



National Student Outcomes Survey 2024 – apprentice and trainee component: technical notes

National Centre for Vocational
Education Research

This document was produced as an added resource for further information on *Apprentice and trainee outcomes 2024*. The publication is available on the NCVER Portal:
<<http://www.ncver.edu.au>>.

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This document should be attributed as NCVER 2025, *National Student Outcomes Survey 2024 – apprentice and trainee component: technical notes*, NCVER, Adelaide.

This work has been produced by NCVER on behalf of the Australian Government and state and territory governments, with funding provided through the Australian Government Department of Employment and Workplace Relations.


Published by NCVER, ABN 87 007 967 311

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Introduction

Apprentice and trainee outcomes 2024 provides a summary of the outcomes of apprentices and trainees who undertook an apprenticeship or traineeship during 2023, with the data collected in mid-2024. It includes those who completed an apprenticeship or traineeship (completers) and those who cancelled or withdrew (non-completers).

The 2021 to 2024 figures are derived from apprentices' and trainees' responses to the National Student Outcomes Survey (SOS), which is an annual survey of vocational education and training (VET) students. Data for 2019 are available in the accompanying DataBuilder product and are sourced from the 2019 Apprentice and Trainee Experience and Destinations (ATED) Survey.

The SOS collected information on apprentices' and trainees' reasons for undertaking their apprenticeship or traineeship, reasons for non-completion, their employment outcomes, further study outcomes and satisfaction with the apprenticeship or traineeship.

This document describes the survey data used to derive the *Apprentice and trainee outcomes 2024* publication and related products.

Background

In 2021 to 2024, students sampled for the SOS who were flagged as undertaking their training as part of an apprenticeship or traineeship in the National VET Provider and National VET in Schools collections were asked additional questions about their apprenticeship or traineeship. These additional questions were sourced from the 2019 ATED Survey. Further information on the 2019 ATED Survey is available in the *Apprentice and trainee experience and destinations survey 2019: technical notes* at <https://www.voced.edu.au/content/ngv%3A85243>.

Survey scope

This section outlines the criteria used to select in-scope individuals for the wider 2024 SOS and describes the subset of students who received the additional apprentice and trainee questions.

The SOS is an annual survey of students who completed nationally recognised VET delivered by registered training organisations (RTOs) in Australia. The population is derived from the National VET Provider and National VET in Schools collections, which are managed in accordance with the Australian Vocational Education and Training Management Information Statistical Standard (AVETMISS)¹.

Students were considered in scope of the domestic 2024 survey if they:

- were enrolled and had some contact hours in 2023, and
- completed at least one subject during 2023, and

¹ For more information regarding the national VET data collections, please refer to Australian vocational education and training statistics explained at <https://www.ncver.edu.au/research-and-statistics/vet-statistics-explained>.

- were 15 years of age or older on 31 May 2024.

Out of scope of the 2024 survey were students who:

- undertook recreational, leisure or personal enrichment courses, or
- were from correctional facilities, or
- were international full-fee-paying students.

The SOS is designed to provide information on the following student groups.

- Qualification completers: students who completed a training package qualification or an accredited qualification.
- Qualification part-completers: students who enrolled in but only completed part of a training package qualification or an accredited qualification (and are no longer undertaking that training²).
- Short course completers: students who completed a training package skill set or an accredited course.
- Short course part-completers: students who enrolled in but only completed part of a training package skill set or accredited course (and are no longer undertaking that training²).
- Subject(s) only completers: students who completed one or more subjects not delivered as part of a nationally recognised program and who are no longer undertaking training in the VET sector².

Respondents were considered in-scope for the additional apprentice and trainee questions if they were:

- qualification completers or qualification part-completers; and
- reported as apprentices and trainees in the National VET Provider or National VET in Schools collections.

Questionnaire design

The SOS questionnaire suite is designed to ensure students received only questions relevant to them. The questionnaires include:

- pulse questionnaire for continuing students (approximately 5 minutes)
- short questionnaire, referred to as the 'lite' questionnaire (5 to 10 minutes)
- full questionnaire (5 to 10 minutes).

Those apprentices and trainees who completed a certificate II or above received the full questionnaire and those who completed a certificate I received the lite questionnaire. Those initially identified as potential qualification part-completers also received the lite questionnaire, unless they responded through the survey they were continuing in that training in which case they received the pulse

² At the time of sample selection, insufficient information is available from the collections to identify 'actual' qualification part-completers, short course part-completers and subject(s) only completers. Instead, a sample of 'potential' qualification part-completers, short course part-completers and subject(s) only completers is chosen, which includes part-completers who are continuing in the course and subject(s) only completers who are continuing in the VET system. The final status of respondents is determined through survey responses.

questionnaire. Only the responses to questions in both the full and lite questionnaires are included in the *Apprentice and trainee outcomes 2024* publication suite.

The 2024 SOS questionnaire collected data on apprentices' and trainees':

- main reason for undertaking their apprenticeship or traineeship
- main reasons for not completing their apprenticeship or traineeship
- employment characteristics before and after training
- further study activity
- opinions of, and satisfaction with, the off-the-job training and the training provider
- satisfaction with the skills learnt on-the-job.

Information on apprentices' and trainees' personal characteristics and their off-the-job training was obtained from the 2023 National VET Provider and 2023 National VET in Schools collections, from which the survey sample was selected. Information on their apprenticeship or traineeship was also obtained, post-fieldwork, from the National Apprentice and Trainee Collection³ (collection number 120, June 2024 estimates).

Questionnaire changes in 2024

There were some minor changes to the instructions and prompts in the SOS questionnaire in 2024. This included a change to the question on the main reason for discontinuing the apprenticeship or traineeship where a prompting note of 'i.e. the course' was added to the item on 'I wasn't happy with the off-the-job training'.

The 2024 SOS questionnaires can be viewed from the publication page at <https://www.ncver.edu.au/research-and-statistics/collections/student-outcomes/apprentice-and-trainee-outcomes>.

Reference period

Apprentices and trainees were asked to provide information with respect to two reference periods. The first reference date was 31 May 2024. Apprentices and trainees were asked to supply information on labour force status and employment characteristics.

The second reference period covered the six months before starting the training. Apprentices and trainees were asked to supply information on labour force status and employment characteristics.

Survey methodology

The apprentice and trainee component of the SOS was not designed as a separate survey. For this reason, the survey methodology explained in this section is that of the overall SOS. Further details are provided

³ This collection holds details of each commencement, cancellation, withdrawal, completion, or expiration associated with the life of an Apprenticeship/Traineeship Contract of Training. The information is sourced from contracts of training that are submitted to NCVET via state training authorities (STAs).

in the *Estimation* section of this document regarding how the apprentice and trainee responses were weighted to represent the apprentice and trainee population.

Population

The SOS population includes all students in scope of the survey and is derived from the National VET Provider and National VET in Schools collections.⁴ The collections hold details on students, the training undertaken, and their achievement. The information is sourced from student enrolment records that are submitted to NCVET either directly from training providers or via STAs or via Boards of Studies. The survey population was extracted for the data submitted for the 2023 calendar year as at 16 April 2024.

A de-duplication process was applied to the population to identify and remove duplicate training activity reported for the same training provider in the same year via different data submitters. Where a student undertook more than one program or subject at an RTO, a further de-duplication process was applied to the population selection to ensure one record for each student was selected at each RTO.

Sampling frame

The sampling frame refers to the de-duplicated records from the population available for surveying and for which contact details could be obtained. This section describes the methodology used to create the sampling frame for the SOS.

Some students completed training across multiple RTOs. In such cases, a hierarchy was applied to retain only one record for surveying in the sampling frame to reduce respondent burden. The sampling frame was then restricted to those students who were not deceased, and who were available for surveying as reported in the 'survey contact status' field in the 2023 National VET Provider Collection and 2023 National VET in Schools Collection.⁵

The sampling frame was also restricted to records for which student contact details could be obtained. This includes students with a unique student identifier (USI) or whose contact details could be sourced from STAs or from the contact details reported to NCVET. The sample was drawn after these exclusions were made to the frame.

Sampling design

The SOS sample was selected in five parts, with independent samples drawn for each student group.

All records in the sampling frame were selected for the sample for qualification completers, short course completers and potential short course part-completers. For potential qualification part-completers and potential subject(s) only completers, a random sample was selected for the core survey, and then a further sample was selected for an apprentice and trainee top-up⁶ from those not sampled in the core potential qualification part-completers sample. For information on the sampling design of the core survey, refer to *VET student outcomes 2024 – technical notes*, available at

4 For more information regarding the national VET data collections, please refer to Australian vocational education and training statistics explained at <<https://www.ncver.edu.au/research-and-statistics/vet-statistics-explained>>.

5 For further information on the 'survey contact status field', refer to <<https://www.ncver.edu.au/rto-hub/statistical-standard-software/avetmiss-data-element-definitions-edition-2.3>>.

6 Three STAs funded a top-up of the sample enabling reporting of apprentice and trainee non-completers for their state/territory.

<<https://www.ncver.edu.au/research-and-statistics/collection/student-outcomes/vet-student-outcomes-2024>>.

After the core sample was selected, the sample for the apprentice and trainee top-up was selected from the remaining units using a census to provide required precision levels for the three STAs requiring the apprentice and trainee top-up.

Source of contact details

Students' contact details (i.e. name, address, telephone/mobile numbers and email address) for the selected sample were sourced from STAs, the Office of the Student Identifiers Registrar (OSIR) or NCVER (from the *Client Postal Details* file submitted to the National VET data collections).

Three STAs provided contact details for training activity they submitted. The OSIR and NCVER provided the contact details for all remaining students, with the OSIR only able to provide the contact details for students that had a USI.

Following the provision and cleaning of contact details, survey invitations were sent to 120 790 apprentices and trainees (table 1).

Table 1 The number of apprentices and trainees in the SOS population and sampling frame and the number of survey invitations sent to apprentices and trainees by student type at sampling, 2024

Student type at sampling	Population	Sampling frame ¹	Survey invitations sent ²
Qualification completers	88 049	83 418	82 918
Potential qualification part-completers	115 566	106 264	37 872
Total	203 615	189 682	120 790

Notes: 1. The sampling frame refers to the de-duplicated records from the population available for surveying and for which contact details could be obtained.

2. For qualification completers, the number of survey invitations is lower than the number of records in the sampling frame even though all qualification completers were selected for surveying. This is a result of cleaning undertaken by the fieldwork contractor to remove records with invalid contact details.

Further information on the SOS methodology is available in *VET student outcomes 2024 – technical notes*, available at <<https://www.ncver.edu.au/research-and-statistics/collections/student-outcomes/vet-student-outcomes>>.

Fieldwork

Fieldwork commenced on 3 June 2024 and concluded on 11 August 2024. The 2024 survey data were collected by way of a self-enumeration online questionnaire or telephone interview. For further information on the fieldwork methodology, refer to *VET student outcomes 2024 – technical notes*, available at <<https://www.ncver.edu.au/research-and-statistics/collections/student-outcomes/vet-student-outcomes>>.

Privacy

All students were sent a link to the privacy collection notice. The privacy notice complied with the Australian Privacy Principles and provided further information on how personal information would be managed and protected. The privacy collection notice can be viewed from <<https://www.ncver.edu.au/research-and-statistics/publications/all-publications/vet-student-outcomes-2024>>.

Students' names, addresses, telephone numbers and email addresses were used by the fieldwork contractor during the fieldwork stage. The fieldwork contractor worked with external service providers for printing and collation services and email distribution services. The fieldwork contractor provided the students' contact details to the external providers for the purposes of administering the survey. Contact details of students held by the fieldwork contractor or the external providers for the purpose of this survey are destroyed upon conclusion of the project.

Survey response

30 160 apprentices and trainees responded to the survey, including those who were later identified as not meeting the definition of an apprentice and trainee 'completer' or 'non-completer'. The response rate is defined as the total number of questionnaires completed, expressed as a percentage of the total number of in scope selections⁷. National response rates for apprentices and trainees were 25.1% for qualification completers and 24.8% for potential qualification part-completers (table 2).

Table 2 Survey response summary for apprentices and trainees in the SOS by student type at sampling, 2024

	Qualification completers		Potential qualification part-completers ²		Total	
	No.	%	No.	%	No.	%
Survey invitations	82 918	100	37 872	100	120 790	100
Completed	20 775	25.1	9 385	24.8	30 160	25.0
Sample loss/other response ¹	9 362	11.3	4 475	11.8	13 837	11.5
Refused/unsubscribed	8 999	10.9	3 506	9.3	12 505	10.4
No response	43 782	52.8	20 506	54.1	64 288	53.2

Notes: 1. Sample loss and other responses includes students whose hardcopy mail was returned to sender and/or whose electronic communication bounced; those who contacted the survey contractor's helpdesk with a query after the survey had closed and students who contacted the survey contractor's helpdesk to indicate they were of ill health and could not complete the survey.
2. At the time of sample selection, insufficient information is available from the collections to identify 'actual' qualification part-completers. Instead, a sample of 'potential' qualification part-completers is chosen, which includes continuing students.

⁷ Out of scope selections comprise apprentices/trainees who contacted the survey fieldwork contractor to indicate they did not undertake the training they were being surveyed about.

Estimation

Classification of apprentices and trainees

Of the 30 160 apprentices and trainees who responded to the SOS, 5 406 reported in the survey that they were still continuing in their off-the-job training. These apprentices and trainees did not receive the additional apprentice and trainee questions and were considered out of scope of reporting. All others were asked the apprentice and trainee questions (table 3).

Table 3 The number of SOS respondents by whether they received the apprentice and trainee questions, by student type at sampling, 2024

	Student type at sampling		Total
	Qualification completer	Potential qualification part-completer	
Received the apprentice and trainee questions	20 775	3 979	24 754
Did not receive the apprentice and trainee questions (as were continuing in off-the job training)	na	5 406	5 406
Total	20 775	9 385	30 160

The 24 754 respondents who received the apprentice and trainee questions were then matched to the National Apprentice and Trainee Collection (collection number 120, June 2024 estimates), to obtain additional information on their contract status and year of transaction to enable classification of the apprentice and trainee reporting groups of ‘completer’ and ‘non-completer’.

The apprentices and trainees meeting the ‘completer’ definition were those whose records were:

- matched to the National Apprentice and Trainee Collection and who were reported as completing their apprenticeship or traineeship during the 2023 calendar year via this collection; or
- not matched to the National Apprentice and Trainee Collection but stated they had completed all the requirements of their apprenticeship or traineeship in the survey.

This methodology resulted in 17 680 apprentice and trainee respondents being classified as a ‘completer’ (table 4).

The apprentices and trainees meeting the ‘non-completer’ definition were those whose records were:

- matched to the National Apprentice and Trainee Collection and were reported as a cancellation or withdrawal during the 2023 calendar year via this collection; or
- matched to the National Apprentice and Trainee Collection and were reported with a contract status other than a completion, cancellation or withdrawal but who stated they cancelled or withdrew in the survey⁸; or
- unable to be matched to the National Apprentice and Trainee Collection, but they stated they cancelled or withdrew from their apprenticeship or traineeship in the survey.

This methodology resulted in 3 197 apprentice and trainee respondents being classified as a ‘non-completer’. The remaining 3 877 apprentices and trainees did not meet the reporting scope and were excluded from reporting.

Table 4 The number of SOS respondents who received the apprentice and trainee questions by reporting status, 2024

Reporting status	Number
Completers	17 680
Defined as a ‘completion’ in the collection ¹	16 783
Not defined as a ‘completion’ in the collection ¹ but self-reported as a completer in the survey	897
Non-completers	3 197
Defined as a ‘cancellation’ or ‘withdrawal’ in the collection ¹	3 022
Not defined as a ‘cancellation’ or ‘withdrawal’ in the collection ¹ but self-reported as a cancellation’ or ‘withdrawal’ in the survey	87
Not matched to collection ¹ but self-reported as a ‘cancellation’ or ‘withdrawal’ in the survey	88
Other apprentices and trainees not meeting the reporting scope	3 877
Total	24 754

Notes: 1. The ‘collection’ refers to the National Apprentice and Trainee Collection (collection number 120, June 2024 estimates).

In the *Apprentice and trainee outcomes 2024* publication, apprentice and trainee completers and non-completers are disaggregated by whether their apprenticeship or traineeship is in a trade or non-trade occupation, as per table 5.

Table 5 The number of apprentice and trainee completer and non-completer respondents by reporting group and trade status, 2024

Reporting group	Trade ¹	Non-trade ¹	Trade status not known	Total
Completers	5 989	11 676	15	17 680
Non-completers	1 538	1 657	2	3 197
Total	7 527	13 333	17	20 877

Notes: 1. ‘Trade’ is classified as all occupations listed under the Australian and New Zealand Standard Classification of Occupations (ANZSCO) major group ‘3-Technicians and trades workers’ and ‘Non-trade’ is classified as all other major occupations groups 1-2 and 4-8 (ANZSCO, 2022 version).

⁸ This rule was adopted due to the known reporting lags in the National Apprentice and Trainee Collection.

Weighting

The sample of respondents may not accurately represent the population of apprentices and trainees due to known sources of bias such as unequal probability of selection, as well as other sources of bias such as non-response. The weighting procedure attempts to minimise bias so that the weighted sample represents the population and can be used to produce accurate estimates.

Using the SOS to gather information from apprentices and trainees means that the survey responses exclude apprentices and trainees who did not undertake off-the-job training in 2023. To reduce this bias, the apprentice and trainee respondents in the SOS were weighted to population benchmarks of completions and cancellations and withdrawals in the 2023 calendar year in the National Apprentice and Trainee Collection (collection number 120, June 2024 estimates).

The weighting procedure consisted of four main steps, as outlined.

- 1 A base weight was calculated for each sampled unit as the inverse of the probability that unit was selected in the sample.
- 2 In the second step, the weights were adjusted for non-response. Variables chosen for adjustment were those that were important predictors of non-response and key reporting variables for SOS, including:
 - provider type (five categories: schools, TAFE institutes, universities, community education providers and private training providers)
 - state/territory of residence (eight categories: New South Wales, Victoria, Queensland, South Australia, Western Australia, Tasmania, Northern Territory and the Australian Capital Territory)
 - funding source (two categories: government-funded and fee-for-service)
 - gender (three categories: male, female and other/unknown)
 - age group (five ranges: 15 to 19 years, 20 to 24 years, 25 to 34 years, 35 to 49 years and 50 years and over).
 - Indigenous status (two categories: Indigenous and non-Indigenous)
 - language spoken at home (two categories: English and non-English)
 - country of birth (four categories: Australia, other English-speaking countries, other countries and not stated)
 - highest level of education (nine categories: Bachelor's degree or higher, Advanced diploma or associate degree, Diploma, Certificate IV, Certificate III, Certificate II, Certificate I, Year 12 and below and other/none/unknown)
 - qualification level (four categories: Certificate I/II, Certificate III/IV, Diploma or higher and other)
 - remoteness (four categories: major cities, inner/outer regional, remote/very remote and unknown)
 - Socio-Economic Indexes for Areas (SEIFA) (six categories: extreme disadvantage, high disadvantage, average disadvantage, slight disadvantage, low disadvantage and unknown).
- 3 The responses were then further adjusted to represent the population of apprentices and trainees and to ensure weighted marginal distributions matched the apprentice and trainee's population marginal

distributions as provided in the National Apprentice and Trainee Collection. While the survey was undertaken as a sample of apprentices and trainees who undertook off-the-job training in 2023, responses have been weighted to population benchmarks of apprentices and trainees who left their training between January and December 2023, the target population for the apprentice and trainee survey component.

There are known lags in reporting contract information to the National Apprentice and Trainee Collection. Therefore, numbers for the same period (in this case January to December 2023) change between collection quarters. The sample was drawn from the 2023 National VET Provider Collection and 2023 National VET in Schools Collection and population counts weighted back to this same time period in the National Apprentice and Trainee Collection (collection number 120, June 2024 estimates).

Variables chosen for raking the weights at this stage were:

- Contract status (2 categories: completion, cancellation/withdrawal)
- Trade status (2 categories: trade and non-trade)
- State/territory of residence (8 categories: New South Wales, Victoria, Queensland, South Australia, Western Australia, Tasmania, Northern Territory and the Australian Capital Territory)
- Employer size (9 categories: 1-4, 5-9, 10-19, 20-49, 50-99, 100-199, 200-499, 500-999, >=1000)
- Gender (3 categories: male, female, other or not stated)
- Age group (4 ranges: 15 to 24 years, 25 to 34 years, 35 to 49 years and 50 years and over).

4 Large weights were trimmed to reduce variance.

Reliability of estimates

Two types of error are possible in an estimate based on a survey: non-sampling error and sampling error. *Non-sampling error* may occur for reasons such as non-response bias, incorrect responses, interviewer errors, attrition and processing errors. Non-response bias occurs when the characteristics of those not responding to the survey differ to the those responding to the survey in relation to the variables or items of interest. Non-response can affect the reliability of results and can introduce bias.

Sampling error occurs because estimates are calculated from a sample of the population, rather than the entire population. The estimates may differ from the true population value (that is, the value if the whole population had been sampled and responded to the survey) as well from estimates that would be produced if a different sample had by chance been selected.

By convention, a 95% confidence level is used to judge the amount of sampling error in an estimate. The confidence interval for an estimate is calculated using the formula:

$$\text{estimate} \pm 1.96 \times \text{SE}$$

where SE is the standard error of the estimate returned by SAS software (the standard error is an estimate of how much variation there is expected to be in a published estimate from one sample to another, based on the randomness of sample selection), taking into account the sampling design and population size. The chance that a 95% confidence interval contains the true population value is 19 in 20.

The half-width of the confidence interval, $1.96 \times \text{SE}$, is often referred to as the *margin of error*. The margins of error reported by NCVET are calculated using a finite population correction to adjust the

variance of estimates to better reflect the survey population. The margin of error allows data users to view the amount of certainty (or error) in a reported measure sourced from information provided by a sample rather than a population.

For further information refer to the Fact sheet: interpreting survey results, available from the publication page on NCVER's website at: <<https://www.ncver.edu.au/research-and-statistics/collections/student-outcomes/apprentice-and-trainee-outcomes>>.