to institutions throughout the 2020 ESS collection cycle. Newsletters were sent monthly covering information related to key QILT survey milestones, acting as a regular touch point with institution contacts who subscribed.

Webinars were presented for institutions on a near monthly basis. Webinar topics were designed to guide institutions through key stages of the survey administration process and to share technical and methodological insights. To ensure continued engagement with the webinar series, institutions were consulted to inform topics of interest for future sessions. Webinars relating directly to the ESS covered topics such as institution data file release and the potential for institution access to employer contact details from the ESS.

3.2. Graduate and supervisor engagement

An *ESS Brochure* was made available to graduates and supervisors as part of engagement materials and upon request. The *ESS Brochure* was presented in a question and answer format and covered topics relevant to supervisor participation. These topics included the benefits of participation, what is required of supervisors to participate and the privacy provisions of the research. A copy of the *ESS Brochure* is included in Appendix 3.

An ESS website (www.qilt.edu.au/ess) was also made available and included links to the *ESS Brochure*, as well as previous years' ESS results and reports. The *GOS Marketing Pack* (refer to the *2020 GOS Methodological Report*) was available to participating institutions on the QILT website provider portal. While the primary purpose of this pack was to help institutions increase graduate

engagement and support the institutional administration of the GOS, the included approach letter and email templates encouraged graduates to nominate their supervisor for the ESS.

All correspondence provided the ESS or QILT email address and phone number for the purpose of contacting the Social Research Centre if there were any queries.

3.3. Contact protocol

Dual methodologies were utilised in the 2020 ESS with online and CATI workflows established to support supervisor participation. Supervisors with a valid email address were entered into the online workflow consisting of an invitation email followed by up to four reminders. This was the primary workflow on the basis that supervisors would prefer to receive information about the ESS in writing, and that they would prefer the opportunity to self-complete in their own time. Records with only a valid phone number (i.e. no email address), were entered into the CATI workflow. Records with both a valid email address and phone number were initially entered into the online workflow.

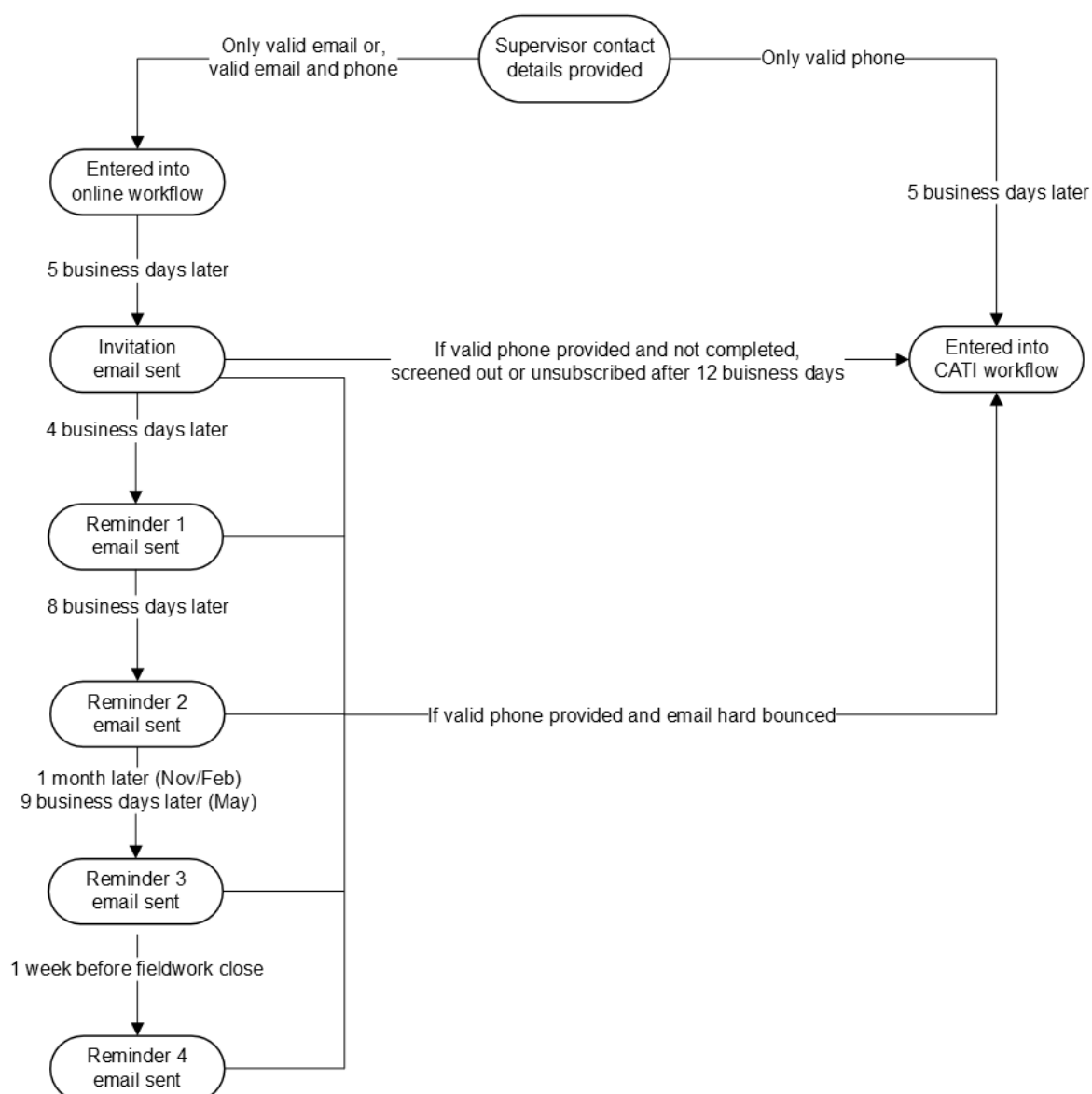
Figure 1 (on the next page) outlines the contact protocol used for 2020 ESS, including the delay before beginning each workflow or sending a communication. The initial delay between contact details being provided and the supervisor being approached allowed graduates time to make their supervisors aware of the ESS before an invitation was received. The month delay between Reminder 2 and Reminder 3 in the November and February rounds made use of the longer fieldwork period allowed for these rounds (refer to Section 1.5 for a summary of fieldwork period by round). Reminder 4 was sent in the final week of fieldwork to engage with supervisors who may have been on leave, or been busy with seasonal work commitments, during previous contact attempts.

Records in the online workflow were transferred to the CATI workflow if they had a valid phone number and the supervisor did not respond to the survey within twelve days of the invitation email being sent, or the email address hard bounced.

Except for when the email address hard bounced, supervisors continued to receive email reminders when transferred from the online to CATI workflow. Supervisors in the CATI workflow had the option of completing the survey via CATI or online. If a supervisor requested to complete the survey online at the time of the call, their preferred email address was collected and an email with a link to complete the survey was sent immediately following the call. Supervisors choosing this option remained in the CATI workflow and if the supervisor had not responded to the survey within seven days, further CATI follow up was conducted.

It is important to note that all contact was ceased to supervisors who had completed the survey, been disqualified from participating (i.e. screened out because they were not eligible) or otherwise opted-out. The contact protocol was adjusted as required to meet operational needs. For example, the email schedule was paused during the end of year holiday period, and if contact details were collected in the final month of fieldwork only a reduced email reminder schedule was employed.

Figure 1 Contact protocol



3.3.1. Email invitation and reminders

The email invitation was sent to all supervisors with valid email addresses to advise of their selection in the ESS, present the survey objectives, outline privacy provisions and communicate the value of participation. All emails included a unique link that took supervisors directly into their survey and referred to the QILT, the Social Research Centre and ESS webpages for further information and contact details. Further, an unsubscribe link was included in the footer of each email if supervisors no longer wanted to receive correspondence.

Figure 2 and Figure 3 illustrate the appearance of the invitation on screen for supervisors on desktop and mobile devices. A copy of the email invitation and all reminders (from all rounds) is provided at Appendix 2.

Figure 2 Example ESS survey invitation - Desktop

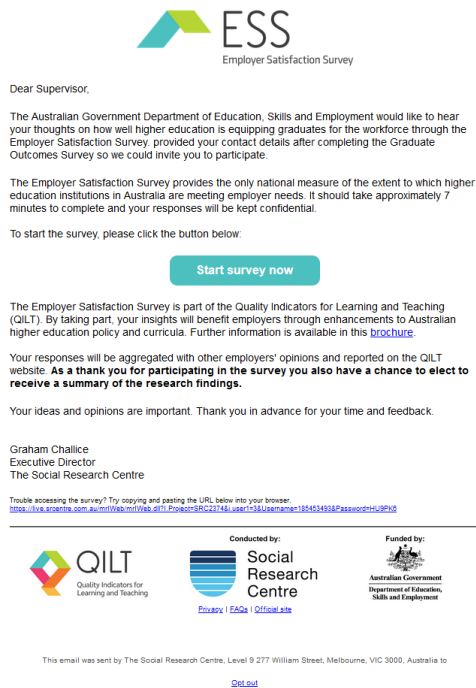
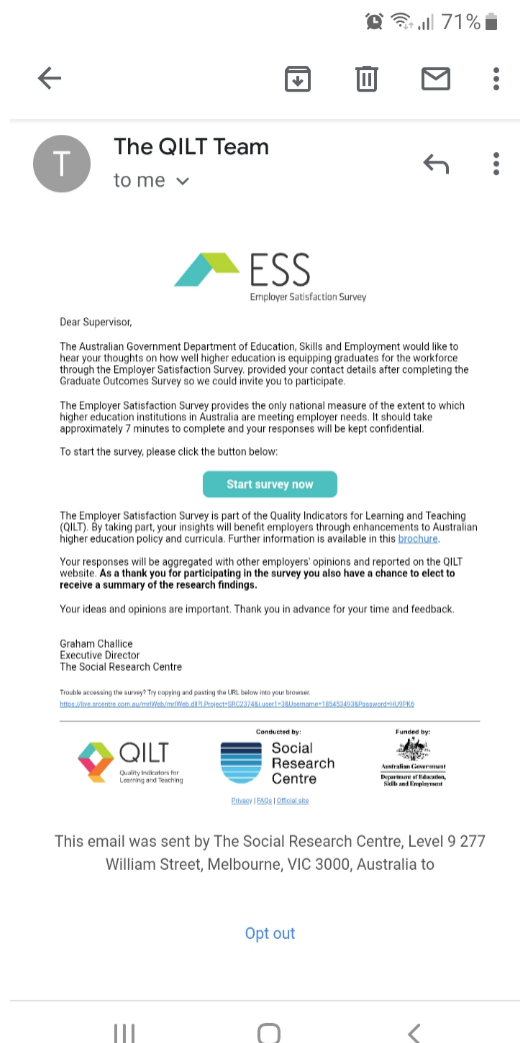


Figure 3 Example ESS survey invitation – Mobile



3.3.2. Email send outcomes

Table 13 provides a breakdown of email send outcomes by standard contact activity for each round in the 2020 ESS collection cycle.

As can be seen, the email invitation open rate was highest in November (44.2 per cent) compared to February and May (both 42.1 per cent). However, supervisor engagement with the invitation ('Clicked on link as a per cent of opened') was highest in May (50.1 per cent) in comparison to November (42.8 per cent) and February (37.7 per cent). It should be noted that the sample size for February is quite small relative to the November and May rounds and should be considered when interpreting the percentage-based results.

A decline in open rates and 'clicked on link' rates were noted in each round as email activity progressed. As could be expected, the open rate generally trended downward with each send in a collection round. The proportion of bounced records across all rounds was relatively low, except for the invitation sends in each round. This suggests that the collection and verification of email addresses could be further improved. Opt-out rates were generally low, with invitation emails receiving the highest level of opt-out.

Table 13 Email send outcomes by round of activity

	Invite	R1	R2	R3	R4
November 2019					
Total sent (n)	2,696	2,140	1,779	1,457	1,282
Opened (%)	44.2	39.9	33.7	30.3	29.8
Clicked on link (%)	18.9	14.0	9.1	6.0	10.5
Opt-out from link (%)	3.9	2.1	0.8	2.7	0.2
Opened from link (%)	21.4	23.8	23.8	21.6	19.1
Unopened (%)	44.2	58.0	64.4	66.8	66.8
Soft bounce (%)	1.3	1.7	1.9	2.7	2.0
Hard bounce(%)	10.3	0.4	0.1	0.3	1.4
Clicked on link as % opened	42.8	35.0	27.0	19.7	35.3
February 2020					
Total sent (n)	522	386	345	274	241
Opened (%)	42.1	35.0	31.9	27.0	30.7
Clicked on link (%)	15.9	12.2	9.9	7.3	15.4
Opt-out from link (%)	6.3	0.5	0.3	1.8	0.8
Opened from link (%)	19.9	22.3	21.7	17.9	14.5
Unopened (%)	46.6	62.7	66.1	69.3	66.8
Soft bounce (%)	1.3	1.6	2.0	3.6	2.5
Hard bounce(%)	10.0	0.8	0.0	0.0	0.0
Clicked on link as % opened	37.7	34.8	30.9	27.0	50.0
May 2020					
Total sent (n)	4,289	3,194	2,537	2,478	2,048
Opened (%)	42.1	38.6	27.9	34.3	32.8
Clicked on link (%)	21.1	18.3	7.9	13.3	16.7
Opt-out from link (%)	2.2	0.4	0.4	0.7	0.4
Opened from link (%)	18.8	19.9	19.5	20.3	15.8
Unopened (%)	48.6	59.3	70.2	63.5	64.7
Soft bounce (%)	1.0	1.4	1.9	2.2	2.3
Hard bounce(%)	8.3	0.7	0.0	0.1	0.1
Clicked on link as % opened	50.1	47.4	28.4	38.8	50.7

3.3.3. CATI workflow protocols

Call procedures for supervisors entering the CATI workflow directly (that is, where no email address was provided by the graduate) or after being transferred from the online workflow were as follows:

- Call attempts placed over different days of the working week and times of day. Up to eight call attempts were made on landlines and six on mobiles in cases where contact had been made. The maximum consecutive non-contacts allowed was six for landlines and four for mobiles. Additional calls beyond these limits were allowed only by appointment request.
- Placing a second call attempt to 'fax / modem' and 'number disconnected' outcomes (given that there are occasionally issues with internet connections and problems at the exchange).
- The option of sending supervisors an email with their unique survey link if supervisors preferred to complete online, rather than complete a phone interview.

Nearly half of the surveys completed in the CATI workflow (49.5 per cent) occurred within the first two call attempts. However, a fifth of the CATI workflow surveys completed (20.2 per cent) required five or more calls to the supervisor, indicating the ongoing requirement for an extended call regime when approaching supervisors to participate in the ESS.

3.3.4. Interviewer briefing

Interviewers selected to work on the 2020 ESS attended a comprehensive briefing session, delivered by the Social Research Centre project management team. Interviewers were briefed at the start of fieldwork for each collection round. Additional briefings were conducted throughout fieldwork as required to meet operational staffing needs. Content covered by the briefing is provided below:

- Survey context and background.
- Survey procedures (sample management protocols, response maximisation procedures).
- Privacy and confidentiality issues.
- A detailed examination of the survey questionnaire, with a focus on ensuring the uniform interpretation of questions and response frames and addressing item-specific data quality issues.
- Targeted refusal aversion techniques.
- Strategies to maintain co-operation (i.e. minimise mid-survey terminations).
- Approaches to get past 'gatekeepers' (e.g. receptionist, personal assistant).
- Comprehensive practice surveying and group discussion of example recordings.
- A review of key data quality issues.

The briefing slides and interviewer handout are provided in Appendix 4.

3.3.5. Quality control

In field quality monitoring techniques as they applied to the CATI components of this project included the following:

- Listening in validations conducted in accordance with existing ISO (International Standards Organisation) 20252 procedures.

- Field team de-briefing after the first shift, and thereafter, whenever there was important information to impart to the field team in relation to data quality, consistency of survey administration, or project performance.
- Maintenance of an 'interviewer handout' document addressing any sample member liaison or data quality issues.
- Monitoring (listening in) by the Social Research Centre project manager and supervisory staff.
- Maintenance of a question and answer log on the Social Research Centre's intranet with responses to common operational queries.

Quality assurance and applicable standards are detailed in Section 3.5.5.

3.4. Respondent support

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

In addition to the helpdesk, an ESS inbox and QILT inbox were available for supervisors and graduates to email with any queries throughout the fieldwork period. The QILT inbox was staffed by the QILT research team during regular business hours, while the ESS inbox was managed by the ESS helpdesk.

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

The ESS helpdesk transactions are summarised in Table 14. In total, the helpdesk processed more than five hundred 1800 number and ESS inbox transactions throughout fieldwork. This was a reduction in the level of helpdesk contact seen in the 2019 ESS (911 transactions). Survey queries were the most common, these included queries about the ESS and technical support for the online survey. The next most common queries included supervisors contacting the helpdesk to opt-out and requests for general information (e.g. queries for information about QILT or the Social Research Centre).

Table 14 Enquiries to the ESS helpdesk

Type of enquiry	Total (n)
Total helpdesk transactions	519
Survey query	411
Opt-out	73
General query	19
Out-of-scope	7
Change of contact details	6
Deletion or removal request	2
Other query	1

3.5. Data collection

3.5.1. Data collection workflows

The ESS utilised a dual mode methodology, with data collected through both online and CATI workflows to maximise response. A reporting module was developed for live monitoring of response (refer to Section 3.5.6).

Table 15 shows the proportion of supervisors allocated to the online and CATI workflows. As can be seen, the majority (93.3 per cent) of supervisor records were initially assigned to the online workflow, with a minority (6.7 per cent) initially assigned to the CATI workflow due to only providing a phone number.

Table 15 Workflow allocation

	November 2019		February 2020		May 2020		Total	
	n	%	n	%	n	%	n	%
Total supervisors approached	2,976	100.0	547	100.0	4,525	100.0	8,048	100.0
Total assigned to online workflow	2,696	90.6	522	95.4	4,289	94.8	7,507	93.3
Email only provided	1,513	50.8	281	51.4	1,899	42.0	3,693	45.9
Email and phone provided	1,183	39.8	241	44.1	2,390	52.8	3,814	47.4
Total assigned to CATI workflow	1,229	41.3	206	37.7	2,104	46.5	3,539	44.0
Phone only provided	280	9.4	25	4.6	236	5.2	541	6.7
Changed from online workflow	949	31.9	181	33.1	1,868	41.3	2,998	37.3

Table 16 shows the number and proportion of supervisor records changing workflow as a result of a 'hard bounce' outcome, or as a result of non-response to the online survey invitation and reminders. Approximately three-quarters (78.6 per cent) of supervisors changed from the online to CATI workflow. This highlights the importance of the CATI workflow as part of the ESS response maximisation effort.

Table 16 Changed workflow

	November 2019		February 2020		May 2020		Total	
	n	%	n	%	n	%	n	%
Eligible for workflow change ¹	1,183	100.0	241	100.0	2,390	100.0	3,814	100.0
Total changed workflow²	949	80.2	181	75.1	1,868	78.2	2,998	78.6
Hard bounce	117	9.9	25	10.4	173	7.2	315	8.3
Online non-response	832	70.3	156	64.7	1,695	70.9	2,683	70.3
Total unchanged workflow	234	19.8	60	24.9	522	21.8	816	21.4

¹ Only records with an email and phone provided were eligible for workflow change.

² Hard bounce and Online non-response added to CATI workflow.

³ Total unchanged workflow are those who had completed, screened out or unsubscribed prior to trigger for changing workflow

3.5.2. Online survey

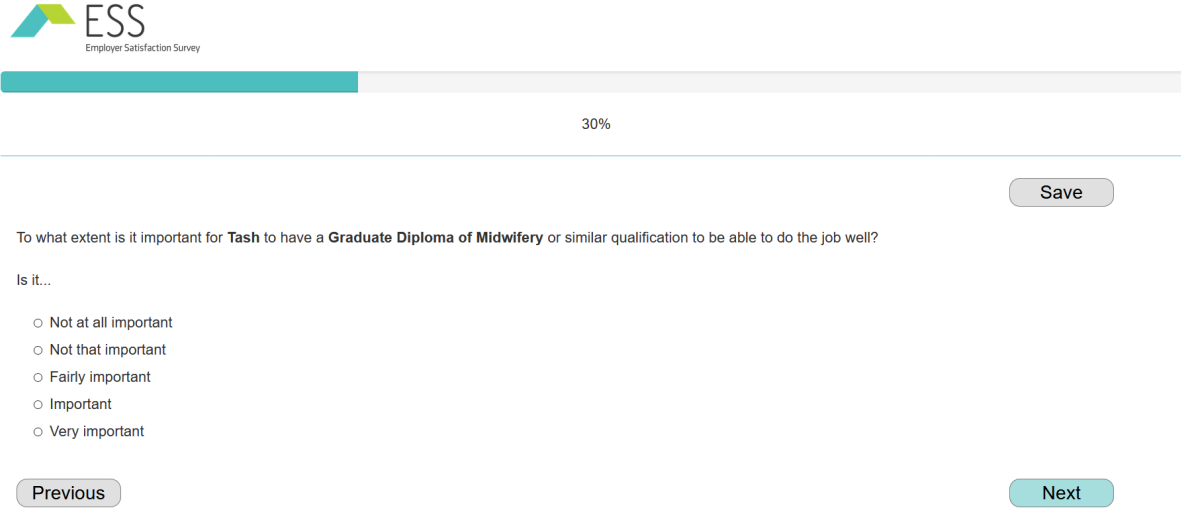
The online survey could be accessed by clicking on the link in the email invitation or email reminders (refer to Appendix 2). Clicking from the email invitation or email reminder would go directly to the beginning of the survey. Unlike the SES and GOS, due to the limited ESS sample frame, there was no option to start the survey via the QILT website.

Online survey presentation was informed by accessibility guidelines and other relevant resources. The following standard features were included:

- Optimisation for small screen devices (see Appendix 9).
- Consistent presentation and placement of “Next” and “Previous” buttons.
- Input controls and internal logic / validation checks.
- Tailoring error messages as appropriate.
- Splitting long statement batteries over several screens to reduce the number of items that require vertical scrolling on a desktop.
- Sizing the panels for free text responses commensurate with the level of detail required in the response.
- Automatically ‘saving’ with progression to the next screen.
- The capacity to save and return to finish off at another time, resuming at the last question viewed.

The survey look and feel was customised to be consistent with QILT branding guidelines, including the use of the ESS logo and colour scheme. This ensured consistency with communications such as the email invitation, reminders and *ESS Brochure*. Refer to Figure 4 and Figure 5 (on the next page) for examples of the online survey look and feel on desktop and mobile. Copies of the questionnaire for each round in the 2020 ESS collection cycle are included in Appendix 5 and screen shots of the online survey are provided in Appendix 6.

Figure 4 Presentation of the ESS online survey on a desktop device



ESS
Employer Satisfaction Survey

30%

Save

To what extent is it important for **Tash** to have a **Graduate Diploma of Midwifery** or similar qualification to be able to do the job well?

Is it...

☐ Not at all important

☐ Not that important

☐ Fairly important

☐ Important

☐ Very important

Previous Next

Figure 5 Presentation of the ESS online survey on a small screen device

14:16 90%

ESS
Employee Satisfaction Survey

30%

To what extent is it important for **Tash** to have a **Graduate Diploma of Midwifery** or similar qualification to be able to do the job well?

Is it...

☐ Not at all important

☐ Not that important

☐ Fairly important

☐ Important

☐ Very important

Next

Previous

Save

3.5.3. CATI survey

The CATI survey was administered in an identical format to the online ESS noting some modifications to facilitate CATI data capture. Interviewers had an interfacing script at the start and finish of the online survey which allowed categorisation of call outcomes. Once agreement to complete the survey by phone was established, the interviewers conducted the survey and recorded responses using web browser based CATI software. Consistent with the online survey, the non-mandatory nature of the ESS questionnaire items allowed for responses to items to be skipped by the interviewer if requested by the supervisor.

3.5.4. Survey testing

Standard operational checks of the online survey were conducted pre-fieldwork to ensure implementation aligned with the intended questionnaire design.

In addition to these standard checks, institutions and stakeholders with additional questionnaire items (refer to Section 4.4) were sent a range of test links to enable their review of these items. Institutions and stakeholders were asked to conduct final testing on the items and provide sign off prior to field launch.

The survey was launched with a small component of the total population and surveys completed on the day of launch were checked for correct base sizes to ensure sequencing was functioning as

intended. No issues were identified, and the survey fieldwork proceeded. Data was again reviewed to ensure the integrity of small base items once a larger number of surveys had been completed.

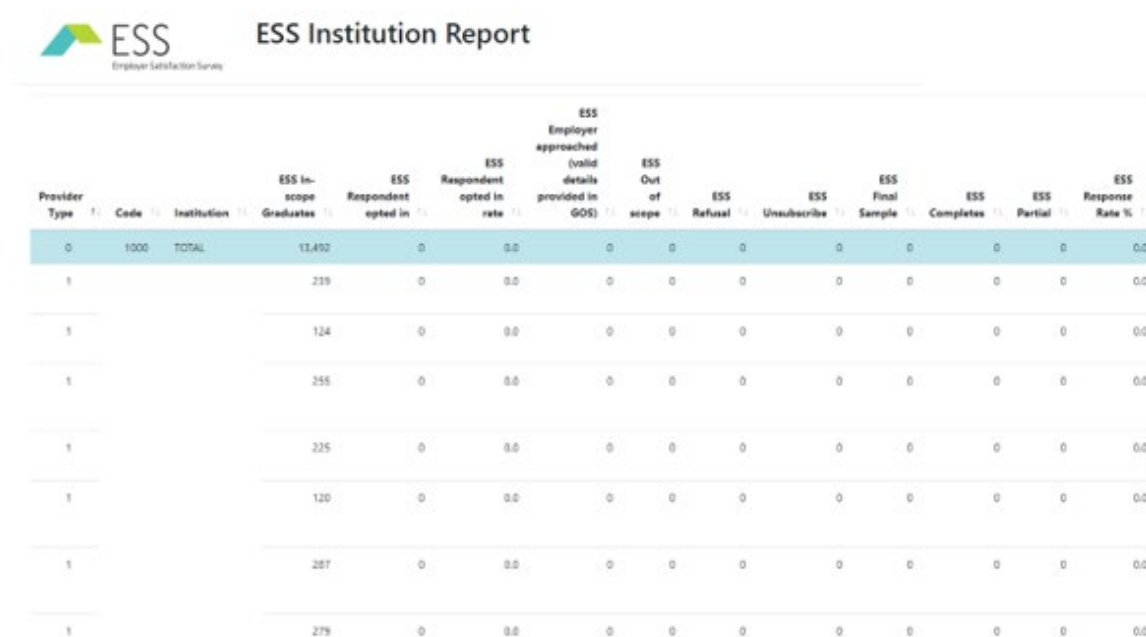
3.5.5. Quality assurance and applicable standards

All aspects of the ESS were undertaken in accordance with the Privacy Act (1988) and the Australian Privacy Principles contained therein, the Privacy (Market and Social Research) Code 2014, the Research Society's Code of Professional Behaviour, and ISO 20252 standards. All senior QILT staff are full members of the Research Society or maintain professional membership relevant to their role and the Social Research Centre is also a member of the Association of Market and Social Research Organisations (AMSRO). All sensitive or personally identifiable information such as survey data were transferred using the QILT secure file exchange.

3.5.6. Monitoring and progress reporting

The department was provided with access to a bespoke 'live' online reporting module which provided an overview of supervisor detail collection rates for each institution and the total participation rates for all institutions. Results were provided in real time and included the number of in-scope graduates who agreed to provide contact details, the total contact details collected and participation rates of supervisors (including partial completes, out-of-scopes and opt-outs). An example of the national reporting module is shown at Figure 6.

Figure 6 Reporting module view



Provider Type	Code	Institution	ESS In-scope Graduates	ESS Respondent opted in	ESS Respondent opted in rate	ESS Employer approached (valid details provided in GOS)	ESS Out of scope	ESS Refusal	ESS Unsubscribe	ESS Final Sample	ESS Completes	ESS Partial	ESS Response Rate %
0	1000	TOTAL	13,402	0	0.0	0	0	0	0	0	0	0	0.0
1			239	0	0.0	0	0	0	0	0	0	0	0.0
1			124	0	0.0	0	0	0	0	0	0	0	0.0
1			255	0	0.0	0	0	0	0	0	0	0	0.0
1			225	0	0.0	0	0	0	0	0	0	0	0.0
1			120	0	0.0	0	0	0	0	0	0	0	0.0
1			287	0	0.0	0	0	0	0	0	0	0	0.0
1			279	0	0.0	0	0	0	0	0	0	0	0.0

4. Questionnaire

4.1. Development

The 2020 Employer Satisfaction Questionnaire (ESQ) was based on the 2019 instrument. Refer to Section 4.3 for a summary of the changes made to the ESQ for the 2020 ESS.

4.2. Overview

Table 17 outlines the thematic areas of the five main modules in the questionnaire. The design of the ESS instrument was modular, with items essential to response analysis (Module B) positioned early in the questionnaire and core item modules positioned before additional items (Module E). Items related to future contact (i.e. for notification of survey results publication) were delivered in the closing module. A copy of the generic survey instrument (i.e. excluding any additional items) is included at Appendix 5 with screen shots of the online survey at Appendix 6.

Table 17 ESS module themes

Module	Themes
Module A	Introduction and screening
Module B	Overall graduate preparation
Module C	Graduate Attributes Scale – Employer (GAS-E)
Module E	Additional items (institution and stakeholder specific)
Module F	Close

Note: The GAS-E measures the extent to which supervisors agreed the graduate was prepared for employment across each of the GAS-E domains. Three GAS-E subscales are also administered to graduates as part of the GOS and form the basis for the Graduate Attributes Scale – Graduate (GAS-G).

4.3. Changes from 2019

The main changes to the core questionnaire from the 2019 ESS for the November round are outlined below:

- Updated the department name throughout to the Department of Education.
- Updated year references throughout the questionnaire.
- Reduced usage of the ESS acronym in the questionnaire, replaced instead with the full Employer Satisfaction Survey name.
- Revised introductory text (Module A) for supervisors who self-registered for the ESS through the new survey invitation pack workflow (see Section 2.4.2).
- Removed text advising on survey time remaining in the introduction for partially complete surveys.
- Revised the further information that is provided in the CATI introduction.
- Reduced display size of verbatim response boxes for the graduate and supervisor duty items (QS6, QS8) to encourage responses to be of a suitable length for coding.
- Small revisions to the online and CATI closing script.

The following change was made for the February round:

- Revised CATI introduction language describing purpose of the call.

Further changes were made for the May round:

- Updated the department name throughout to the Department of Education, Skills and Employment.
- Updated the online introduction to make reference to QILT.
- Updated the online introduction with an acknowledgement of the impact of COVID-19 on employment.
- Updated question stem and response frame at *SUPEMX* and *SUPPHX*.
- Consolidated the options for a supervisor to receive a summary of the study outcomes and notification of the result release into a single item (*C1*, *C3*).

4.4. Additional items

4.4.1. Institution items

In keeping with QILT survey processes, institutions were able to add institution specific items to the ESS. One university opted to include institution specific items in the 2020 ESS. Content covered by the institution specific items related to net promoter score. Currently, institution specific items do not fall under any data sharing arrangements and are therefore only included in the respective institution data file.

4.4.2. Stakeholder items

The Optometry Council of Australia and New Zealand (OCANZ) included items in the 2020 ESS. Graduates from five institutions were in-scope to be asked OCANZ items related to the work preparedness of optometry graduates.

5. Data processing

5.1. Definition of the analytic unit

The analytic unit for the ESS is the course or major. The ESS data file contains one record for each of the graduate's courses or majors to a maximum of two. Supervisors appear twice in the file if the graduate they supervised either completed a single degree with two majors, or a double degree. If a graduate had completed a single degree with two majors, the second major is included in the ESS data file but not included in the *National Report*.

In the 2020 ESS data set, a record was considered complete and valid if the supervisor had provided a valid response at any of the following items:

- *EQUALIMP* (importance of qualification to be able to do their job well).
- *ECRSPREP* (qualification prepared graduate for the job).
- *EHIRE* (likelihood the employer would hire another graduate with the same qualification) questions.

5.2. Data cleaning and preparation

Data preparation occurred on the raw data file exported from the data collection platform with derivations, re-coding and cleaning routines applied, including:

- Derivation of results for as the graduate attributes scale and other outcome variables based on Australian Bureau of Statistics (ABS) standards (derivations are documented in the *2020 ESS Data Dictionary*, made available to institutions on the QILT provider portal).
- Re-coding value labels where required.
- Re-coding of 'no answers' to the missing values conventions.
- Cleaning of supervisor name and coding of occupation and further study field of education.
- Spell checking and light cleaning of email addresses, business names, *EBSTPREP* (main ways institution prepared graduate for employment), *EIMPPREP* (ways institution could have better prepared graduates for employment) and 'other specify' responses.

5.3. Coding and processing of open text responses

Spell checking and light cleaning of 'other' specify responses were applied to remove identifiers and expletives. Email addresses and business names were also cleaned as part of the coding process during the sample build phase. Code frames were developed in conjunction with, and approved by the department, and remained largely unchanged in 2020. Table 18 (on the next page) summarises those items which were coded using an external code frame as a source. Coded responses for open text items were added and then a consistent missing data convention was applied.

Table 18 Items coded and source for coding decisions

Item coded	Source
Occupation	Occupation was coded using the Australian and New Zealand Standard Classification of Occupations (ANZSCO, Version 1.3, 2013, ABS catalogue number 1220.0)
Industry	Industry was coded using the Australia and New Zealand Standard Classification of Occupations (ANZSIC, 2006 Revision 2.0, ABS catalogue number 1292.0)
Country employer/business is based	For graduates working overseas, country of employment was coded using the Standard Australian Classification of Countries (SACC, 2016, Second edition, ABS catalogue number 1269.0)

5.4. Data deliverables

The Social Research Centre provided institutions and the department the following data deliverables at the completion of the 2020 ESS collection cycle:

- Institution data files in CSV and SPSS format as a standard, and in SAS format for institutions specifically requesting this format.
- Department national data file in SAS format.
- Data dictionary and data map.
- *National Report Website Tables*, available from the QILT website.

6. Final dispositions and response rates

Table 19 summarises outcomes for sample records in the ESS online and CATI workflows, that is, it only includes email and call outcomes of valid supervisor records.

A total of 8,048 supervisors were approached for the 2020 ESS, approximately two-fifths (42.6 per cent) of supervisors approached completed the survey. Consistent with the 2019 ESS, nearly two-thirds (64.1 per cent) of surveys were completed online, with the remainder (35.9 per cent) completed via CATI.

A small proportion (6.3 per cent) of supervisors approached were out-of-scope (i.e. refused the survey or had not supervised the graduate). Further, after the online and CATI workflow contact protocols were completed, nearly one-third (32.7 per cent) of supervisors approached were an online non-response or CATI non-contact. Finally, less than one-fifth of supervisors approached were recorded as an other outcome or an other contact.

The average CATI interview duration, inclusive of time to locate and screen the supervisor, was 12 minutes.

Table 19 Final survey outcomes

	November 2019 (n)	February 2020 (n)	May 2020 (n)	Total (n)
Total supervisors approached	2,976	547	4,525	8,048
In-scope supervisors	2,732	503	4,288	7,523
Out-of-scope supervisors (screened out)¹	244	44	237	525
Total completed	1,202	228	2,000	3,430
Completed online	803	145	1,251	2,199
Completed telephone	399	83	749	1,231
Online workflow outcomes	1,035	196	1,398	2,629
Online non-response	692	125	904	1,721
Other outcome ²	343	71	494	908
CATI workflow outcomes	495	79	890	1,464
Non-contact	308	46	557	911
Other contact ³	111	20	234	365
Other outcome ²	76	13	99	188
Average CATI interview duration (minutes)	12	13	12	12

¹ Includes opt-outs and out-of-scope surveys.

² Includes outcomes such as email bounces, unusable sample and partial surveys.

³ Includes outcomes such as language difficulties, away for duration of survey, claims to have completed survey, residual appointments.

7. Response analysis

7.1. Mode of completion

Almost two thirds (64.1 per cent) of supervisors who completed the ESS, completed online. As can be seen at Table 20, the majority of those completing online (48.1 per cent of all completing, equating to 75.0 per cent of those completing online) did so in response to the initial email invitation or reminders, and did not require follow up in the CATI workflow.

Over one-third (35.9 per cent) of ESS surveys were completed by CATI, supporting the case for a dual mode design and underling the importance of maintaining the CATI workflow to boost response rates.

Table 20 Mode of completion

	November 2019		February 2020		May 2020		Total	
	n	%	n	%	n	%	n	%
Total completed	1,202	100.0	228	100.0	2,000	100.0	3,430	100.0
Total completed online	803	66.8	145	63.6	1,251	62.6	2,199	64.1
Completed online without CATI workflow follow up	598	49.8	116	50.9	935	46.8	1,649	48.1
Completed online after CATI workflow follow up	205	17.1	29	12.7	316	15.8	550	16.0
Total completed by CATI	399	33.2	83	36.4	749	37.5	1,231	35.9

Table 21 compares sample yield and mode of completion within the workflow to which the supervisor was originally assigned. Overall sample yield was similar for the online workflow (45.6 per cent) and the CATI workflow (45.0 per cent). One in seven supervisors in the online workflow (14.7 per cent) completed by CATI, in comparison to a low rate of online completion (5.1 per cent) by supervisors assigned to the CATI workflow.

Table 21 Sample yield and mode of completion by workflow

	Online		CATI		Total	
	n	%	n	%	n	%
In-scope supervisors approached ¹	7,016	100.0	507	100.0	7,523	100.0
Total completed	3,202	45.6	228	45.0	3,430	45.6
Completed online	2,173	31.0	26	5.1	2,199	29.2
Completed by CATI	1,029	14.7	202	39.8	1,231	16.4

¹ In-scope supervisors excludes unusable sample (e.g. no contact details), out-of-scope and opted-out

7.2. Workflow attribution

As noted in Section 2.3.1, low levels of consent to provide contact details at the ESS bridging module meant additional workflows were required to supplement the collection of contact details. Table 22 (on the next page) provides an overview of ESS completes by sample workflow (i.e. source of contact details collection).

The workflow that contributed the most contact details leading to ESS completes was refusal conversion (44.6 per cent). Refusal conversion contributed to fewer ESS completes in the May round (42.8 per cent), which could be due to the shorter fieldwork period of the May round (see Section 1.5). With the importance of refusal conversion to achieving ESS response, consideration could be given to allowing additional time for the refusal conversion workflow in May.

Approximately one-third (32.8 per cent) of ESS completes came from contact details collected through the ESS bridging module. More than one-in-ten ESS completes were attributed to the GOS partial completers workflow (11.9 per cent).

Table 22 Source of contact details for ESS completes

Sample workflow	November 2019		February 2020		May 2020		Total	
	n	%	n	%	n	%	n	%
Total completed	1,202	100.0	228	100.0	2,000	100.0	3,430	100.0
Refusal conversion	568	47.3	106	46.5	855	42.8	1,529	44.6
ESS bridging module	402	33.4	78	34.2	645	32.3	1,125	32.8
GOS partial completers	138	11.5	19	8.3	252	12.6	409	11.9
CATI follow up	69	5.7	20	8.8	87	4.4	176	5.1
Survey invitation pack	12	1.0	5	2.2	156	7.8	173	5.0
Full CATI	13	1.1	-	-	5	0.3	18	0.5

7.3. Response bias analysis

The tables that follow compare the course, demographic and labour market characteristics of employed graduate respondents to the GOS, with the characteristics of graduates whose supervisors responded to the ESS, to detect possible bias in the ESS. That is, these tables identify the extent to which the ESS departs from being a representative survey of employers of recent graduates.

Employed graduate respondents to the GOS were asked to provide contact details of their supervisors and as such represent the population frame for the ESS. Please refer to the *2020 ESS National Report* for data related to the measures of satisfaction referenced within this analysis.

Comparison of employed graduates with supervisor responses by field of education shows that Education graduates are over-represented by 4.1 percentage points in the survey whilst Health, Management and commerce and Creative arts are underrepresented in the ESS, as shown by Table 23.

Supervisors of Education graduates recorded higher than average ratings while supervisors of Management and commerce and Creative arts graduates reported lower than average satisfaction ratings. Therefore, the bias in supervisor responses by field of education, all other things equal, raises reported overall satisfaction.

Table 23 Respondents by broad field of education²

	Employed graduates		Supervisors	
	n	%	n	%
Natural and Physical Sciences	7,803	7.9	278	8.1
Information Technology	5,171	5.2	167	4.9
Engineering and Related Technologies	6,017	6.1	262	7.6
Architecture and Building	2,199	2.2	88	2.6
Agriculture and Environmental Studies	1,463	1.5	61	1.8
Health	21,951	22.2	659	19.2
Education	9,463	9.6	471	13.7
Management and Commerce	18,612	18.8	590	17.2
Society and Culture	20,966	21.2	722	21.0
Creative Arts	5,251	5.3	131	3.8

Note: the analysis in this table is based on valid responses to the 2020 GOS and 2020 ESS by characteristic.

² This table excludes a small number of responses in Food, Hospitality and Personal Services.

There is a slightly higher level of responses from supervisors of external graduates in the ESS by 4.1 percentage points as seen in Table 24. Supervisors of external graduates report lower overall satisfaction so that over-representation of the supervisors of external graduates would lead to a downward bias in reported overall satisfaction in the 2020 ESS.

Supervisors of postgraduate coursework and postgraduate research graduates are somewhat over-represented by 0.9 percentage points and 3.0 percentage points respectively, while undergraduate supervisors are underrepresented by 3.9 percentage points. Since employers report lower satisfaction with postgraduate coursework graduates this is anticipated to lead to a downward bias in reported employer satisfaction. This would be offset, in part, by over-representation of postgraduate research graduates who report higher employer satisfaction. However, the population of postgraduate research graduates is much smaller, likely resulting in smaller bias for postgraduate compared with undergraduate responses.

Table 24 Respondents by type of institution and course characteristics

	Employed graduates		Supervisors	
	n	%	n	%
Type of institution				
University	92,210	93.2	3,175	92.6
NUHEI	6,705	6.8	255	7.4
Mode				
Internal	80,268	81.1	2,643	77.1
External	18,455	18.7	781	22.8
Course level				
Undergraduate	54,407	55.0	1,752	51.1
Postgraduate coursework	39,208	39.6	1,390	40.5
Postgraduate research	5,300	5.4	288	8.4

Note: The analysis in this table is based on valid responses to the 2020 GOS and 2020 ESS by characteristic.

Table 25 compares the demographic characteristics of employed graduate respondents to the GOS with the demographic characteristics of graduates whose supervisors actually responded to the ESS. Supervisors of male graduates are slightly over-represented in the ESS by around 3.7 percentage points as seen in Table 25, and they report slightly higher overall satisfaction. However, differences in employer satisfaction with male and female graduates are not significant so the over-representation of employers of male graduates is unlikely to materially impact on reported overall satisfaction.

Supervisors of graduates aged 30 years and over are over-represented in the ESS by 10.9 percentage points. This is consistent with the over-representation of supervisors of postgraduate coursework and postgraduate research graduates as shown in Table 24. Employers of older graduates reported lower overall satisfaction, so the over-representation of older graduates is likely to lead to a small downward bias in reported overall satisfaction. Additionally, there is a significant difference between employers' overall satisfaction with younger graduates (86.3 per cent) compared to older graduates (82.3 per cent).

Table 25 Respondents by demographic characteristics

	Employed graduates		Supervisors	
	n	%	n	%
Gender				
Male	37,219	37.6	1,418	41.3
Female	61,438	62.1	2,003	58.4
Age				
30 years or under	69,345	70.1	2,030	59.2
Over 30 years	29,570	29.9	1,400	40.8
Indigenous status				
Indigenous	1,103	1.1	38	1.1
Not Indigenous	97,812	98.9	3,392	98.9
Home language				
English	83,883	84.8	2,988	87.1
other than English	15,032	15.2	442	12.9
Disability status				
Reported disability	4,927	5.0	205	6.0
No disability	93,796	94.8	3,219	93.8

Note: the analysis in this table is based on valid responses to the 2020 GOS and 2020 ESS by characteristic.

Supervisors of graduates working in Professional occupations are over-represented by 4.1 percentage points in the ESS. Supervisors of graduates working in Professional occupations reported higher overall satisfaction. All other things equal, this would lead to an upward bias in the reported overall satisfaction in the 2020 ESS.

Supervisors of graduates employed full-time are over-represented in the ESS by 5.5 percentage points. There was little significant difference in reported overall satisfaction among supervisors of graduates who worked either full-time or part-time. Supervisors of graduates who have worked in their current job for between three months and one year are over-represented in the 2020 ESS by 8.7 percentage points. 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 and so their over-representation may lead to an upward bias in employer satisfaction.

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

Table 26 Respondents by labour market characteristics

	Employed graduates		Supervisors	
	n	%	n	%
Occupation				
Managers	7,053	7.4	282	8.3
Professionals	54,325	56.9	2,069	61.0
Technicians and trades workers	3,248	3.4	148	4.4
Community and personal service workers	10,080	10.6	304	9.0
Clerical and administrative workers	9,442	9.9	367	10.8
Other workers	11,389	11.9	223	6.6
Work status				
Full-time	63,417	64.1	2,388	69.6
Part-time	35,498	35.9	1,042	30.4
Duration of job with current employer				
Less than 3 months	11,211	12.4	285	8.3
3 months to < 1 year	33,594	37.1	1,569	45.8
1 year or more	45,778	50.5	1,571	45.9

Note: the analysis in this table is based on valid responses to the 2020 GOS and 2020 ESS by characteristic.

8. Considerations for future surveys

8.1. Graduate response to the ESS bridging module

In the 2019 ESS, additional sample workflows were piloted in response to a low level of employed graduate agreement to the ESS bridging module. In the 2020 ESS the collection of contact details through the ESS bridging module remained a major challenge with the level of agreement again declining (see Section 2.4.1). This decline occurred despite evidence-based changes to the ESS bridging module informed by qualitative research with graduates and experimental survey design.

Additional sample workflows are now attributed with providing a majority of the achieved ESS sample (69.0 per cent, refer to Section 2.3). The current reliance on additional workflows to collect contact details has increased the complexity and cost of the ESS sampling process. While it may be reasonable to attribute some decline in agreement to the disruption caused by the COVID-19 pandemic, innovation in the sampling process is required if previous levels of response to the ESS are to be achieved. A critical review of the ESS bridging module is required and consideration could be given to reviewing the current placement of the module at the end of the GOS.

8.2. Sample and data collection workflow strategies

With a complex set of workflows now used for ESS sampling, consideration must be given to strategically optimising how and when these workflows are used. Prioritising engagement with graduates more likely to be employed in a 'career job' related to their study, rather than 'first destination' occupations, could improve the efficacy of the sampling workflows. Managing operational timing of the sampling and data collection workflows to utilise the full 'year-round' fieldwork period could lead to improved operational outcomes. This could include optimising reminder delays in the contact protocol or scheduling operational resources to best make use of each round's varied fieldwork period. Expansion of low-cost workflows, such as the survey invitation pack, could also be considered.

During the 2020 ESS improvements to interviewer training and operational reporting drove improved provision of phone numbers round to round (see Section 2.3.4). Focussing on achieving this improved level of phone number provision throughout the entire 2021 ESS fieldwork would lead to an overall increase in the ESS sample yield.

8.3. ESS resources on the QILT website

The ESS resources made available through the QILT website could be improved and expanded. A participant facing ESS landing page would allow for content tailored at driving graduate, supervisor and industry engagement with the ESS. Acknowledging employers which have participated in the ESS on this page could build the profile and legitimacy of the ESS brand. A participant landing page for the ESS could also allow new innovations in the sampling or data collection workflows.

8.4. Incentivisation of supervisor participation

The ESS is the only QILT survey without direct incentivisation for the participant. Consideration could be given to incentivising the ESS for supervisors. An equivalent of the monetary incentives used for the SES, GOS and GOS-L may not be suitable or effective for the ESS. However, consideration could be given to improving ESS response by using 'information incentives' for supervisors. For example, offering industry specific summaries of the ESS results to supervisors who participate.

8.5. Institutional engagement

To build awareness of the 2020 ESS with graduates, and normalise the provision of contact details, primary approach materials in the GOS *Marketing Pack* drew attention to the ESS for the first time. However, as the only QILT survey to not directly survey students or graduates of higher education institutions, the ESS naturally has a lower level of institutional engagement. To improve institutional engagement, it is recommended that the ESS be showcased more frequently in QILT webinars and newsletters. Consideration should also be given to improving the access institutions have to monitor the engagement of their graduates with the ESS (e.g. adding response to the ESS bridging module to intuitions' live online reporting module). To build the profile of the ESS within institutions, institution level Tableau packaged workbooks could be developed as a standard ESS data product.

8.6. Employer and industry engagement

Engagement with employers and industry peak bodies could build ESS brand awareness and lead to improved graduate and supervisor engagement. Consideration could be given to targeting a limited number of employers, by study area or industry, for each major round of the ESS (November and May).

Graduates commonly perceive providing contact details for the ESS as a risk to their employment. By engaging with the human resource departments of major employers, it may be possible to overcome this misconception. Employers could communicate internally to graduates that the business is a 'safe' environment for the ESS, encouraging the provision of contact details and supervisor participation. Industry peak bodies could be contacted with offers of industry specific reports, or other industry tailored promotions and products, to broadly build awareness and encourage participation.

List of abbreviations and terms

ABS	Australian Bureau of Statistics
AMSRO	Association of Market and Social Research Organisations
ANZSCO	Australian and New Zealand Standard Classification of Occupations
CATI	Computer Assisted Telephone Interviewing
ESS	Employer Satisfaction Survey
ESQ	Employer Satisfaction Questionnaire
GAS-E	Graduate Attributes Scale – Employer
GAS-G	Graduate Attributes Scale – Graduate
GOS	Graduate Outcomes Survey
ISO	International Standards Organisation
NUHEI	Non-University Higher Education Institution
QILT	Quality Indicators for Learning and Teaching
SACC	Standard Australian Classification of Countries
SES	Student Experience Survey

Appendix 1 Participating institutions

Appendix 2 Survey invitations and reminders

Appendix 3 ESS Brochure and survey invitation pack

Appendix 4 Briefing slides and interviewer handout

Appendix 5 Core questionnaire

Appendix 6 Questionnaire screen shots

Appendix 7 ESS bridging module

Appendix 8 Refusal conversion and ESS boost scripts

Appendix 9 Small screen optimisation