

# 2007-08 ABCs of Public Education

## Technical Notes

(August 3, 2008 )

### Two-Stage release of ABCs results

New test editions were introduced in 2007-08 for End-of Grade (EOG) Reading (grades 3-8), Algebra II, Biology, Chemistry, Physical Science, and Physics. In April 2008 the State Board of Education (SBE) decided to remove these tests from ABCs calculations of academic change but to retain the results in the ABCs performance composites. The SBE subsequently instructed the Department of Public Instruction to prepare for release of ABCs academic change results at the August SBE meeting, and to release the remaining results involving performance composites at the November SBE meeting in conjunction with the schedule for scaling and setting standards on the new EOG Reading tests. This is the first time in the history of the ABCs that the growth results have been released prior to the performance composite results and separate from the recognition categories, which are based on academic change in conjunction with the performance composites.

### Standard Conventions used in the ABCs analyses

**95R** – Indicates that the percent of students tested was below 95%. A percentage of students tested was computed by combining information from EOG reading, EOG mathematics, EOC and alternate assessments across all grades in a school. The percentage must be greater than or equal to 95, when rounded to the nearest whole number.<sup>1</sup> Schools identified as having fallen below the 95% threshold for the ABCs were asked to justify their rate. Their explanations were reviewed at DPI and if rejected, the school was assigned a 95R status. This assigned status means that the school was in violation of the rule and ineligible to receive incentive awards or recognition (other than low performing). A school in violation for two consecutive years may be identified as low-performing by the State Board of Education.

### Full Academic Year

Students must have been in membership in a school for at least 140 days as of the first day of spring testing in order for their test scores to be included in the growth calculations for the ABCs. In block scheduled high schools, the student must be in membership 70 days in the semester the course is taught.

### Medical Exclusions

In compliance with NCLB and in light of the full availability of alternate assessments, only exclusions for serious medical emergencies and/or conditions were allowed. Examples included students who were (1) in the final stages of terminal or degenerative illnesses, (2) comatose, or (3) receiving extensive short-term medical treatment due to a medical emergency. In response to a request from the student's LEA the Director of Accountability Services provides a written statement of the decision to the LEA; any exception granted is limited to the testing period for the specific test(s) for which it was requested and does not carry forward to future test administrations, unless noted in the decision. In the rare case that a student was still administered an assessment, the score from the assessment was used.

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<sup>1</sup> To determine the 95% participation rate for Adequate Yearly Progress (AYP) per the No Child Left Behind legislation, the cohort of tenth-grade students on the first day of spring testing for the school was analyzed to determine the number of students who had taken the required tests. There is no appeal for the 95% requirement as it applies to AYP.

### **Algebra I Scores in the Performance Composite**

Algebra I scores for current ninth graders who took Algebra I prior to grade 9 were included in the performance composite for the high school where they were currently enrolled. For the ABCs, banked scores were included using their original achievement level standards.<sup>2</sup> Algebra I scores of students in grades 6, 7, or 8 during the current school year were included in the K-8 performance composite of the middle school where they were currently enrolled.

### **Confidence Interval Applied to the Performance Composite to Identify Low-Performing Schools**

The performance composite is the percent of students' scores at or above grade level (i.e., in Achievement Levels III or IV) on end-of-grade (and Computer Skills in grade 8 where applicable) and/or end-of-course tests. The performance composite is computed by adding the number of scores at or above Achievement Level III on each of the tests, and then dividing the sum by the total number of valid scores on the tests. If a school did not make expected growth *and* its performance composite was significantly less than 50, the school is given the status of low-performing.

The confidence interval is a way of taking into account the precision of the performance composite. By applying the confidence interval, the likelihood of incorrectly assigning a low-performing status to a school that does not deserve it is decreased while the likelihood of correctly assigning a status to schools is not hindered. The confidence interval itself will be narrow or wide depending on the size of the school and the variation of the student scores in the school. In general, the confidence interval is narrower when the number of students is larger, or the scores are more homogeneous; the confidence interval is wider when the number of students is smaller, or the scores are less homogeneous.

This means that a potentially low-performing school may have a performance composite that is considerably below 50% but when the confidence interval is applied (correcting for the precision of the performance composite), the school is not considered low-performing (because the confidence interval for that school is wide i.e., there is less confidence in the value of the performance composite). This situation would likely be true for a school that has few students or has wide variation in test scores. It is also possible for a school to have a performance composite that is fairly close to 50% and is considered low-performing because the confidence interval for that school is very narrow (i.e., there is high confidence in the performance composite). This situation would likely be true for a school that has a large number of students or students all have about the same test score.

As long as the value, 50, lies within or on the upper boundary of the confidence interval for an observed performance composite, then the performance composite is not significantly less than 50 and hence the school is not classified as low-performing.

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<sup>2</sup> Algebra I scores of students currently enrolled in grade 10 who took Algebra I while in earlier grades were included in the AYP calculations for mathematics in tenth grade. New Level III cut scores were set for the banked scores, equivalent to the standard on the new edition of Algebra I; then, new AMO targets were set for grade 10 mathematics for AYP purposes. The new AMOs were approved by the SBE in July 2008.

**Table. N Counts and Equations for Current EOC Formulas**

<b>Algebra I</b>	109,585	Grade 8 Mathematics EOG*0.82
<b>Algebra II</b>	265,165	Algebra I EOC*0.82
<b>Biology<sup>a</sup></b>	197,455	Grade 8 Reading EOG*0.82
<b>Biology<sup>b</sup></b>	193,548	The average of English I EOC and grade 8 Reading EOG*0.92
<b>Chemistry</b>	84,620	Biology EOC*0.82
<b>English I</b>	280,400	Grade 8 Reading EOG*0.82
<b>Geometry<sup>a</sup></b>	172,713	Algebra I EOC*0.82
<b>Geometry<sup>b</sup></b>	149,943	The average of Algebra I EOC and grade 8 Mathematics EOG*0.92
<b>Physical Science</b>	110,722	Grade 8 Mathematics EOG*0.82
<b>Physics</b>	12,084	The average of Chemistry and Geometry EOCs*0.92
<b>US History<sup>b,c</sup></b>	74,235	The average of English I and Biology EOC *0.92
<b>US History<sup>a,c</sup></b>	75,174	Biology EOC * 0.82
<b>Civics and Economics<sup>b</sup></b>	49,494	The average of English I and Biology EOC *0.92
<b>Civics and Economics<sup>a</sup></b>	90,197	English I EOC * 0.82

<sup>a</sup> denotes only one predictor used. <sup>b</sup> denotes two predictors used.

<sup>c</sup> In 2007-08, Civics and Economics is substituted for Biology

The predicted values for Algebra I and Physical Science are computed by multiplying the grade 8 Mathematics c-scale score by 0.82.

The predicted value for Algebra II is computed by multiplying the Algebra I c-scale score by 0.82.

The predicted value for Biology <sup>a</sup> is computed by multiplying the grade 8 Reading c-scale score by 0.82, whereas the predicted value for Biology <sup>b</sup> is computed by multiplying the average of the English c-scale score and the grade 8 Reading c-scale score by 0.92.

The predicted value for Chemistry is computed by multiplying the Biology c-scale score by 0.82.

The predicted value for English I is computed by multiplying the grade 8 Reading c-scale score by 0.82.

The predicted value for Geometry<sup>a</sup> is computed by multiplying the Algebra I c-scale score by 0.82, whereas the predicted value for Geometry<sup>b</sup> is computed by multiplying the average of the Algebra I c-scale score and the grade 8 Mathematics c-scale score by 0.92. The predicted value for Physics is computed by multiplying the average of the Chemistry c-scale score and the Geometry c-scale score by 0.92.

**Achievement Level and Scale Score Ranges Information**

<http://www.ncpublicschools.org/accountability/testing/shared/achievelevel/>

**Programming Reference Table  
with Means and Standard Deviations for Standard Setting Years**

[https://www.rep.dpi.state.nc.us/2008/nclb/ABC\\_AYP\\_Test\\_Configuration.xls](https://www.rep.dpi.state.nc.us/2008/nclb/ABC_AYP_Test_Configuration.xls)