

Understanding Proficiency Statistics in Various Reports

The Reporting Section of Accountability Services has developed this guide to help explain the different ways that proficiency statistics are reported. Now that reports are designed to meet so many different requirements, it is important to understand the differences in the various reports and the data sources, conditions, and restrictions that define them. Factors such as the assessments used to determine proficiency, achievement levels included, and whether the data were derived from a panel (same students over time) or cross-section (all students) of student scores contribute to different results in different reports. These different statistics reflect the different data sources and the different purposes and stakes attached to each set of results.

There are different ways of characterizing proficiency for different purposes. The ABCs performance composite, for example, is a proficiency statistic that reports the percent of student scores at or above Level III (grade level) for the annual ABCs report. AYP (Adequate Yearly Progress) proficiency results reflect the percent of student scores that meet the Annual Measurable Objectives (AMOs), as reported in the AYP school detail report. In the case of these two proficiency measures, the AYP proficiency results for the school as a whole will not match the ABCs performance composite exactly.

AYP proficiency statistics are reported for the LEA and the state, in addition to the school. With AYP calculations, proficiency statistics for the LEAs are based on different data than the proficiency statistics for the schools. For example, there is a federal requirement to count students who have been in the LEA for at least 140 days (full academic year), even though they may not have been in a single school within that LEA for 140 days. This means some students would be counted for AYP proficiency at the LEA level but not at the school level. You cannot, therefore, combine the school-based AYP proficiency statistics (e.g. by using a weighted average) in order to compute the AYP proficiency statistics for the LEA.

Proficiency statistics are also reported in the supplemental *Disaggregation Reports* (formerly Volume 2) and in the *North Carolina School Report Cards*. An example of how proficiency results may differ in the various reports for a school is shown below. The school might have the following statistics reported:

1. Performance composite – 88.4 (from the *ABCs Report* at <http://abcs.ncpublicschools.org/abcs/>);
2. Math and Reading Composite, Grades 3 through 8 – 82.2 (from the *Disaggregation Reports* at <http://disag.ncpublicschools.org/disag03.html>);
3. Percent proficient – 83.6 (Reading) and 93.2 (Math) (from the *AYP School Detail Report* at <http://ayp.ncpublicschools.org/>); and
4. Percent of students' scores at or above grade level – 83.2 (Reading) and 93.5 (Math) (from the *NC School Report Cards* at <http://www.ncreportcards.org/src/>).

In each of the proficiency measures above, the reported percentages are derived when a numerator (typically the number of proficient scores in a given group) is divided by a denominator (the group of valid scores), and the quotient is multiplied by 100. The definition of the denominator, or the group to which the standard is applied, is critical to

understanding why results differ. Typically, the numerator represents the number proficient within whatever group the denominator defines. To understand what these various proficiency statistics mean, it is necessary to look at the sources of the results reported. In the examples cited above, the following sources were used:

1. In the *ABCs Report*, the performance composite reported for this elementary school was computed from:
 - Numerator** = The total number of scores at or above Level III, including EOG Reading, Mathematics, the North Carolina Alternate Assessment Academic Inventory (NCAAAI), the North Carolina Alternate Assessment Portfolio (NCAAP), and the scores of students who passed both parts of the Computer Skills Test at grade 8.
 - Denominator** = The total number of valid scores on each of these tests.
2. The *AYP School Detail Report* results were derived from all students in membership in the school as a whole for at least 140 days (the full academic year).
 - Numerator** = The total number of scores at or above Level III, including EOG Reading (or Mathematics) the NCAAAI, and the NCAAP.
 - Denominator** = The total number of valid full academic year (FAY) scores.
3. In the *Disaggregation Reports*, “Math and Reading Composite” was selected under “Subject”; “Composite, Grades 3 through 8” was selected under “Grade”; and “All” was selected from “Type of Assessment” to generate the results shown in the example. Selecting “All” means the results were computed using all scores at or above Level III in all assessments administered in Reading and in Mathematics (including NCAAAI and NCAAP). There were no restrictions for number of days students were in membership.
 - Numerator** = The total number of scores at or above Level III
 - Denominator** = The total number of valid scores on all assessments.
4. Proficiency results reported in the *NC School Report Cards* are based on the same numerator and denominator used in the *Disaggregation Reports*.

Table 1, which follows, shows the various accountability reports, and the sources, conditions or restrictions that define those data that are included.

Table 1. Proficiency Statistics in Accountability Reports

Report:	ABCs		AYP			Disaggregation Reports	NC School Report Cards
Web Address:	http://abcs.ncpublicschools.org/abcs/		http://ayp.ncpublicschools.org/			http://disag.ncpublicschools.org/	http://www.ncreportcards.org/src/
Data Sources and/or Conditions ¹	Growth	Performance	School	LEA	State		
Minimum “n”	30 ²	N/A	40 ³	40	N/A	N/A	N/A
Membership (140 days)	✓	N/A	✓	✓	N/A	N/A	N/A
EOG	✓	✓	✓	✓	✓	✓	✓
EOC	✓	✓	N/A	N/A	N/A	✓	✓
NCAAAI	N/A	✓	✓	✓	✓	✓	✓
NCAAP	N/A	✓	✓	✓	✓	✓	✓
95% Participation Rule	✓	✓	✓	✓	✓	N/A	N/A
Gr. 8 Computer Skills	N/A	✓	N/A	N/A	N/A	N/A	✓ ⁴
HS Comprehensive Test	N/A	N/A	✓	✓	✓	✓	✓ ⁴
Privacy protection	N/A	N/A	✓ ^{5, 6}	✓ ^{5, 6}	✓ ⁶	✓ ^{5, 6}	✓ ^{5, 6}

¹This is not an exhaustive list of components of each report; for a list of the ABCs and AYP components, see *ABCs Program* at <http://www.ncpublicschools.org/Accountability/reporting/2003memo/ABCsProgram.pdf>.

²When minimum “n” is not met, school is placed on the *Schools not included in ABCs* list.

³For schools with fewer than 40 FAY students’ scores, whatever state test data are available are used to make an AYP determination.

⁴Reported as a separate component.

⁵Aggregate results not reported when based on fewer than 5 scores.

⁶Whenever all students in a subgroup score in the same category, results are reported as >95% or < 5%.

Key: N/A = Source, condition or restriction is not applicable
 ✓ = Source, condition or restriction is applicable

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