PERFORMANCE-BASED FUNDING FOR THE COMMONWEALTH GRANT SCHEME

TECHNICAL NOTE

DETAILS OF THE PERFORMANCE-BASED FUNDING MODEL

This technical note provides information on the modelled performance and statistical analysis of the model for the 2020 performance-based funding (PBF) scheme.

DESIGN

- The 2020 PBF scheme comprises four core measures and a qualitative university submission, weighted as follows:

Core measures (weighting)				
Graduate employment outcomes (40%) (overall graduate employment)	**Student experience (20%)** (student satisfaction with teaching quality)	**Student success (20%)** (adjusted attrition)	**Equity group participation (20%)** (Indigenous, low socio-economic status (SES) and regional/ remote students)	**University submission**

FUNDING GROWTH AND TREATMENT

In 2020

- In 2020, under current Commonwealth Grant Scheme (CGS) funding agreements, universities' non-designated maximum basic grant amounts (MBGAs) are grown in line with the population growth rate of 18–64 year olds (1.36 per cent in 2020), subject to performance targets being met under the PBF scheme.
- Access to the additional funding for non-designated Commonwealth supported places is subject to performance assessed through quantitative measures and qualitative submissions under the scheme.
- The qualitative submission outlines a university's action plan to address an issue highlighted by the performance data.

From 2021 onwards

- From 2021 onwards, the PBF will accumulate each year until it reaches 7.5 per cent. Due to the current legislative requirement that a university's non-designated MBGA is not less than its MBGA in the previous year (section 30-27(3)), it is not possible to add the PBF to a university's MBGA and allow it to accumulate.
- Under the *Higher Education Support Act* 2003 (HESA), grants payable under the CGS can include 'the amount of performance funding grant amount worked out under the Commonwealth Grant Scheme Guidelines for the provider for that year' (section 33-1(1)(b)(v)). To allow the PBF to accumulate, the CGS Guidelines 2012 (Guidelines) will be updated to provide the legislative basis for the PBF scheme from 2021 onwards.
- The Guidelines will set the maximum PBF that is available (the accumulation of national population growth rate of 18–64 year olds on non-designated MBGAs) and will set out that the PBF is only payable when students are enrolled in non-designated places.
- The department will be consulting with the sector on how best to construct the Guidelines to ensure that the PBF reflects the intention of the policy to set the cap on university's non-designated funding.
- The PBF amount will be the amount worked out under section 33-5(5)(a) of HESA for non-designated places minus the MBGA for non-designated places, up to the maximum PBF.

Funding allocation scenarios

Where a university's enrolments do not meet the 2020 MBGA for non-designated places worked out under section 33-5(5)(a) of HESA:

- The university will not receive any PBF for 2020 as the PBF allocation will only be payable for enrolments in non-designated courses of study.

Where the amount for non-designated places worked out under section 33-5(5)(a) of HESA for a university in 2021 or a later year is less than its MBGA:

- The university will not receive any PBF as its MBGA would be greater than the amount it is due under section 33-5(5)(a).
- In line with the policy intention of the PBF, the PBF will only be payable for enrolments in non-designated courses of study.
- In 2021, a university's maximum potential PBF amount will be the national population growth for 18–64 year olds multiplied by its 2020 MBGA for non-designated places.
- In 2022, a university's PBF amount will be the sum of its maximum PBF amount for 2021 and its CGS funding growth for non-designated places in line with the population growth for 18–64 year olds for 2022.

Where the amount for non-designated places worked out under section 33-5(5)(a) of HESA for a university in 2021 or a later year would be equal to or greater than its MBGA, but less than the sum of the university's MBGA and PBF for that year:

- The university will receive that proportion of the PBF it would have received based on its enrolment of students in non-designated places.
- The PBF would equal the amount for non-designated places worked out under section 33-5(5)(a) of HESA minus its MBGA for non-designated places.

Where the amount for non-designated places worked out under section 33-5(5)(a) of HESA for a university in 2021 or a later year would be equal to the sum of the university's MBGA and PBF for that year:

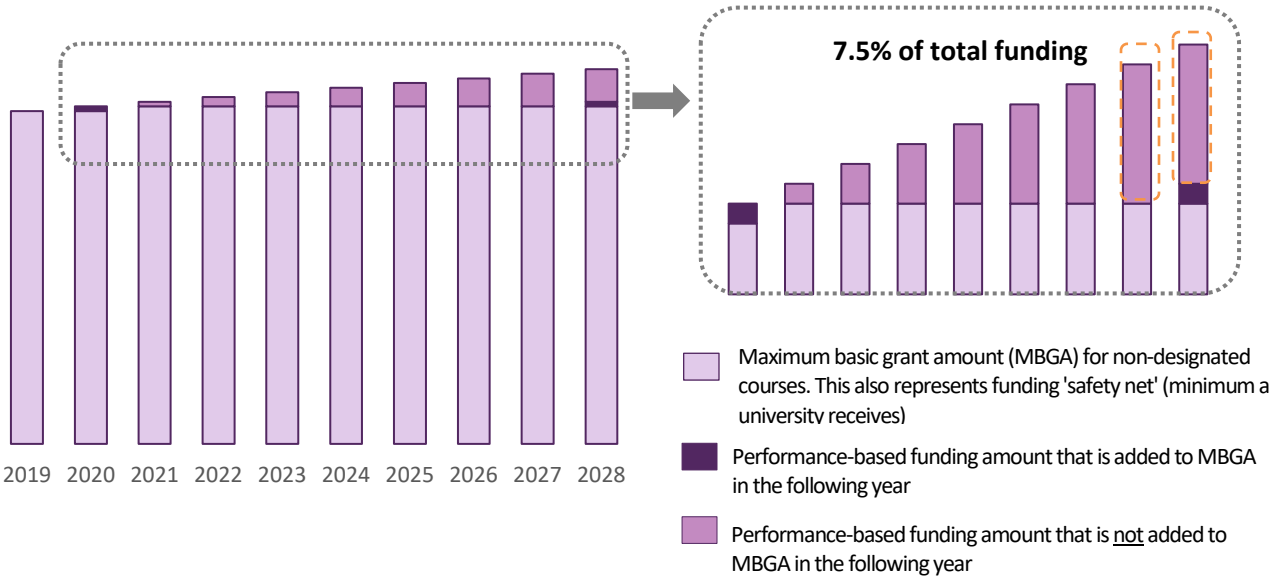
- The university will receive its total amount of MBGA and PBF for that year.

Where the basic grant amount for non-designated places worked out under section 33-5(5)(a) of HESA for a university in 2021 or a later year would be greater than the sum of the university's MBGA and the PBF growth factor:

- The maximum amount of funding a university will receive for non-designated places is the sum of its MBGA and PBF for that year.

Funding trajectory

- The figure below shows the funding trajectory for a university under the funding freeze, with a PBF increase from 2020 onwards.



PERFORMANCE MEASURE FUNDING BANDS

- The PBF model uses an incremental approach to allocating funding to universities for each measure. The incremental funding bands presented in the table below are used for all measures in the model.

Funding allocation band	Funding %
1	100%
2	80%
3	60%

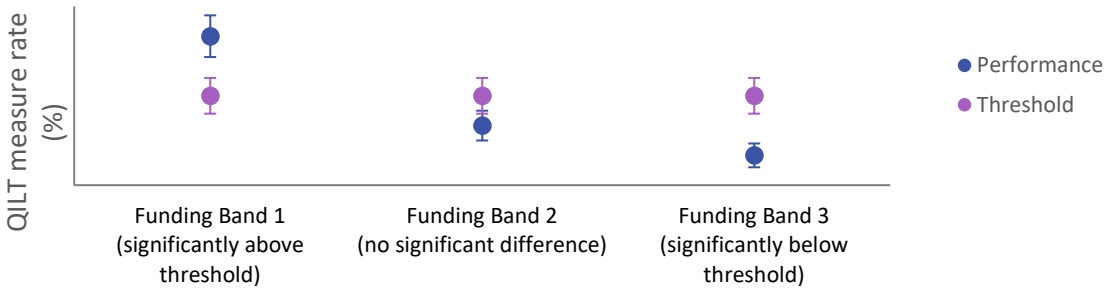
- The expert panel for the PBF scheme suggests funding band 3 reduce over time for universities that show continuous poor performance. For instance, if a university achieves funding band 3 over some time, this amount could reduce to 40 per cent, then 20 per cent and so on.

EXCELLENCE THRESHOLDS (APPLICABLE FOR GRADUATE EMPLOYMENT OUTCOMES AND STUDENT EXPERIENCE)

What is the excellence threshold?

- Graduate employment outcomes and student experience are Quality Indicators for Learning and Teaching (QILT) survey measures, where data is accompanied by confidence intervals.
- The confidence intervals show the inherent uncertainty in the QILT survey data. As outlined below, these confidence intervals are used to determine university funding allocations.

- As indicated in the figure below, funding band 1 applies to those universities that show significant improvement over the threshold (without an overlap of confidence intervals). Funding band 2 applies to those whose performance is not significantly different from the threshold (an overlap of confidence intervals). Funding band 3 applies to those that show a decline in performance against the threshold (without an overlap of confidence intervals).



- However, there is a possibility, in particular for the measure of graduate employment outcomes, where a university that achieves a very high performance rate (e.g. 98 per cent) will not achieve funding band 1 due to an overlap of confidence intervals. This situation forms the basis for applying an excellence threshold.
- Excellence thresholds will ensure universities are not disadvantaged by the inherent technical features of the QILT data.

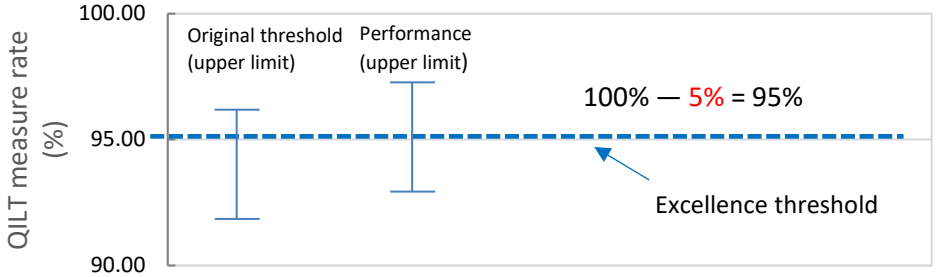
Determination of excellence threshold

- An excellence threshold is determined by finding the widest range of the confidence intervals over the previous five years. This amount is then subtracted from 100 per cent to set a university's excellence threshold (100% — X, where X is the widest range of the confidence intervals). This is to ensure that the threshold is attainable based on a university's historical performance.

Indicative example

- In the following example of University A, looking at the previous five years of data, the widest range of the confidence intervals was five per cent, meaning it has an excellence threshold of 95 per cent. If the upper limit of University A's performance is above the upper limit of its original threshold and the excellence threshold (100% — X), it will receive 100 per cent of the funding for that measure, regardless of an overlap of confidence intervals.

Year	2013	2014	2015	2016	2017
Widest range of the confidence intervals (%)	1	2	5	3	1.5

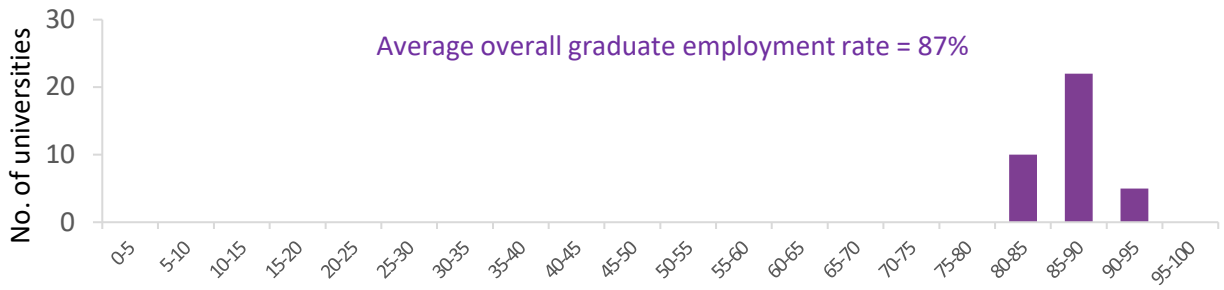


GRADUATE EMPLOYMENT OUTCOMES

Measure	Overall graduate employment rates for domestic bachelor students, contextualised through system-weighted adjustment by local employment rates (capital cities vs rest of states)
Model	University-specific incremental improvement model
Performance	2018 rates (from QILT), contextualised
Threshold	Previous five-year (2013–2017) rolling average, contextualised

- Graduate Employment Outcomes are measured by overall graduate employment rates for domestic bachelor students.
- Overall graduate employment rate is the proportion of graduates in any kind of employment (including full-time, part-time or casual work), as a percentage of those graduates available for employment.
- This metric was selected to better accommodate the complexity of employment by profession or study field, such as varied job seeking patterns, regionality differences and gendered professions.

Distribution of overall graduate employment rates for all universities (2018)



Contextualisation of performance and threshold

- A university's improvement, against its previous five-year (2013–2017) rolling average of graduate employment rates that have been contextualised, is the threshold approach for this measure.
- A university's graduate employment rates are contextualised by local employment rates (capital cities vs rest of states) through system weighting. This approach will help target the employment outcomes measure and minimise the unfairness of holding universities accountable for economic and labour market effects.
- The weighting model uses:
  - overall graduate employment rates from QILT
  - student enrolment data from Higher Education – University Statistics
  - local unemployment rates (state/capital city/rest of state) from Australian Bureau of Statistics (ABS Cat No 6291.0.55.001, Labour Force, Australia, Detailed - Electronic Delivery - Table 02. Labour force status by State, Territory, Greater capital city, Rest of state (ASGS) and Sex). Local unemployment rates by capital city/rest of state are determined by the postcode of a university campus based on ASGS Coding Indexes (2016) (ABS CG POSTCODE 2016 GCCSA 2016 LARGEST ASSOCIATIONS).

Methodology for contextualisation

Adjustments to threshold and performance

- To contextualise the threshold and performance of a particular university, university-specific enrolment proportions (A) are calculated and then multiplied by local unemployment rates (B). These campus unemployment rates are then added together to provide a weighted unemployment rate for the university, as shown below.

$$Insitution\text{-}specific\ weighted\ unemployment\ rate = \sum(A * B)$$

A = university-specific enrolment proportions
B = local unemployment rates

- The weighted unemployment rate is then added to the university's overall employment rate for domestic bachelor students to provide the adjusted overall graduate employment rate for each year. The validity of this adjustment is developed through regression analysis.

- This process is repeated for every year from 2013–2018.

- The threshold is the average of the adjusted overall graduate employment rates from 2013–2017. The rate from the performance year of 2018 is compared to the threshold to determine funding allocation.

Adjustments to confidence intervals of threshold and performance

- The confidence intervals of both performance and threshold of a particular university are adjusted proportionately based on the adjustment of the point estimates of performance and threshold respectively, using the formula below:

Adjusting upper value of confidence interval

$$GERmodHi = \left(1 + \frac{\Delta HiCI}{OvrEmp}\right) \times GERmod$$

$\mathrm{GERmodHi}$ = modified upper value of confidence interval

$\Delta\mathrm{HiCI}$ = difference between upper value and point estimate of overall graduate employment rate

OvrEmp = overall graduate employment rate

GERmod = modified overall graduate employment rate

Adjusting lower value of confidence interval

$$GERmodLo = \left(1 - \frac{\Delta LoCI}{OvrEmp}\right) \times GERmod$$

$GERmodLo$ = modified lower value of confidence interval

$\Delta LoCI$ = difference between lower value and point estimate of overall graduate employment rate

Funding allocation rules

Performance	Funding band	Funding %
Meet excellence threshold (as described above) OR Significantly above five-year average (lower value of performance confidence interval is above upper value of threshold confidence interval)	1	100%
Not significantly above or below five-year average (confidence intervals overlap)	2	80%
Significantly below five-year average (upper value of performance confidence interval is below lower value of threshold confidence interval)	3	60%

Indicative example

Adjustments to threshold and performance

- In the following example of University B in Victoria, look at the student enrolments in a metropolitan area campus and a regional area campus, and the local unemployment rates for these campuses from 2013–2018.

Enrolment proportions (A)

Campus	2013	2014	2015	2016	2017	2018
Metro	0.20	0.25	0.30	0.20	0.25	0.30
Regional	0.80	0.75	0.70	0.80	0.75	0.70

Capital city/rest of state local unemployment rates (B)

	2013 (%)	2014 (%)	2015 (%)	2016 (%)	2017 (%)	2018 (%)
Greater Melbourne	6.01	6.71	6.21	5.87	6.12	5.01
Rest of Victoria	5.45	6.29	5.77	5.70	5.38	4.90

- Multiply student proportions by unemployment rates to determine institution-specific weighted unemployment rates for each year.

	2013 (%)	2014 (%)	2015 (%)	2016 (%)	2017 (%)	2018 (%)
Weighted unemployment rates	5.56	6.40	5.90	5.73	5.57	4.93

- Add the institution-specific weighted unemployment rate to University B's overall graduate employment rate from QILT for adjustment for each year.

	2013 (%)	2014 (%)	2015 (%)	2016 (%)	2017 (%)	2018 (%)
Overall graduate employment rates (QILT)	89.10	89.30	89.30	90.10	90.20	90.20
Adjusted overall graduate employment rates	94.66	95.70	95.20	95.83	95.77	95.13

- Take an average of the adjusted overall graduate employment rates from 2013–2017 to determine the threshold (threshold=95.43%).

Adjustments to confidence intervals of threshold and performance

- Adjust the confidence interval of University B's overall graduate employment rate for each year.

	2013 (%)	2014 (%)	2015 (%)	2016 (%)	2017 (%)	2018 (%)
Upper value of confidence interval (QILT)	89.50	89.50	89.50	90.50	90.50	90.60
Lower value of confidence interval (QILT)	85.40	85.40	84.40	85.40	86.40	86.40

e.g. the adjusted upper and lower values for University B's overall graduate employment rate in 2013 are calculated as below, where the overall graduate employment rate from QILT and the adjusted rate are 89.1 per cent and 94.66 per cent respectively:

$$GERmodHi = \left(1 + \frac{89.5\% - 89.1\%}{89.1\%}\right) \times 94.66\%$$

$$GERmodLo = \left(1 - \frac{89.1\% - 85.4\%}{89.1\%}\right) \times 94.66\%$$

	2013 (%)	2014 (%)	2015 (%)	2016 (%)	2017 (%)	2018 (%)
Adjusted upper value of confidence interval	95.08	95.91	95.41	96.26	96.09	95.55
Adjusted lower value of confidence interval	90.73	91.52	89.98	90.83	91.74	91.12

- Take an average of the upper and lower values of confidence intervals from 2013–2017 respectively to determine the confidence interval of the threshold (upper value=95.75%; lower value=90.96%).

Excellence threshold

- Find the widest range of the confidence interval (from QILT) over the previous five years to determine the excellence threshold, and subtract this amount from 100 per cent (excellence threshold=94.9%).

Funding allocation

- Compare University B's performance in 2018 to its threshold, as indicated below:

Adjusted overall employment rate	Performance (%)	Excellence Threshold (%)	Threshold (%)
Point estimate	95.13	94.9	95.43
Upper value of confidence interval	95.55	NA	95.75
Lower value of confidence interval	91.12	NA	90.96

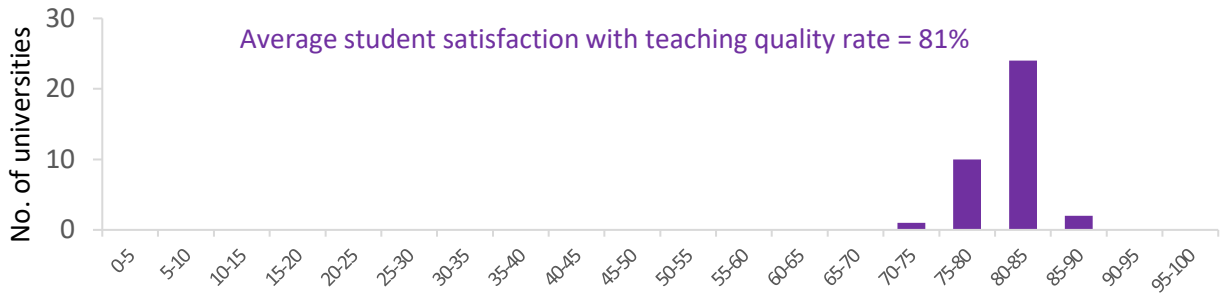
While the performance meets the excellence threshold, the upper value of performance confidence interval is below the upper value of threshold confidence interval. With an overlap of confidence intervals, University B achieves funding band 2.

STUDENT EXPERIENCE

Measure	Student satisfaction with teaching quality for domestic bachelor students, contextualised through system-weighted adjustment by study area
Model	University-specific incremental improvement model
Performance	2018 rates (from QILT), contextualised
Threshold	Previous five-year (2013–2017) rolling average, contextualised

- Student Experience is measured by student satisfaction with teaching quality rates for domestic bachelor students, which is the percentage of students who rated the quality of teaching they have experienced positively.
- Student satisfaction with teaching quality was chosen over other student experience questionnaire measures because it is the most targeted and relevant to teaching quality.

Distribution of student satisfaction with teaching quality rates for all universities (2018)



Contextualisation of performance

- A university's improvement, against its previous five-year (2013–2017) rolling average of student satisfaction with teaching quality rates that have been contextualised, is the threshold approach for this measure.
- Study areas, which have a strong correlation with student satisfaction (see 2018 Student Experience Survey National Report for details), are used to contextualise performance through system weighting. This mitigates the risk of skewing a university's student recruitment for particular study areas.
- The weighting model uses:
  - student satisfaction with teaching quality rates from QILT
  - student enrolment data for 21 study areas (indicated below) from Higher Education – University Statistics.

Contextualisation Factor	Definition/Classification	
Study Area	• Science and mathematics • Computing and Information Systems • Engineering • Architecture and built environment • Agriculture and environmental studies • Health services and support • Medicine	• Rehabilitation • Teacher education • Business and management • Humanities, culture and social sciences • Social work • Psychology

Contextualisation Factor	Definition/Classification	
	• Nursing • Pharmacy • Dentistry • Veterinary science	• Law and paralegal studies • Creative arts • Communications • Tourism, Hospitality, Personal Services, Sport and recreation

Source: 2018 Student Experience Survey National Report

Methodology for contextualisation

Adjustments to performance and threshold

- To contextualise the performance of a particular university, sector-wide group enrolment proportions for 2018 (A) are multiplied by university-specific group satisfaction rates for 2018 (B), using the formula below:

$$System\ weighted\ satisfaction\ rate\ (performance) = \sum (A * B)$$

A = sector-wide group enrolment proportions for 2018
B = university-specific group satisfaction rates for 2018

- To contextualise the threshold, sector-wide group enrolment proportions for 2018 (A) are multiplied by university-specific group satisfaction rates from the pooled data for 2013–2017 (B), using the formula below:

$$System\ weighted\ satisfaction\ rate\ (threshold) = \sum (A * B)$$

A = sector-wide group enrolment proportions for 2018
B = university-specific group satisfaction rates (pooled data for 2013–2017)

- Normalising university-specific group satisfaction by standard sector-wide group enrolment proportions (2018) for both the performance and threshold will limit the unintended consequences of driving universities to provide courses with typically high student satisfaction rates.

- If the university does not teach one or more of the study areas, the total student enrolments will be rescaled to remove the influence of having zero student enrolments in those study areas (see indicative example below for details).

- The performance is then compared to the threshold to determine funding allocation.

Adjustments to confidence intervals of performance and threshold

- Similar to the graduate employment outcomes measure, the confidence intervals of both performance and threshold of a particular university are adjusted proportionately based on the adjustment of the point estimates of the performance and threshold respectively, using the formulas below:

Adjusting upper value of confidence interval

$$SEmodHi = \left(1 + \frac{\Delta HiCI}{SatRat}\right) \times SEmod$$

$SEmodHi$ = modified upper value of confidence interval

$\Delta HiCI$ = difference between upper value and point estimate of student satisfaction with teaching quality rate

$SatRat$ = student satisfaction with teaching quality rate

$SEmod$ = modified student satisfaction with teaching quality rate

Adjusting lower value of confidence interval

$$SEmodLo = \left(1 - \frac{\Delta LoCI}{SatRat}\right) \times SEmod$$

$SEmodLo$ = modified lower value of confidence interval

$\Delta LoCI$ = *difference between lower value and point estimate of student satisfaction with teaching quality rate*

- For adjusting performance, the confidence interval of a university's 2018 satisfaction rate is used; for adjusting threshold, the average of the confidence intervals of a university's satisfaction rates for 2013–2017 is used.

Funding allocation rules

Performance	Funding band	Funding %
Meet excellence threshold (as described above) OR Significantly above five-year average (lower performance confidence interval is above higher threshold confidence interval)	1	100%
Not significantly above or below five-year average (confidence intervals overlap)	2	80%
Significantly below five-year average (higher performance confidence interval is below lower threshold confidence interval)	3	60%

Indicative example

Adjustments to performance and threshold

- In the following example, University C did not teach study areas 3 and 4 in 2018.

University C's student satisfaction with teaching quality rates by study area (2018) (B)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
90.2	63.2	0.0	0.0	62.0	86.6	88.7	78.6	82.0	90.3	72.2	93.3	75.4	70.9	77.9	85.3	85.0	78.4	85.7	75.0	68.0

Sector wide enrolment proportions (2018) by study area (A)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total
10.6%	3.6%	6.3%	2.4%	1.1%	7.5%	0.9%	7.5%	0.7%	0.3%	0.4%	1.6%	8.5%	17.3%	12.3%	2.0%	4.6%	5.8%	3.3%	3.0%	0.3%	100%

- As indicated below, the sector-wide enrolment proportions for University C were, therefore, zero per cent for study areas 3 and 4, and its total enrolment percentage was 91.3 per cent, rather than 100 per cent. This would lower the modified satisfaction rate of University C in 2018.

Sector wide enrolment proportions (adjusted for University C's enrolment patterns)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total
10.6%	3.6%	0.0%	0.0%	1.1%	7.5%	0.9%	7.5%	0.7%	0.3%	0.4%	1.6%	8.5%	17.3%	12.3%	2.0%	4.6%	5.8%	3.3%	3.0%	0.3%	91.3%

Total enrolment percentage = (no enrolments for study areas 3 and 4) $\sum z = 91.30\%$

- To account for this issue, the total student enrolments are rescaled to remove the influence of study areas 3 and 4 by dividing the sum of University C's satisfaction rates for all study areas by the total enrolment percentage, as shown below:

Modified satisfaction rate = (rescaled) $\frac{\sum(A * B)}{\sum z}$

The modified satisfaction rate for 2018 (performance) is 78.90 per cent.

- Similarly, to determine the threshold, multiple sector-wide group enrolment proportions for 2018 by university-specific group satisfaction rates from the pooled data for 2013–2017. Then, rescale the total student enrolments to account for the zero per cent enrolment for study area 5.

University C's student satisfaction with teaching quality rates by study area (pooled data for 2013–2017) (B)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
90.5	63.3	62.2	64.5	0.0	86.3	88.7	78.3	82.1	90.1	72.1	93.2	75.3	71.9	76.9	85.4	86.0	76.4	85.9	75.2	67.8

The modified satisfaction rate for the average of 2013–2017 (threshold) is 77.65 per cent.

Adjustments to confidence intervals of threshold and performance

- Adjust the upper and lower values of the confidence interval of University C's performance and threshold respectively using the formulas on page 11.

	Data for 2018 (QILT) (%)	Adjusted data for 2018 (%) (Performance)	Pooled data for 2013-2017 (QILT) (%)	Adjusted pooled data for 2013-2017 (%) (Threshold)
Point estimate	72.37	78.90	73.12	77.65
Upper value of confidence interval	74.52	81.24	74.32	78.92
Lower value of confidence interval	71.18	77.60	72.09	76.56

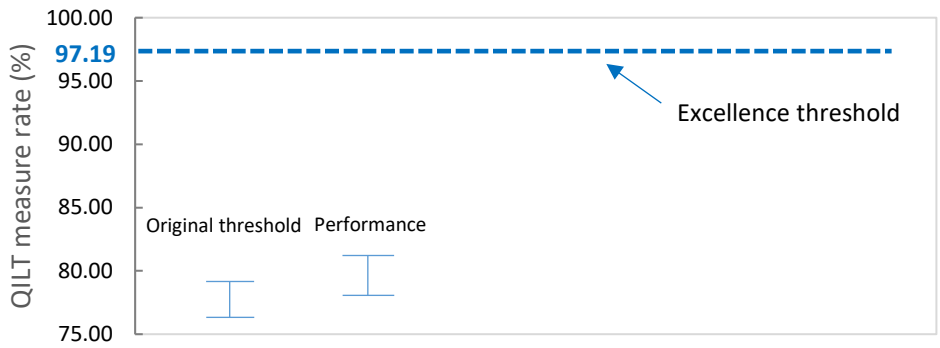
Excellence threshold

- Find the widest range of the confidence interval (from QILT) over the previous five years (in this case, 2.81% in 2014) to determine the excellence threshold, and subtract this amount from 100 per cent (excellence threshold=97.19%).

	2013 (%)	2014 (%)	2015 (%)	2016 (%)	2017 (%)
Upper value of confidence interval (QILT)	75.61	75.93	73.15	73.31	73.59
Lower value of confidence interval (QILT)	73.15	73.12	71.51	71.25	71.40

Funding allocation

- Compare University C's performance in 2018 to its threshold, as indicated below.



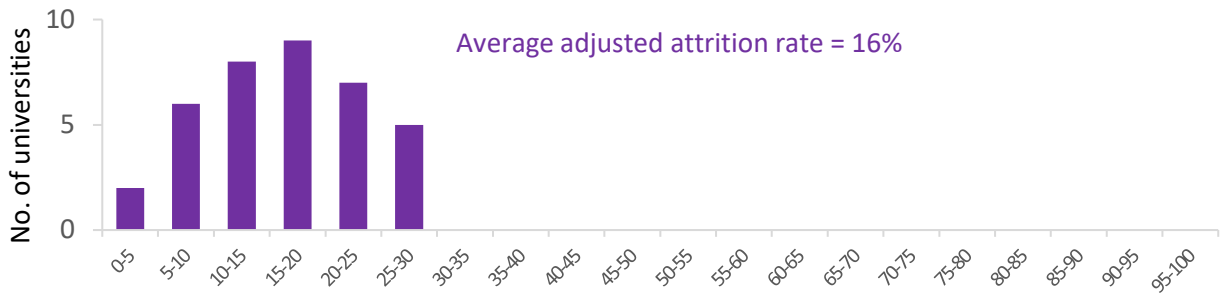
The performance does not meet the excellence threshold. The lower value of performance confidence interval is below the upper value of threshold confidence interval. With an overlap of confidence intervals, University C achieves funding band 2.

STUDENT SUCCESS

Measure	Adjusted attrition rate for first-year domestic bachelor students, contextualised by student characteristics
Model	Contextualised thresholds estimated through system weighted average model
Performance	2017 rates (2017 commencing students) (from Higher Education – University Statistics)
Threshold	2017 system weighted rates (for 2017 commencing students)

- Student Success is measured by 2017 adjusted attrition rates for the first-year domestic bachelor students.
- Adjusted attrition (adjusted for students moving providers and/or courses) was chosen over other success measures (e.g. completion, retention) due to its reasonably contemporaneous nature (only one year lag), while still offering a strong proxy for completion.

Distribution of adjusted attrition rates for all universities (2017)



Contextualisation of performance

- Contextualised thresholds are obtained through system weighting that sets a 'target' (estimated) attrition rate for each institution, controlling for the five most significant factors based on the Final Report on *Improving retention, completion and success in higher education* published by the Higher Education Standards Panel.
- The Higher Education Information Management System (HEIMS) Data Element Dictionary provides specifications and operational definitions for the contextualisation factors, noting that only those relating to domestic bachelor students are included below:

Contextualisation Factor	Element Number	Definition/Classification
Type	330	• Full-time attendance • Part-time attendance
Mode	329	• Internal mode of attendance at an on-shore campus (includes classroom based) • External mode of attendance at an on-shore campus (includes electronic based, on line and correspondence) • Multi-modal mode of attendance

Contextualisation Factor	Element Number	Definition/Classification
Basis	327	• A higher education course (Australian or overseas equivalent; complete or incomplete) • Secondary education undertaken at school, VET or other Higher Education Provider (Australian or overseas equivalent) • A VET award course other than a secondary education course (Australian or overseas equivalent; complete or incomplete) • Mature age special entry provisions • A professional qualification • Other basis
Field of Education	461	• Field of education (as defined under the Australian Standard Classification of Education (ASCED) 2001)

Age	N/A	• Age group bands
		  • <20 (under 20)
		  • 20-29
		  • 30+ (30 and above)

Source: HEIMS Data Element Dictionary

- A university's contextualised threshold is compared to its actual adjusted attrition rates from Higher Education – University Statistics to determine funding allocation.

Methodology for contextualisation

Adjustments to threshold

- The system weighted threshold is calculated based on unique combinations of the five contextualisation factors (altogether 1296 combination groups). To contextualise the threshold of a particular university, calculate the proportion of students in each unique combination at that university (A) and sector-wide attrition rates of students in each unique combination (B). Then multiply these two (A and B) to get the system weighted attrition rate for each unique combination, and sum these rates to get the adjusted system weighted attrition rate for the university. This then becomes the target for the university to stay below.

$$System\ weighted\ attrition\ (threshold) = \sum (A * B)$$

A = university-specific group enrolment proportions (2017 commencing)
B = sector-wide group attrition rates (2017 commencing)

Funding allocation rules

Performance	Funding band	Funding %
Better than system weighted threshold	1	100%
Within two standard deviations of threshold	2	80%
Not within two standard deviations of threshold	3	60%

Indicative example

Adjustments to threshold

- In the following simplified example, University D has four unique combination groups based on the five contextualisation factors in 2017.

Type	Mode	Age band	Basis	Field of Education	University enrolment proportions	Sector-wide attrition rate
Full-time	External	<20	Higher education course (Australian or overseas equivalent complete or incomplete)	01 Natural and Physical Sciences	0.17	0.12
Full-time	External	<20	Mature age special entry provisions	05 Agriculture Environmental and Related Studies	0.33	0.08
Full-time	External	<20	Other basis	06 Health	0.42	0.23
Full-time	External	<20	Secondary education (Australian or overseas equivalent)	10 Creative Arts	0.08	0.11

- Multiply the university enrolment proportion and sector-wide attrition rate to get the system weighted attrition rate for each unique combination. Sum the rates for all combination groups to get the adjusted system weighted attrition rate for the university.

  The weighted attrition rate (threshold) is 15.22 per cent.

Funding allocation

- Compare University D's performance in 2017 (16.68% from Higher Education – University Statistics) to its threshold, where the system-wide standard deviation is 4.5 per cent.

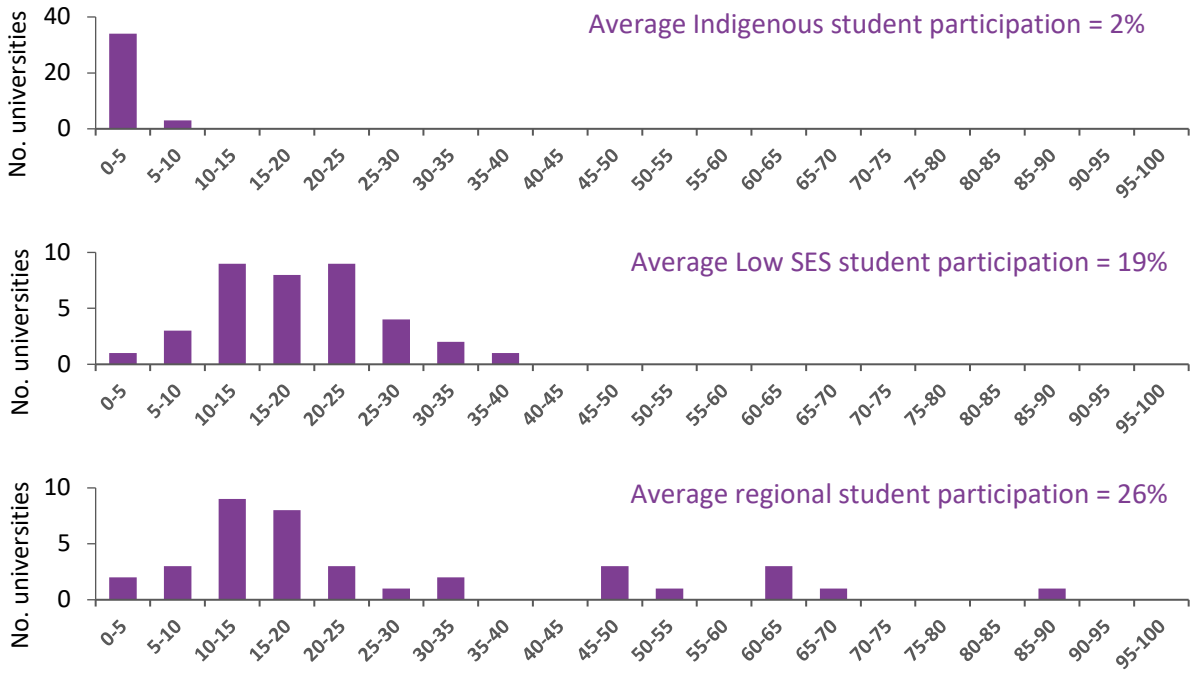
  The performance is worse than the threshold, and is not within two standard deviations of the threshold (16.59%). University D achieves funding band 3.

EQUITY GROUP PARTICIPATION

Measure	Participation rates for Indigenous, low SES and regional/remote domestic bachelor students
Model	Sector-wide incremental model, based on sector average
Performance	2018 rates (using student's first address, from Higher Education – University Statistics)
Threshold	Within reasonable distance to 2018 sector average

- Equity Group Participation is measured by the participation rates for three equity groups of domestic bachelor students: Indigenous, low SES and regional/remote.
- Participation rate, while not necessarily an outcome measure, was chosen primarily as a contextualisation measure to promote equity of access.

Distribution of equity group participation rates for all universities



Contextualisation of performance

- Contextualisation is not necessary for this measure, as the measure itself offers a level of contextualisation for university performance. Increased enrolments of students from equity groups is a goal of the Government and this performance measure will incentivise such enrolments.

Methodology for this measure

- The threshold set for the three groups is determined by the feature of the distributions of equity group participation rates (see charts above).
- For low SES student group, the distribution of the participation rates is relatively symmetrical. The thresholds are therefore set by standard deviations from the sector average, where the sector-wide standard deviation is calculated using the performance values, and the sector average is the average proportion of students from a particular equity group (e.g. total low SES students/total students across the sector).

- For Indigenous and regional/remote student groups, the distribution of the participation rates is more skewed. The thresholds are therefore set by the sector average.

Funding allocation rules

Equity group	Threshold 1	Threshold 2
Indigenous students	½ of the sector average	¼ of the sector average
Low SES students	1 standard deviation below the sector average	2 standard deviations below the sector average
Regional/remote students	½ of the sector average	¼ of the sector average
% funding (above threshold)	100%	80%

Indicative example

- In the following example of University E, look at the student participation by the three equity groups in 2018:

Students	No. of students
Indigenous	300
Low SES	650
Regional/ remote	360
Total domestic bachelor	13,200

- Compare University E's performance in 2018 to the sector-wide threshold for each equity group, as indicated below:

	Participation rates (%)	System-wide threshold 1 (%)	System-wide threshold 2 (%)
Indigenous	2.27	0.90	0.45
Low SES	4.92	10.3	2.57
Regional/ remote	2.73	10.85	5.42

For Indigenous students, the performance is above Threshold 1. University E achieves funding band 1 for this student group.
For low SES students, the performance is below Threshold 1 and above Threshold 2. University E achieves funding band 2 for this student group.
For regional/remote students, the performance is below Threshold 2. University E achieves funding band 3 for this student group.

The fund allocation for equity group participation measure for University E is 80 per cent, which is the average of the funding allocations for the three student groups.

Element	Student success (20%)	Equity group participation (20%)	Graduate employment outcomes (40%)	Student experience (20%)
Measure	Adjusted attrition rate for first-year domestic bachelor students ***Recommendation 11.*** *Student success should be a performance measure, as measured by adjusted attrition rates, noting a potential dimension should include students transitioning from higher education to the VET sector.*	Participation rates for Indigenous, low SES and regional/remote domestic bachelor students ***Recommendation 12.*** *Equity group participation should be a performance measure, as measured by equally weighted participation rates of Indigenous students, low socio-economic status students and regional/remote students.*	Overall graduate employment rates for domestic bachelor students ***Recommendation 10.*** *Graduate (employment) outcomes should be a performance measure, as measured by overall graduate employment rate for domestic bachelor students.*	Student satisfaction with teaching quality for domestic bachelor students ***Recommendation 9.*** *Student experience should be a performance measure, as measured by student satisfaction with teaching quality for domestic bachelor students.*
Model	Contextualised thresholds estimated through system weighted (sys. wt.) average model ***Recommendation 15****. The student success measure should apply a sector contextualised approach to setting thresholds*	Sector-wide model, based on sector average participation rates ***Recommendation 14****. The equity group participation should apply a sector wide approach for setting thresholds*	University-specific incremental improvement model, contextualised by local employment rates (capital cities vs rest of states) ***Recommendation 16****. The graduate (employment) outcomes… measure should apply a university-specific 'improvement approach' for setting thresholds*	University-specific incremental improvement model, contextualised by study area ***Recommendation 16****. The student experience… measure should apply a university-specific 'improvement approach' for setting thresholds*
Performance	2017 rates (for 2017 commencing students, adjusted to take into account change in course and/or provider)	2018 rates (using student's first address)	2018 overall graduate employment rate (GER) plus institution-specific weighted (Inst. wt.) unemployment rate contextualised by local employment rates (capital cities vs rest of states): $$\text{GER} + \left(\text{Inst. wt. average} = \sum (A*B)\right)$$ A = university-specific enrolment proportions B = local unemployment rates NB: Take the proportion of students at each campus of the university (A) and multiply that by the relevant unemployment rate (B). These are then added together to provide a 'weighted' unemployment rate for each university. This 'weighted' unemployment rate is added to the overall graduate employment rate from QILT to determine the performance. The validity of doing this is developed through regression analysis.	2018 sys. wt. rates, contextualised by study area: $$\text{Sys. wt. average} = \sum (A*B)$$ A = sector-wide group enrolment proportions for 2018 B = university-specific group satisfaction rates for 2018
Threshold	2017 sys. wt. rates (for 2017 commencing students, adjusted to take into account change in course and/or provider), contextualised by type, mode, age, basis and field of education. These contextualisation factors were selected based on the five most significant factors determined through the Higher Education Standards Panel (HESP) analysis. $$\text{Sys. wt. average} = \sum (A*B)$$ A = university-specific group enrolment proportions (2017 commencing) B = sector-wide group attrition rates (2017 commencing) NB: Create unique combinations of the above factors and calculate proportions of students in each unique combination (A). Then, calculate sector-wide attrition rates of each unique combination (B). Multiply A and B to get the system weighted attrition rate for each unique combination, and sum the attrition rates for each unique combination to get the system weighted attrition rate for each university.	2018 sector average	Average of 5-year (2013-2017) pooled data, using the above weighting approach to adjustment NB: Excellence threshold applies to this measure: Excellent threshold = 100% — X X = the widest range of the confidence intervals over the previous five years A university receives 100 per cent of the funding for this measure if the upper limit of its performance confidence interval is above the upper limit of its original threshold and the excellence threshold, regardless of an overlap of confidence intervals.	Average of 5-year (2013-2017) pooled data, using the above weighting approach to adjustment NB: Excellence threshold applies to this measure: Excellent threshold = 100% — X X = the widest range of the confidence intervals over the previous five years A university receives 100 per cent of the funding for this measure if the upper limit of its performance confidence interval is above the upper limit of its original threshold and the excellence threshold, regardless of an overlap of confidence intervals.
Funding allocation rules	• Funding Band 1 -> better than system-weighted estimate • Funding Band 2 -> within 2 standard deviations of system weighted estimate • Funding Band 3 -> not within 2 standard deviations of system weighted estimate	For Indigenous and regional/remote participation rates: • Funding Band 1 -> better than 1/2 of sector average • Funding Band 2 -> better than 1/4 of sector average • Funding Band 3 -> worse than 1/4 of sector average For low SES participation rates: • Funding Band 1 -> better than 1 standard deviation of sector average • Funding Band 2 -> better than 2 standard deviations of sector average • Funding Band 3 -> worse than 2 standard deviations of sector average	• Funding Band 1 -> excellence threshold or lower confidence interval greater than higher confidence interval of 5-year average • Funding Band 2 -> lower confidence interval greater than lower confidence interval of 5-year average • Funding Band 3 -> higher confidence interval less than lower confidence interval of 5-year average	• Funding Band 1 -> excellence threshold or lower confidence interval greater than higher confidence interval of 5-year average • Funding Band 2 -> lower confidence interval greater than lower confidence interval of 5-year average • Funding Band 3 -> higher confidence interval less than lower confidence interval of 5-year average