



VET qualification completion rates 2022: explanatory notes

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Tables and figures

Figures

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Explanatory notes

Scope

- 1 This publication provides information on completion rates for nationally recognised VET qualifications delivered by Australian registered training organisations (RTOs) to students in both onshore (Australia) and offshore locations, these include:
 - TAFE institutes
 - Universities
 - Community education providers
 - Enterprise providers
 - Private training providers
 - Schools.
- 2 This publication does not cover the following types of training activity:
 - completions of programs below Certificate I level
 - non-nationally recognised training
 - credit transfer (reported with *outcome identifier - national '60 - credit transfer'*)
 - subjects that were superseded part-way through training (reported with *outcome identifier - national '61 - superseded training'*)
 - not yet started training (reported with *outcome identifier - national '85 - not yet started'*)
 - any activity where revenue was earned from another training provider in terms of subcontracting, auspicing, partnership or similar arrangements¹ (reported with *funding source - national '80 - revenue earned from another training organisation'*).

Data sources

- 3 Data are sourced from the administrative records reported to NCVET by
 - State and territory training authorities
 - Boards of studies, or their agents
 - RTOs.
- 4 The information contained in this publication is, unless otherwise stated, derived from the National VET Provider Collection and the National VET in Schools Collection. These collections are compiled under the Australian Vocational Education and Training Management Information Statistical Standard (AVETMISS), release 8.0. For further information on AVETMISS go to <<https://www.ncver.edu.au/rto-hub/statistical-standard-software/avetmiss-vet-provider-collection-specifications-release-8.0>>

¹ Third party delivery is issued under the name and logo of the principal provider. The principal provider is expected to submit the administrative records to the National VET Provider Collection, it is this activity that is reported on in lieu of any administrative records provided by a sub-contracted training organisation.

- 5 This publication also makes use of data and classification information from the Australian Bureau of Statistics (ABS). For more information, refer to the fact sheet Use of Australian Bureau of Statistics (ABS) data in 'total VET activity' located at <<https://www.ncver.edu.au/research-and-statistics/collections/students-and-courses-collection/total-vet-activity-tva-fact-sheets>>.

Data treatment

- 6 The National VET Provider and National VET in Schools collections collect enrolment and completion details of VET students and their qualifications. While these national databases are essentially cross-sectional by year, there is enough information to match data over a number of years for individual VET students and the qualifications they undertake. Obtaining such a longitudinal dataset allows the use of mathematical techniques that rely on conditional probabilities to then calculate projected completion rates.
- 7 As these data are sourced from both the National VET Provider Collection and the National VET in Schools Collection, which may contain overlaps, NCVET applies a deduplication process to reduce instances of overcounting. For more information refer to NCVET's 'de-duplication of training activity in Total VET activity' fact sheet <https://www.ncver.edu.au/__data/assets/pdf_file/0031/9674104/TVA_2021_fact_sheet_De-duplication_of_training_activity.pdf>.
- 8 Note that the percentages presented in this publication are reported to one decimal place.
- 9 Students are counted distinctly against each by variable in a chart or table, including the total.

Data revisions

- 10 Data from previous collections, represented within this publication, may differ to what was presented earlier as:
 - a. The time lag associated with data submissions; there is a delay in reporting completions, meaning completions occurring each year might take a year or more to be reported.
 - b. These data may have been rebased. Data revisions take place to facilitate comparisons across collection periods and years based on current data. For example, if a training provider was reported in the current year with provider type of 'school' but in the previous year the same provider was reported as 'community education provider', NCVET will adjust the previously reported provider type to match that of the current year. Improvements to the student counting methodology may also lead to minor variations in data reported between years.
 - c. These data may have been submitted to NCVET after the original reporting window has closed. These data would not have been included in that collection's publication. However, they will be included in the following years' publications.

Data quality and comparability issues

- 11 The COVID-19 pandemic, and states and territories' economic responses, may have impacted training data, particularly from March 2020 onwards. Any comparison with previous years should be made with caution.
- 12 Data are sourced from 'Total VET activity', and any quality and comparability issues outlined for *Total VET students and courses 2022* may apply here. For more information refer to *Total VET students and*

courses 2022: explanatory notes available on NCVER's portal < <https://www.ncver.edu.au/research-and-statistics/collections/students-and-courses-collection/total-vet-students-and-courses>>.

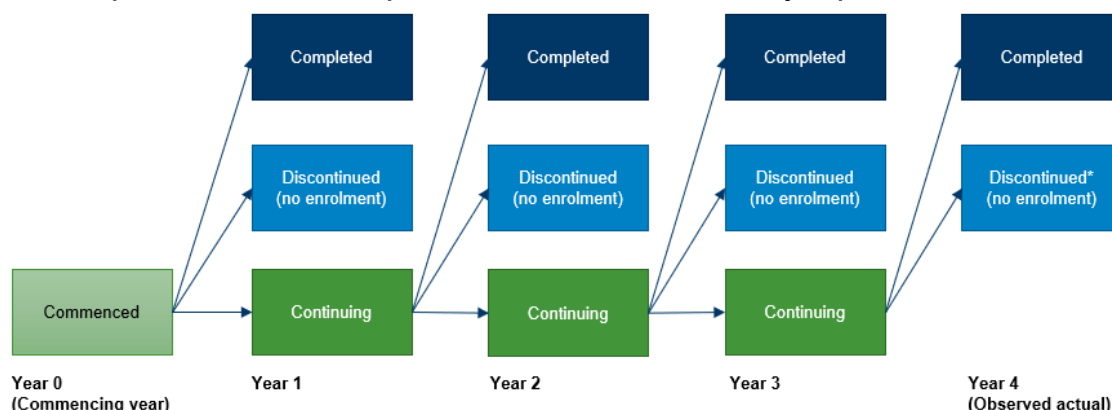
Methodologies

Completion rates methodology

- 13 A VET qualification completion rate is defined as the proportion of VET qualifications that commenced in a given year that are eventually completed. The calculation considers when a student commences a qualification and, ultimately, when a student exits (such as successfully completing or discontinuing).
- 14 The time taken for a student to exit a VET qualification varies, in line with factors such as Australian Qualification Framework (AQF) level and mode of study. Consequently, for any given cohort of commencing students, there is a natural time lag before qualifications are completed and a completion rate can be considered 'final' (observed). There can also be delays in the reporting of these completions.
- 15 For these reasons, the accuracy of calculated completion rates improves over time, although the data become less relevant for performance evaluation. While the direct approach of tracking qualifications from commencement to exit is adequate for tracking historic observed rates of completion, it remains necessary to derive completion rates for the more recently commencing cohorts.
- 16 NCVER has developed a methodology for calculating projected qualification completion rates using a longitudinal dataset in which data for an individual student are linked from commencement to completion (outlined in *The likelihood of completing a VET qualification: a model-based approach*, available at <<https://www.ncver.edu.au/research-and-statistics/publications/all-publications/the-likelihood-of-completing-a-vet-qualification-a-model-based-approach>>).
- 17 This approach uses information about qualification enrolments over a three-year window (centred on the year of interest), together with the theory of absorbing Markov chains, to derive the probability that a commencing VET qualification enrolment will eventually be completed.
- 18 The advantage of Markov chain theory is that the probability of an entity 'transitioning' from one status to another in successive time periods is not dependent on past transitions. This means that knowledge of the 'status' of qualification enrolments across successive years can be used to predict the qualification completion rate without having the full history of all qualification enrolments.
- 19 Another advantage of the methodology is that it can be readily applied to subsets of the data based on student demographics or attributes of the training. However, projected completion rates are likely to be overstated due to the natural and reporting lags influencing the calculated status of qualification enrolments, particularly for more recently commencing cohorts.
- 20 In the Markov chain formula, qualifications can belong to one of four states in a given year:
 - commenced
 - continuing, that is, commenced in the previous year and has an enrolment in the current year
 - completed, that is, there is a record of completion
 - discontinued, that is, had an enrolment in the previous year but in the current year has neither an enrolment nor a completion recorded.
- 21 Using the assumption that qualifications will be completed within four years, the progression of qualifications through these four states is examined. At the end of four years, it is assumed that all

qualifications that were not completed were discontinued, such that every qualification reaches a “final” state as reflected in Year 4 in Figure 1.

Figure 1 The possible states of a VET qualification enrolment across a four-year period after commencement



22 The proportions of qualification enrolments that reach the “completed” state over the four years form the basis of observed actual completion rates. For commencing years without four years of subsequent data, the transition of qualification enrolments through the possible states is predicted on the basis of calculated probabilities, which is then used to project completion rates.

23 Further explanation of qualification completion rates, including recent methodological reviews, can be found in the following technical papers:

- VET qualification completion rates: an evaluation of the current method
<<https://www.ncver.edu.au/research-and-statistics/publications/all-publications/vet-qualification-completion-rates-an-evaluation-of-the-current-method>>
- Evaluating machine learning for projecting completion rates for VET programs
<<https://www.ncver.edu.au/research-and-statistics/publications/all-publications/evaluating-machine-learning-for-projecting-completion-rates-for-vet-programs>>

Subject load pass rates methodology

24 Subject load pass rate is the ratio of reporting hours attributed to students who gained competencies/passed assessment in an assessable subject to all students who were assessed and either passed, failed or withdrew. The calculation is based on the annual hours (or FYTEs) for each assessable module or unit of competency and includes competencies achieved/units passed through recognition of prior learning.

25 The subject load pass rate is calculated using the following formula based on national outcome codes:

$$\left[\frac{\text{SUM}(\langle \text{reporting hours of subject results} \rangle \text{ '20 - Competency achieved/pass', '51 - Recognition of prior learning granted'})}{\text{SUM}(\langle \text{reporting hours of subject results} \rangle \text{ '20 - Competency achieved/pass', '51 - Recognition of prior learning granted', '30 - Competency not achieved/fail', '40 - Withdrawn', '52 - Recognition of prior learning not granted'})} \right] \times 100$$

26 Further explanation of subject load pass rates can be found in the occasional paper *Lifting the lid on completion rates in the VET sector: how they are defined and derived*, available at <<https://www.ncver.edu.au/research-and-statistics/publications/all-publications/lifting-the-lid-on-completion-rates-in-the-vet-sector-how-they-are-defined-and-derived>>.