

Background information

Cohort data compares the performance of students from one assessment to the next. For each set of assessments in the same subject, reports are provided to each school involved in the administration of the assessments/examination. This data allows all schools participating in the assessments to:

- track specific sets of students
- see how they have performed from one assessment to another
- inform instructional adjustments at school and regional level.

Some cohort analysis cannot be completed due to gaps in administration for some assessments.

About the data

Students who did not participate or did not provide enough evidence to be assessed are not included in the cohort comparison results. Variations in student population due to moving in or out of the province, retention or placement on an Individualized Program Plan will result in a smaller population for cohort comparison.

How the data is presented

Cohort analysis is presented in three separate files.

1. Excel file which contains the raw data of each student.
2. Regional Level PDF file which contains regional level analysis of all schools in the region which is produced from the perspective of both assessments.
3. School Level PDF file which contains school level analysis broken out for each individual school of both assessments. Results for each student is included.

Legend of terms

Students are sorted in to four groups based on how they have performed from one assessment to the next.

Student Progress	Earlier Assessment	Most Recent Assessment
Stayed Below Expectation	Level 1 or 2	Level 1 or 2
Fell Below Expectation	Level 3 or 4	Level 1 or 2
Rose to Expectation	Level 1 or 2	Level 3 or 4
Maintained Expectation	Level 3 or 4	Level 3 or 4

Note: Some students within these categories may have moved slightly from one level to the next, while others may have large changes within the same level. Therefore, the student by student analysis should be referenced to understand how individual students have progressed from one assessment to the next.

Guidelines on meaningful differences

The following guidelines are used to identify meaningful differences (determines the presence of the arrow which is explained later) based on the number of participants on both assessments for a school:

- Number of participants fewer than 10 students: differences of 80 or more are usually meaningful
- Number of participants fewer than 20 students: differences of 60 or more are usually meaningful
- Number of participants fewer than 50 students: differences of 40 or more are usually meaningful
- Number of participants fewer than 100 students: differences of 25 or more are usually meaningful
- Number of participants fewer than 200 students: differences of 20 or more are usually meaningful
- Number of participants greater than 200 students: differences of 15 or more are usually meaningful
- Board level number of participants: differences of 10 or more are usually meaningful

Raw Data File Includes

- student information
- results from both assessments
- performance comparison (See "Legend of terms" section for more information)

Reional Level Report Includes

- number of students in both data sets
- the percentage of students in each of the four groups (See "Legend of terms" section for more information)
- mean scaled score of each assessment
- difference in mean scaled
- adjusted difference (See "About the analysis" section for more information)

School Level Report Includes

- number of students in both data sets
- the percentage of students in each of the four groups (See "Legend of terms" section for more information)
- mean scaled score of each assessment
- difference in mean scaled score
- adjusted difference (See "About the analysis" section for more information)
- graphs that depict the data
- list of students and their performance

About the analysis

- All assessments are equated to a Scaled Score which places all students on a consistent scale related to the provincial average (mean).
 - This allows for comparison across assessments and between years.
- Scaled Scores fall within the range 200 to 800 (The Scale) with a mean of 500 and standard deviation of 100.
 - Since the provincial average is not exactly 500 for all assessments, any comparison must take this into consideration.
- Differences between assessment scaled scores at the regional/school level are calculated to allow for comparison within the cohort and not how the cohort performed in relation to the province.
- A positive difference means that the most recent score was higher while a negative difference means that the most recent score was lower.
- Differences are ADJUSTED using the Provincial Difference to allow for a more accurate comparison between assessments.
 - The ADJUSTED difference is calculated by taking the differences at the Regional and School level and subtracting the Provincial difference.
 - The adjustment is necessary because the two assessments are not identical, and to make an appropriate comparison, the provincial difference must be accounted for. This is not done to compare the region/school with the province.
- The values in this column are highlighted with an arrow if the difference is considered meaningful based on the number of participants in the cohort at the given school (see Guidelines on meaningful differences).
 - A yellow bar represents a difference that would not be considered meaningful.
 - An upward pointing green arrow represents a positive difference for the school and identifies an encouraging trend in student results.
 - A downward pointing red arrow represents a negative difference for the school and identifies a concerning trend in student results.

Guide for student by student analysis

• Individual data are presented for each student within the cohort. – This includes performance levels and scaled scores for both assessments being compared. • The scaled scores are displayed as dots on a 200 to 800 scale. • The dot representing the most recent assessment is colour-coded based on how the student performed in comparison to the earlier assessment. – A purple dot represents a change that is not meaningful. – A green dot represents a meaningful increase in scaled score. – An orange dot represents a meaningful decrease in scaled score. • The dot is also shaded based on amount of change. – A lighter shade represents a half standard deviation change. – A darker shade represents a full standard deviation change.	Student by Student Dot Legend	
		Scaled Score on Earlier Assessment
		Scaled Score on Most Recent Assessment within 50 points of Earlier
		Scaled Score on Most Recent Assessment 50 points greater than Earlier
		Scaled Score on Most Recent Assessment 100 points greater than Earlier
		Scaled Score on Most Recent Assessment 50 points less than Earlier
		Scaled Score on Most Recent Assessment 100 points less than Earlier

Nova Scotia Assessments

Cohort Comparison User Guide for Regional Staff



Using the report at the school level

Even though meaningful differences are identified in the report, it is recommended each school further evaluate all students' performance on both assessments. The following suggestions will support your school-based team in gaining the full benefit of this Cohort Analysis.

Share with your staff: this cohort information is relevant for multiple grades within your school. Even though the assessment is attached to a specific grade level, it has instructional implications and benefits for your entire school.

Begin the data conversation:

- What do you notice?
- What do you wonder?
- What surprises you?

Dig Deeper:

- What is encouraging?
- What is concerning?
- Are there patterns of trends?

Direct your attention to individual students:

- Which students rose/maintained expectation?
 - What is their learner profile?
 - What could account for their success?
- Which students fell/stayed below expectation?
 - What is their learner profile?
 - What could account for their challenges?
- How did your most vulnerable students perform?
- Is additional information required?

Do results in this report align with classroom-based assessment, report card grades, and SSP priorities?

Possible Next Steps:

- Access instructional personnel.
 - Coaches
 - Intervention
 - Specialists
- Analyze provincial support documents.
 - Lessons learned
 - Item Description Reports
 - Curriculum
- Determine Collaborative Learning Teams / Professional Learning Communities in areas of need.
 - Common assessment development
 - Professional development

Review and Reflect:

- What seems to be working?
- How do you know?
- Celebrate efforts and successes.
- Adjust strategies as additional information becomes available.