

General End User Guide
8.2.20 External Results → Assessment Analysis



TrackOne

S T U D I O

This document will assist you in navigating through the Learning Analytics Suite as both an Administrator, and as a set user type with fewer permissions enabled in their setup, ie. Staff or Student. Please carefully review all instructions set out in the Help Documentation made available.

If you require further expansion or assistance at any point in the document, please do not hesitate to contact TrackOne Studio Support through the Help Desk by sending an email to helpdesk@trackonestudio.com.

Assessment Analysis

Assessment Analysis allows for deeper analysis of the school's external results.

The screenshot displays the 'Demonstration School Learning Analytics Suite' interface. On the left is a dark blue sidebar with a navigation menu under the heading 'Analytics' and a link 'Go to Administration'. The menu items are: Home, Student Results, Class Results, Class Tools, Data Entry, Subject Results, Cohort Results, Pastoral Care, External Results (with sub-items: Assessment Results, Assessment Analysis, NAPLAN Analysis, OP Analysis, Predictive Analysis), and Reports. The 'Assessment Analysis' item is highlighted in blue. On the right, a dark blue dropdown menu is open, showing 'External Results' with sub-items: 'Assessment Results', 'Assessment Analysis' (highlighted), and 'NAPLAN Analysis'. The main content area has a breadcrumb trail: 'Performance Progress' > 'Cohort Performance Over Time' > 'Academic Comparison'. Below this, the 'Performance Progress' section is active, showing filter options for 'Select Student Group' (Cohort: Year 12, Sem 1, 2020; Filter by subject enrolment: All Students) and 'Select External Assessment' (Provider: NAPLAN, Section: Spelling). There are also sections for 'Additional Filter Options' (No filters selected) and 'Additional Report Options'. A 'Create Report' button is located at the bottom of the filter options.

Performance Progress – Growth Tool

Demonstration School Learning Analytics Suite

► Performance Progress ► Cohort Performance Over Time ► Academic Comparison ► Performance At Risk

Performance Progress

Select Student Group

Cohort: Year 10 Semester: Sem 1, 2020 Filter by subject enrolment: Mathematical Methods All Classes

Select External Assessment

Provider: NAPLAN Section: Numeracy

Additional Filter Options: No filters selected.

Additional Report Options: Create Report

► Growth Tool ► Comparison Tool

The External Assessment Growth tool allows teachers to monitor the effect of interventions between two assessments using an effect size* calculation. Each student in the group is indicated by a dot. The vertical axis measures effect size with a positive effect signalling an improvement in performance, whilst a negative effect indicates a decline in performance. The horizontal axis indicates the student's result in the latest assessment item.

*Effect size is a simple measure for quantifying the difference between two groups or the same group over time, on a common scale. In an educational setting, effect size is one way to measure the effectiveness of an intervention. Effect size enables us to measure both the improvement (gain) in learner achievement for a group of learners AND the variation and volatility it provides information about which interventions are worth having.

NAPLAN, Numeracy, Numeracy Scores: 2017, Year 7 to 2019, Year 9

Initial Period: 2017, Year 7 Comparison Period: 2019, Year 9

Student Effect Comparison

Effect Size

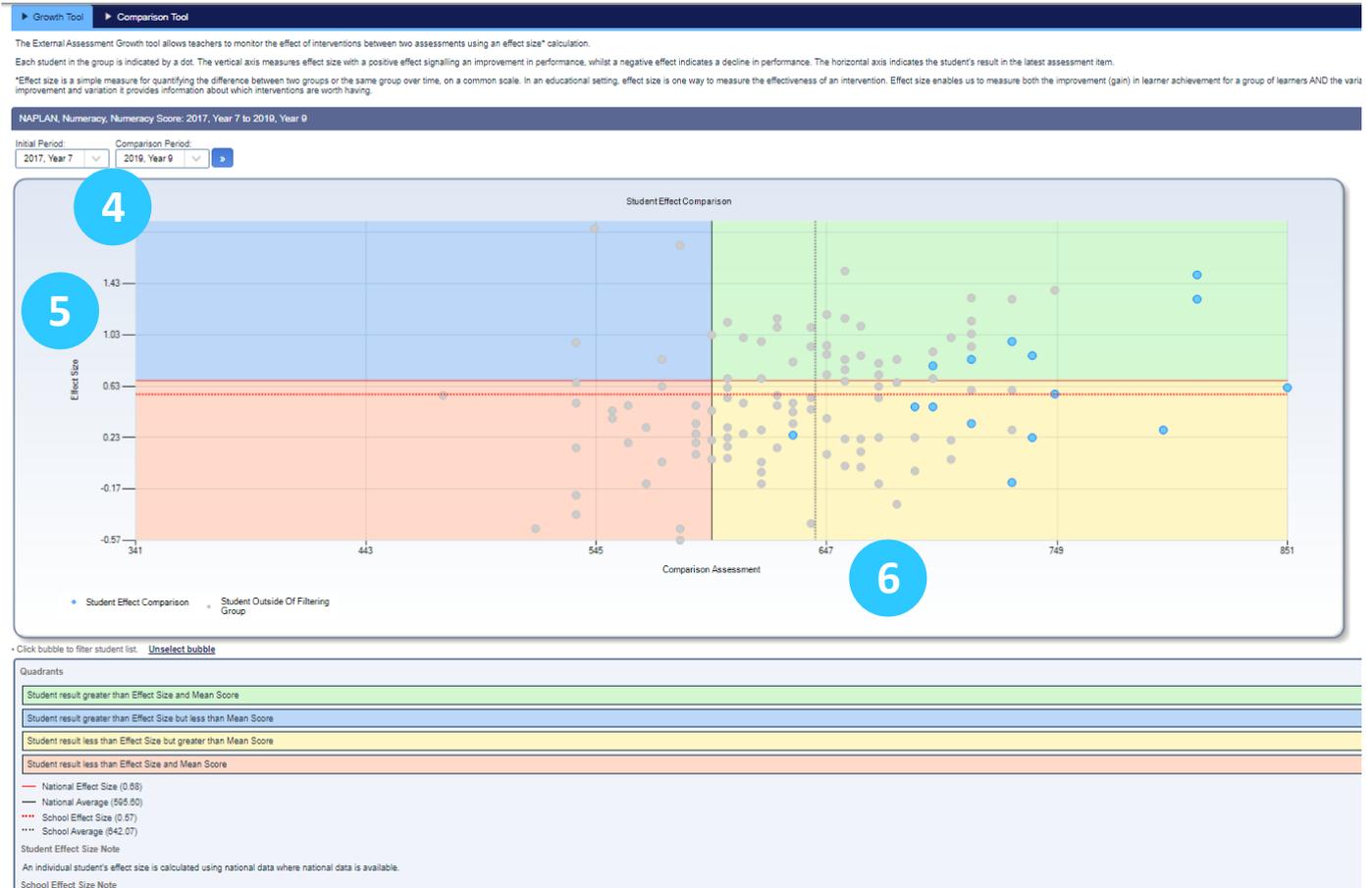
Comparison Assessment

• Student Effect Comparison • Student Outside Of Filtering Group

1. The blue menu bar enables the user to move between the areas within **Assessment Analysis**. The pages will refresh as the user moves between tabs (meaning the assessment item will not stay the same). The first tab looks at **Performance Progress**, which indicates the degree to which students have improved from one assessment item to the next.
2. Select the cohort, result period and subject for analysis.
For instance, Year 10 → Semester One, 2020 → Mathematical Methods.

Select the provider, section and data type.
For instance, NAPLAN → Numeracy → Numeracy Score.

In this example, the user is looking at the Year 10s of Semester One, 2020 (who studied Mathematical Methods). They are analysing the degree to which these students' Numeracy scores improved over time.
3. Click **Create Report**.



4. The drop-down menus above the chart indicate the initial and latest assessment item being used to measure improvement.

In the example shown:

- The initial assessment item is their Year 7 test (which they sat in 2017); and
- The latest assessment item is their Year 9 test (which they sat in 2019).

5. The vertical axis measures effect size (improvement from one test to the next). A positive effect size signals improvement in performance, whilst a negative result shows decline. (For additional information on the effect size calculation, please contact TrackOne Studio).

- The solid red line shows the average effect size (at the national level).
- The dotted red line shows the average effect size (at the school's level).

6. The horizontal axis indicates the student's result on the latest assessment item.

In the example shown, this would be the student's Year 9 Numeracy scale score.

- The solid black line shows the average scale score (at the national level).
- The dotted black line shows the average scale score (at the school's level).

The External Assessment Growth tool allows teachers to monitor the effect of interventions between two assessments using an effect size* calculation.

Each student in the group is indicated by a dot. The vertical axis measures effect size with a positive effect signalling an improvement in performance, whilst a negative effect indicates a decline in performance. The horizontal axis indicates the student's result in the latest assessment item.

*Effect size is a simple measure for quantifying the difference between two groups or the same group over time, on a common scale. In an educational setting, effect size is one way to measure the effectiveness of an intervention. Effect size enables us to measure both the improvement (gain) in learner achievement for a group of learners AND the variance and variation it provides information about which interventions are worth having.

NAPLAN, Numeracy, Numeracy Score: 2017, Year 7 to 2019, Year 9

Initial Period: 2017, Year 7 Comparison Period: 2019, Year 9



Click bubble to filter student list. [Unselect bubble](#)

Quadrants

- Student result greater than Effect Size and Mean Score
- Student result greater than Effect Size but less than Mean Score
- Student result less than Effect Size but greater than Mean Score
- Student result less than Effect Size and Mean Score

— National Effect Size (0.68)
 — National Average (647.00)
 School Effect Size (0.57)
 School Average (642.07)

Student Effect Size Note
 An individual student's effect size is calculated using national data where national data is available.

School Effect Size Note

7. Students in the green quadrant have scored:

- Above the national average in terms of their scale score; and
- Above the national average in terms of their effect size.

These results are pleasing. The scale scores are above average and they have improved across the two tests.

8. Students in the yellow quadrant have scored:

- Above the national average in terms of their scale score; but
- Below the national average in terms of their effect size.

These results can often go unnoticed. Whilst they are above the national average, they have not improved across the two tests.

9. Students in the blue quadrant have scored:

- Below the national average in terms of their scale score; but
- Above the national average in terms of their effect size.

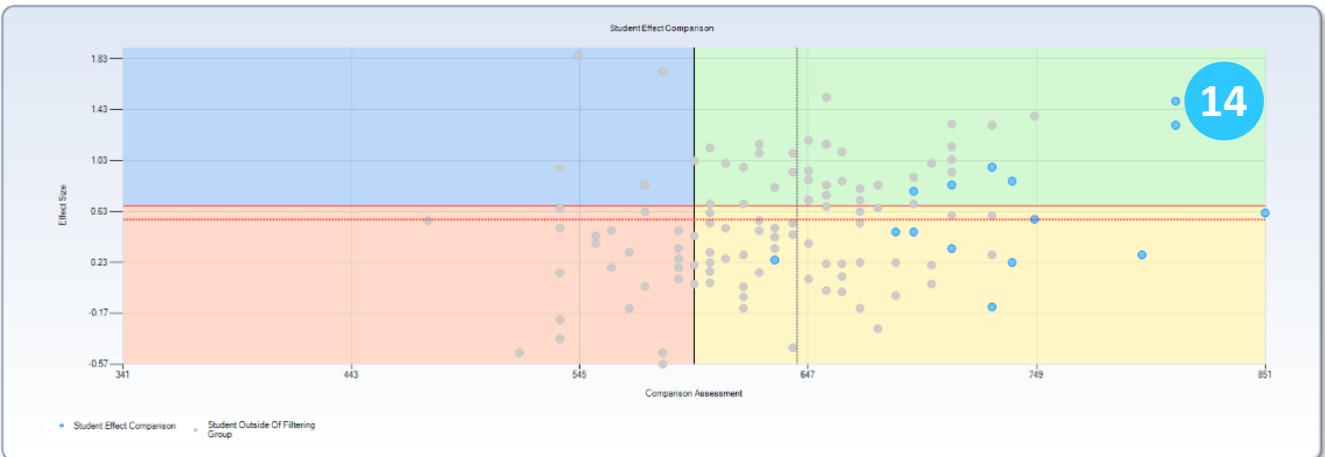
These results show promise. The scale scores may be below average, however they have improved significantly across the two tests.

10. Students in the red quadrant have scored:

- Below the national average in terms of their scale score; and
- Below the national average in terms of their effect size.

These results are concerning. The scale scores are below average and they have not improved across the two tests.

Initial Period: 2017, Year 7 Comparison Period: 2019, Year 9



Click bubble to filter student list. [Unselect bubble](#)

Quadrants

- Student result greater than Effect Size and Mean Score
- Student result greater than Effect Size but less than Mean Score
- Student result less than Effect Size but greater than Mean Score
- Student result less than Effect Size and Mean Score

— National Effect Size (0.68)
 — National Average (595.60)
 ••• School Effect Size (0.57)
 ••• School Average (642.07)

Student Effect Size Note
 An individual student's effect size is calculated using national data where national data is available.

School Effect Size Note
 The 'School Effect Size' has been calculated using only the results for students who completed BOTH the initial and comparison assessments. The 'School Average' and 'School SD' in the table below however reflect the average and SD for all students who participated in the assessment.

Period	Year Level	School Average	National Average	School SD	National SD
2015	5	537.39	487.60	63.02	69.00
2017	7	604.88	549.50	60.60	70.00
2019	9	643.73	595.60	63.49	66.30

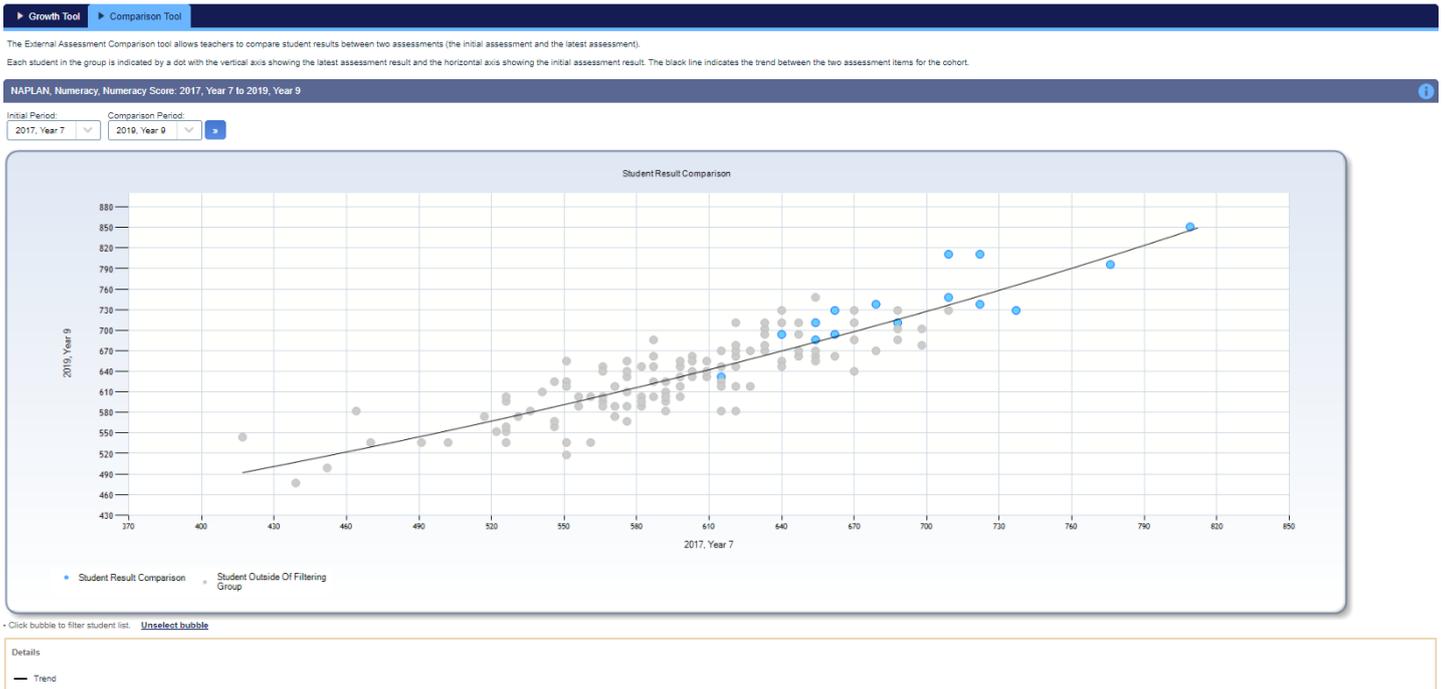
Sort results by: 2019 Y9 Ascending Descending

Student Code	Surname	Given Name	Sex	Status	Date Left	2016 Y6	2017 Y7	2018 Y8	Range	Effect Size
3225901	Jake		M	In Cohort	Current		809	851	42	0.62
3545344	Louis		M	In Cohort	Current	703	722	811	89	1.31
3512218	Austin		M	In Cohort	Current		709	811	102	1.50
3596827	Lacey		F	In Cohort	Current			796		
3128598	Charles		M	In Cohort	Current	638	776	796	20	0.29
3782566	Connor		M	In Cohort	Current	608	705	748	39	0.57

- Summary statistics for the assessment items are listed below the graph.
- Individual student results (on the latest assessment item) are then listed in the next table down. These results can be exported using the green Excel icon in the top right-hand corner of this section.
- These results can be sorted in ascending or descending order.
- Clicking on an individual bubble will condense these results to those of a single student.
- Clicking on a student's ID number will open their transcript in a separate tab.

Performance Progress – Comparison Tool

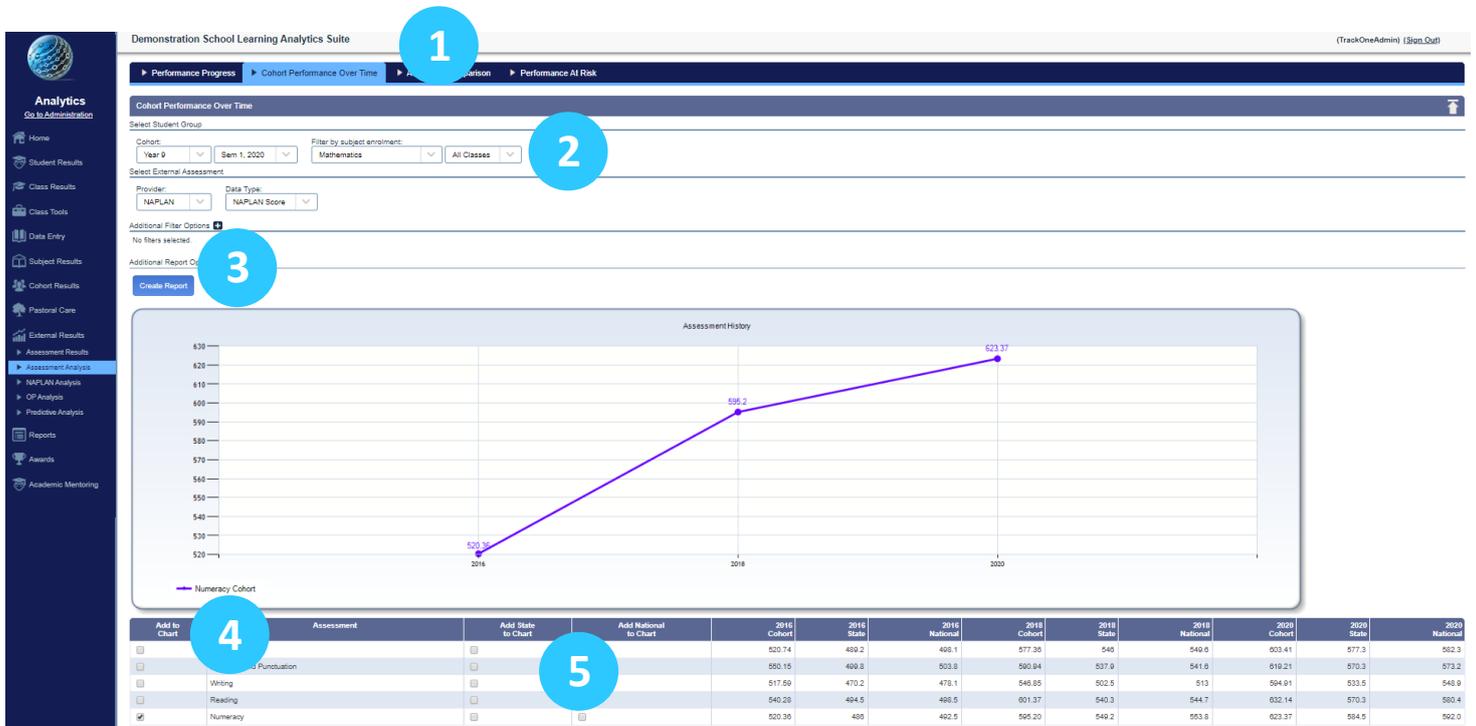
Now select the **Comparison Tool** tab. This tool allows teachers to compare student results between two assessments (the initial assessment and the latest assessment). In our current example we are comparing the Year 10 Mathematical Methods students' results between their NAPLAN numeracy test in 2017 with their numeracy test in 2019.



Each student in the class is indicated by a blue dot with the vertical axis showing the latest assessment result and the horizontal axis showing the initial assessment result. The black line indicates the trend between the two assessment items for the cohort.

Cohort Performance Over Time

The second tab on the green menu bar is **Cohort Performance Over Time**, which charts a cohort's performance on a particular assessment item over the years.



1. Use the blue horizontal menu bar to move to **Cohort Performance Over Time**.
2. Select the cohort, result period and subject for analysis.
For instance, Year 9 → Semester One 2020 → Mathematics.

Select the provider, section and data type.
For instance, NAPLAN → Numeracy → Numeracy Score.

In this example, the user is looking at the Year 9s of Semester One 2020 who were enrolled in Mathematics. They are analysing the degree to which these students' Numeracy scores improved over time.
3. Click **Create Report**.
4. There is the option to overlay additional assessment item results (from the same Provider). In the example above, the user may choose to overlay Spelling, Grammar, Writing or Reading results.
5. There is also the option to overlay State and National average results for a particular assessment item. In the example above, the user may choose to overlay State and National average Numeracy Score results.

Academic Comparison

The third tab on the blue menu bar is **Academic Comparison**, which plots a cohort's performance in a particular subject against their performance on an external assessment item.

The screenshot shows the 'Academic Comparison' interface. The top menu bar has three tabs: 'Performance Progress', 'Cohort Performance Over Time', and 'Academic Comparison' (highlighted with a blue circle 1). The main content area has a filter section with 'Year 10', 'Sem 1, 2020', and 'Mathematical Methods' selected (circle 2). Below this, 'NAPLAN Year 9 2019' and 'Numeracy' are selected (circle 3). A 'Create Chart' button is visible (circle 4). The scatter plot shows 'Internal' vs 'External' scores with a trend line (circle 5). A table below the plot lists student results (circle 6).

Student Code	Student Name	Subject Result	Demonstrates appropriate behaviour and attitudes	Takes responsibility for home study	Takes responsibility for own learning in class	Subject Grade	Unit Progress	FIA1: Problem solving and modelling task (20)	FIA2: Unit 1 exam (30)	Unit Result	Assessment Result
5352661	Lacie Robinson	A(14)	OO	OO	OO	A	SA	17	20	45	851
3812112	Austin Cain	A(14)	OO	OO	OO	A	SA	16	28	44	811
5432896	Annabelle Winter	A(15)	OO	OO	OO	A-	SA	17	20	43	720
5548544	Louie Meads	B+(12)	OO	OO	OO	B+	SA	12	27	39	811
3955587	Lacey Roebelen	B+(12)	OO	OO	OO	B+	SA	11	20	37	790

1. Use the blue horizontal menu bar to move to **Academic Comparison**.
2. Select the cohort, result period and subject for analysis.
For instance, Year 10 → Semester One 2020 → Mathematical Methods.
Select the provider, assessment item and data type.
For instance, NAPLAN → Year 9 2019 → Numeracy score.
In this example, the user is looking at the Year 10s of Semester One 2020 who were enrolled in Mathematical Methods. They are plotting their Mathematics results against their Year 9 2019 NAPLAN Numeracy scores.
3. Click **Create Chart**.
4. The trend line indicates the expected internal and external results. In the example shown, a student who received a B- in Mathematics should have received a NAPLAN Numeracy score of approximately 720.
Students above the trend line are performing better than expected externally.
Students below the trend line are performing worse than expected internally.
5. The students' results are listed in the corresponding table.
6. The size of the bubble indicates the number of students. Clicking on an individual bubble will reduce the table to the students within that bubble.

Performance At Risk

The fourth tab on the blue menu bar is **Performance At Risk**, which identifies those students who have gained or lost a certain number of points on an external assessment item.

Demonstration School Learning Analytics Suite (TrackOneAdmin) (Sign Out)

▶ Performance Progress ▶ Cohort Performance Over Time ▶ Academic Comparison ▶ **Performance At Risk** 1

Performance At Risk

Provider: NAPLAN 2 Assessment: NAPLAN Year 7 2017 3 Latest Assessment: NAPLAN Year 9 2019 6

Find all students who have Gained 3 50 or more 4 Numeracy Numeracy Score 4

Additional Filter Options +
No filters selected.

Id	Student Name	Sex	NAPLAN Year 7 (2017), Numeracy Score	NAPLAN Year 9 (2019), Numeracy Score	Difference
S952576	Logan Bowen	M	417	544	127
S422743	Adam Blair	M	464	582	118
S592756	Hollie Van Seysen	F	551	655	104
S818218	Austin Cain	M	709	811	102
S877533	Erin Higgins	M	587	686	99
S199145	Emily Wilson	F	654	748	94
S675553	Isabella Kuefler	F	621	711	90
S548644	Isabelle Meads	M	722	811	89
S398612	Matthew Gooding	M	640	729	89
S548711	Esmé Mograth	F	566	647	81
S663152	Phoebe Brock	F	576	655	79
S127866	Julia Richards	F	546	625	79
S352383	Jessica Farr	F	633	711	78
S391811	Joseph Craig	M	526	603	77
S435237	Amy Blakely	F	587	662	75
S499347	Darcey Scott	F	587	662	75
S514443	Lucy Wells	F	566	640	74
S736751	Edward Cummins	M	551	625	74
S221624	Phoebe Wells	F	640	711	71
S715496	Sonny Flesher	M	526	596	70

1 2 3

1. Use the blue horizontal menu bar to move to **Performance At Risk**.
2. Select the provider, as well as the earliest and latest assessment item.
For instance, NAPLAN → Earliest: Year 7 2017 → Latest: Year 9 2019.
3. Select whether the application should return students who have gained or lost points on the chosen assessment item. Then select the number of points.
4. Select the section (e.g. Numeracy) and the data type (e.g. Numeracy score).

In the example above, the application is returning students who gained at least 50 NAPLAN Numeracy scale score points (between sitting the test in Year 7 2017 and Year 9 2019).

5. Clicking on an individual student's ID will produce their transcript below.
6. These results may be exported out into Excel.