

**Tertiary Education
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Te Amorangi Mātauranga Matua



Educational Performance Indicators: Definitions and Methodology

For work-based provision (ITR)

Version 1.2

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44 The Terrace

PO Box 27048

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Author

The Tertiary Education Commission

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Version history

Table 1: Version history of the methodology

Version	Date	Comments
Draft V0.1	June 2017	<ul style="list-style-type: none"> › Incorporated two documents into one: <ul style="list-style-type: none"> – Educational Performance Indicators for TEOs and MACs – definitions and rules (Jul 2014) – Methodology for calculating cohort-based completion and retention rates for industry training (Dec 2016) › Renamed “Credit completion” to “Credit achievement” to better reflect the process and to make this consistent with other documents › Updated formula wording to ensure that year n means the reporting year, and improved the cohort-based programme completion and cohort apprentice retention rate definitions and methodology wording (Note: there are no changes to the calculations) › Removed industry cash contribution information as this is not an EPI.
Final V1.0	February 2018	Published on TEC website.
Final V1.1	July 2021	<p>Updated Cohort-based programme completion methodology to make it clear that micro-credentials are excluded from the measure.</p> <p>Updated references to ITOs to refer to TEOs to better reflect the range of organisations that may report through the Industry Training Register as a result of the Reform of Vocational Education</p>
Version 1.2	June 2026	<p>This update does not include any changes to the methodology for calculating EPIs.</p> <p>Changes made include</p> <ul style="list-style-type: none"> - edits to reflect current terminology and to update examples - removing links to outdated documents <p>Changes to make the provider-based and work-based EPI documents consistent in language and format.</p>

Introduction

Purpose

1. This document sets out the methodology used to calculate the educational performance indicators (EPIs) for tertiary education organisations (TEOs) that report work-based enrolments through DXP Ngā Kete (ITR).
2. Each year we publish EPIs for credit achievement, programme completion, and apprentice retention.
3. The EPIs set out in this document apply to both industry trainees and apprentices (collectively referred to as learners) enrolled with TEOs.
4. This document describes the definitions and methodologies used for calculating the following EPI measures:
 - (a) **Credit achievement rate** - represents the credits achieved by learners at a TEO as a proportion of the total number of credits learners are expected to achieve in a given period at each TEO. Monitoring the credits achieved by learners provides information about the extent to which learners are retained in training and actively progressing toward the completion of their programme.
 - (b) **Cohort-based programme completion rate** - measures how many learners in a starting cohort go on to complete a programme at the same New Zealand Qualifications and Credentials Framework (NZQCF) level after a given period of time. Monitoring the completions provides information on the extent to which learners are obtaining recognisable and transferable skills
 - (c) **Cohort-based first year retention rate for apprentices** - measures how many New Zealand Apprentices are still enrolled in their apprenticeship after their first 12 months eligible for funding. Apprentices who are retained in training for at least one year are more likely to go on to complete their apprenticeship.
5. While not a measure of educational output performance the methodology for calculating participation rates of different groups of learners in industry training is also included in this document. Participation indicators measure the proportion of learners from priority groups engaged in tertiary education.
6. The Parity measure provides information on educational outcomes of Māori and Pacific compared with non-Māori and non-Pacific learners.
7. Generally, the final cut-off date for calculating EPIs is 1 April of the following year. All work-based data entered into the DXP Ngā Kete (ITR) up to and including the cutoff date will be included in the calculations. Any work-based data submitted after cutoff date relating to the previous reporting year will be captured in the DXP Ngā Kete (ITR) but not included in the published EPIs.

Credit achievement

What it reports

8. The credit achievement rate measures the number of credits achieved by learners within the reporting year, as a proportion of the number of credits those learners were expected to achieve in the year.

Formula 1: Credit achievement rate

<i>Numerator</i>	Credits achieved by all learners at a TEO in year n
<i>Denominator</i>	Total credits expected by all learners at a TEO in year n

Timeframe for reporting

9. The period used for measuring credit achievement is one year. For example, the reporting year of 2025 will include learners who achieved credits in 2025.

Methodology

10. *Credits achieved*: the sum of the credit values of all standards¹ assessed as achieved in year n where:
 11. the standard is recorded on the learner's enrolment
 - (a) the credit value is from the assessed version on the learner's record of achievement, and
 - (b) the assessment date is on or after the participation start date and, where the enrolment has been completed or withdrawn, on or before the participation actual end date.
12. *Year n*: the reporting year.
 - *Credits expected*: the EFTS credit value (formerly called STMs) calculated at a programme version level for each month.
13. The credits achieved include those associated with all programme enrolments registered in DXP Ngā Kete (ITR):
 - (a) National qualifications (programme type NQ).
 - (b) Complex apprenticeships (programme type COM).
 - (c) Supplementary credit programmes (programme type SCP).
 - (d) Micro-credentials (programme type MC)
 - (e) Limited credit programmes (programme type LCP).

¹ Unit standards or skills standards

- (f) Single National Qualification Programme that does not have components that are standards (programme type CB)
- 14. For complex apprenticeships, EFTS are calculated at the parent enrolment level, while credits achieved are from either the parent enrolment or sub-enrolment.
- 15. The source of evidence of credit achievement data is the New Zealand Qualifications Authority's Record of Achievement. The date of credit achievement is the date the unit standard was assessed as achieved.
- 16. The first reported achievement of the unit standard is used.

Cohort-based programme completion

What it reports

17. The cohort-based programme completion rate measures how many learners in a starting cohort go on to complete a programme at the same NZQCF level after a given period at the same TEO.
18. This cohort-based approach does not require a learner to complete the particular programme in which the learner originally enrolled. The learner is only expected to complete a programme at the same level to be counted as completed.

Formula 2: Cohort-based programme completion rate

<i>Numerator</i>	Total number of learner enrolments at a TEO in the starting cohort that complete a programme at level x within a given timeframe by year n
<i>Denominator</i>	Total number of learner enrolments at a TEO in the starting cohort at level x

Timeframes for reporting

19. The period for measuring qualification completions differs by NZQCF level and learner type:
 - (a) For levels 1 to 3 Industry Training use a three-year time period.
 - (b) For levels 4 and above Industry Training use a four-year time period.
 - (c) For level 4 New Zealand Apprentices, use a six-year time period.
20. For example, for the 2025 reporting year the cohort entry year by level are 2023 cohort for levels 1 to 3 Industry Training, 2022 cohort for levels 4 and above Industry Training and 2020 cohort for level 4 New Zealand Apprentices.
21. The years are counted from the start of the calendar year for the starting cohort. For example, the six-year timeframe for a cohort that started a level 4 New Zealand Apprentice in 2020 would count completions up to the end of 2025.

Methodology

22. *Learner enrolment*: an enrolment for an industry trainee or apprentice.
23. *Cohort*: based on the TEO, learner type (industry trainee or apprentice) and NZQCF level of the programme enrolment.
24. *In the starting cohort*: the earliest participation start date in a calendar year relevant to the starting cohort.
25. *Complete*: a programme enrolment at the cohort level with status of completed in DXP Ngā Kete (ITR).

26. *Level x*: the NZQCF level of the programme.
27. *Year n*: the reporting year.

Entry into a cohort

28. A cohort belongs to a TEO. If a learner is enrolled in two programmes at the same level at different TEOs they are in two cohorts.
29. The cohort entry year is the year of the earliest participation start date in the learner type and NZQCF level of the programme enrolment.
30. The cohort entry year is considered as year one for the relevant given timeframe required to complete.
31. A learner can only be active in one cohort at a TEO, learner type and NZQCF level. Active is where the learner is currently enrolled and has not completed.
32. A learner can enter a new cohort at a TEO as the same learner type and NZQCF level after completing a programme at that NZQCF level, including within the same year. A learner can be counted as entering the cohort twice in the same year, provided the second entry into the same cohort occurs after a completion in that cohort.
33. A learner can enter a new cohort after they have withdrawn from the programme where the withdrawal end date was at least five years (1,825 days) earlier than the new participation start date and there have been no other enrolments in the same NZQCF level since the original enrolment.
34. Cohorts exclude:
 - (a) enrolments that have been deleted
 - (b) enrolments where the participation start date and participation actual end date are in the same calendar month and year
 - (c) enrolments in Limited credit programmes (programme type LCP), Course based programmes (programme type CB) and micro-credentials (programme type MC).

Cohort completions

35. Completions are to be recorded at each NZQCF level.
36. Only programmes completed after the cohort entry date are to be counted.
37. Only enrolments that complete at least one calendar month after the start month are counted.

Complex apprenticeship programmes

38. For complex apprenticeships the enrolment and completion of the parent programme only will be used in calculating cohort rates. The sub-programme enrolments will not be included in any cohort entry, exit or calculation.

Merged TEOs and TEOs reporting through multiple EDUMIS numbers²

39. Where a learner has previously enrolled at a TEO that has subsequently merged with another TEO, then the first enrolment at the new TEO is counted as the earliest participation start date.
40. Where a TEO is reporting through two or more EDUMIS numbers due to a merger, the enrolments relating to these will be re-coded to a single EDUMIS number, and treated as if they were in a single TEO.

Reporting

41. The cohorts will be reported separately in three groups:
 - (a) Industry trainees at levels 1 to 3.
 - (b) Industry trainees at levels 4 and above.
 - (c) New Zealand Apprentices.
42. The totals for these three groups are aggregated to report an overall cohort rate for a TEO.

² A code assigned by the Ministry of Education to an education organisations. Also known as provider code or MoE number.

Cohort-based retention of New Zealand Apprentices

What it reports

44. The first year retention rate measures how many New Zealand Apprentices are retained in their apprenticeship after their first 12 months of training at the TEO

Formula 3: Cohort-based apprentice retention rate

<i>Numerator</i>	<i>Total number of New Zealand Apprentices who start in year n-1 who are still in training after 12 months at the TEO</i>
<i>Denominator</i>	<i>Total number of New Zealand Apprentices who start in year n-1 at the TEO</i>

Timeframe for reporting

- The time-period used for measuring first-year retention rates is based on apprentices who started in the year prior to the reporting year. For example, the reporting year of 2025 includes apprentices who started in a cohort in 2024

Methodology

45. *Start in year n-1*: earliest participation start date in a New Zealand Apprenticeship at the TEO in the year prior to the reporting year.
46. *Still in training after 12 months*: the number of months eligible for funding is 13 months or more in a New Zealand Apprenticeship at the TEO during year n-1 and year n. Eligible for funding is where the enrolment has a status of active or grace at the end of the month.
47. *Year n*: the reporting year.

Entry into a cohort

48. The apprentice must be enrolled in a New Zealand Apprenticeship programme.
49. An apprentice is counted as retained if they were eligible for funding for at least 13 distinct months during year n-1 and year n. The months do not have to be consecutive.
50. Any enrolments where the apprentice has completed the apprenticeship within the retention period are not included in the retention rate but will be reported separately as part of the retention reporting.
51. Note that in calculating historical rates an enrolment in a New Zealand Apprenticeship will not be included where the apprentice previously enrolled as a Modern Apprentice, and that Modern Apprenticeship enrolment is included in an active cohort for the cohort-based programme completion rate.

Other Measures

Learner participation

What it reports

52. Learner participation measures the proportion of learners in a priority group (Māori, Pacific, and young people aged under 25 years).

Formula 4: Participation of learners

<i>Numerator</i>	Number of distinct (Māori, Pacific, or under 25 years) learners enrolled at the TEO in year n
<i>Denominator</i>	Total number of distinct learners enrolled at the TEO in year n

Methodology

53. *Distinct learners enrolled at the TEO*: a distinct count of each learner in the TEO, where the learner had a status of active or grace at the end of any month during the reporting year.
54. *Māori, Pacific*: a distinct count of each learner with a reported ethnicity of Māori or Pacific.
55. *Under 25 years*: a distinct count of each learner whose age is under 25 years as at 1 July of the reporting year.
56. *Year n*: the reporting year.
57. Each learner is counted once (a distinct count). If a TEO reports a learner against multiple programmes in year n, the learner is only counted once at that organisation, based on their NSN, ethnicity, and programme level.
58. In calculating the proportions of Māori and Pacific learners, only those learners who have stated an ethnicity are included in the denominator.
59. Learners can report multiple ethnicities and be reported against more than one ethnicity.
60. A learner's ethnicity is based on the latest work-based record submitted to DXP Ngā Kete (ITR) by any TEO at the time of reporting. The latest record that was active at the time of reporting will be used and may not reflect the information held by the TEO.

Parity

What it reports

62. Parity calculations measure how well priority groups are achieving compared with other groups at the same level. It compares Māori and Pacific learners with non-Māori and non-Pacific learners.

Formula 5: Credit achievement at NZQCF level 4 and above for Māori and Pacific Peoples learners

<i>Numerator</i>	<i>Credits achieved by (Māori, Pacific, non-Māori/non-Pacific) learners at a TEO at NZQCF level 4+ in year n</i>
<i>Denominator</i>	<i>Total credits expected by (Māori, Pacific, non-Māori/non-Pacific) learners at a TEO at NZQCF level 4+ in year n</i>

63. *Credits achieved*: the sum of the credit values of all unit standards assessed as achieved in year n as defined under the Credit Achievement Rate.
64. *Māori, Pacific*: a distinct count of each learner with a reported ethnicity of Māori or Pacific.
65. *Non-Māori/non-Pacific*: a distinct count of each learner who did not report an ethnicity of Māori or Pacific.
66. *NZQCF level 4+*: a programme enrolment that is at level 4 and above.
67. *Year n*: the reporting year.
68. *Credits expected*: the EFTS credit value (formerly called STMs) calculated at a programme version level for each month.

Formula 6: Cohort-based programme completion at NZQCF level 4 and above for Māori and Pacific Peoples learners

<i>Numerator</i>	<i>Total number of (Māori, Pacific, non-Māori/non-Pacific) learner enrolments in the starting cohort that complete at a TEO at level 4+ within a given timeframe by year n</i>
<i>Denominator</i>	<i>Total number of (Māori, Pacific, non-Māori/non-Pacific) learner enrolments at a TEO in the starting cohort at level 4+</i>

69. *Māori, Pacific*: a distinct count of each learner with a reported ethnicity of Māori or Pacific.
70. *Non-Māori/non-Pacific*: a distinct count of each learner who did not report an ethnicity of Māori or Pacific.
71. *Learner enrolment*: an enrolment for an industry trainee or apprentice.

72. *Cohort*: based on the TEO, learner type (industry trainee or apprentice) and NZQCF level of the programme enrolment.
73. *In the starting cohort*: the earliest participation start date in a calendar year relevant to the starting cohort.
74. *Complete*: a programme enrolment at the cohort level with status of completed in the ITR.
75. *NZQCF level 4+*: all learners with a programme enrolment that is at level 4 and above, irrespective of learner type (industry trainee or apprentice).
76. *Year n*: the reporting year.

Calculating all measures by other dimensions

77. This section sets out the various dimensions and methodology by which participation and achievement may be calculated.

Ethnicity

78. A learner's ethnicity is the latest record submitted by any TEO at the time of reporting. Latest and historical records are maintained, and are accurate at the time the information was submitted.

79. Learners can report multiple ethnicities. All are used to assign a learner's ethnicity, so a learner can be reported multiple times when reporting total percentages of disaggregated ethnicities. For example, if a learner reports their ethnicities as Māori and Pacific, they will be counted as both Māori and Pacific.

80. For a learner to be reported as "non-Māori or non-Pacific", none of the reported ethnicities can include Māori or Pacific.

81. Non-response (Not Stated) and other residual categories are excluded from calculating ethnic group percentages.

Age

82. A learner's age is calculated as at 1 July of the reporting year using the date of birth reported by the TEO which is validated against the National Student Index,

NZQCF level

83. This is the NZQCF level for which the programme was approved for funding. Performance can be analysed by the level of the programme in which a learner is enrolled.

84. The NZQCF level comes from the programme dimension of DXP Ngā Kete (ITR).

85. For complex apprenticeships, the NZQCF level of the parent programme is used.

Region

- Both region and territorial authority are where the learner's place of employment is located and are obtained from the Employment Region and TLA Code on the Training Agreement.

86. The territorial authority is based on Statistics New Zealand 2006 classification of territorial authority.

Appendix 1: Acronyms used in the methodology

Table 2: List of acronyms used in this methodology

Acronym	Term
EPI	Educational performance indicator
IT	Industry training
ITR	Industry Training Register
LCP	Limited credit programme
COM	Complex apprenticeship
MC	Micro-credential
NQ	National qualification
NSN	National student number
NZA	New Zealand Apprenticeship
NZQA	New Zealand Qualifications Authority
NZQCF	New Zealand Qualifications and Credentials Framework
SCP	Supplementary credit programme
STM	Standard training measure
TEC	Tertiary Education Commission Te Amorangi Mātauranga Matua
TEO	Tertiary Education Organisation
TES	Tertiary Education Strategy

Appendix 2: Example overall cohort-based programme completion rate

The overall cohort-based programme completion rate is calculated using the aggregated data from each of the three cohorts: industry trainees at levels 1 to 3, industry trainees at levels 4 to 7, and apprentices. Each of the starting cohorts' years will be different, but all finish in the same reporting year.

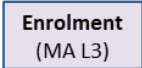

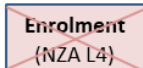
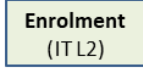
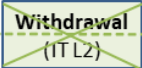
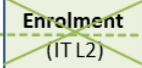
Example: Cohort-based programme completion reporting for the 2025 reporting year

Year *n* is the reporting year.

Cohort	2019 Year n-5	2020 Year n-4	2021 Year n-3	2022 Year n-2	2023 Year n-1	2024 Year n	2025 Rates published for 2024 Reporting Year	Individual cohort rates
Industry trainees levels 1 to 3				Year 1 Enter IT L1-3		Year 2 3-yr cohort	51%	$\frac{1,645}{3,230} = 51\%$
Industry trainees levels 4 to 7			Year 1 Enter IT L4-7	Year 2	Year 3	Year 4 4-yr cohort	61%	$\frac{4,920}{8,015} = 61\%$
Apprentices	Year 1 Enter NZA	Year 2	Year 3	Year 4	Year 5	Year 6 6-yr cohort	71%	$\frac{405}{570} = 71\%$
Overall cohort rate								
Complete:	405		4,920	1,645		6,970		
Enter cohort:	570		8,015	3,230		11,815		$= 59\%$

Appendix 3: Examples of cohort-based programme completion entries and exits

Example	2019	2020	2021	2022	Summary	Cohort	Reporting year
Enrolment in level 4 industry training; withdrawn and re-enrolled in an NZA	Enrolment (IT L4)	Withdrawal (IT L4) Enrolment (NZA L4)		Completion (NZA L4)	<ul style="list-style-type: none"> > Enters 2019 IT L4 cohort, and withdraws in 2014 > Remains in 2019 IT L4 cohort > Enters 2020 Apprentice cohort as NZA and exits in 2022 with a completion 	2019 IT L4 2020 Apprentice	2022 2025
First enrolment in level 2 industry training; another enrolment in level 2 industry training after completion of first enrolment			Enrolment (IT L2)	Completion (IT L2) Enrolment (IT L2)	<ul style="list-style-type: none"> > Enters 2021 IT L2 cohort and exits in Feb 2022 with completion > Enters 2022 IT L2 cohort in March and is still active as enrolment is <i>after</i> the completion 	2021 IT L2 2022 IT L2	2023 2024
First enrolment in level 4 industry training; another enrolment in level 4 industry training before first enrolment is completed	Enrolment (IT L4)		Enrolment (IT L4)	Completion (IT L4)	<ul style="list-style-type: none"> > Enters 2019 IT L4 cohort and exits in Dec 2021 with a completion > No entry into 2021 IT L4 cohort as learner was still active in 2019 IT L4 cohort > Second completion is not counted as there is no related cohort entry 	2019 IT L4	2022
Two enrolments in different years in level 4 industry training; completion for the second enrolment occurs first	Enrolment (IT L4)	Enrolment (IT L4)	Completion (IT L4)	Completion (IT L4)	<ul style="list-style-type: none"> > Enters 2019 IT L4 cohort > No entry in 2020 IT L4 cohort as learner still active in 2019 IT L4 cohort > Exits 2019 IT L4 cohort with a completion in 2021 > Completion in 2022 is not counted as there is no related cohort entry 	2019 IT L2	2022

Example	2019	2020	2021	2022	Summary	Cohort	Reporting year
Enrolment in MA; withdrawn and re-enrolled in NZA		 			<ul style="list-style-type: none"> > Enters 2019 Apprentice cohort > NZA enrolment is ignored, as it is the same cohort as the MA > Learner remains active in 2019 Apprentice cohort 	2019 Apprentice	2024
Enrolment in level 2 industry training; withdrawn in the following year then re-enrolled again in level 2 industry training					<ul style="list-style-type: none"> > Enters 2020 IT L2 cohort > Withdrawal is ignored due to subsequent re-enrolment in 2022 within 5 years from withdrawal 	2020 IT L4	2022

