

## Value-Added Reporting for Low Achieving Students

### Summary

At the request of the Ohio Department of Education, SAS now provides value-added estimates based on the state's lowest achieving students in order to provide insight as to the effectiveness of instructional practices for these students. This process can be summarized as follows:

- To identify the state's lowest achieving students, each student's achievement level is determined by averaging his/her Normal Curve Equivalent (NCE) scores from the current and previous years. This is done separately for math and reading using OAA scores.
- Based on this average achievement, students across the state are divided into five, equally-sized groups for each subject, and students whose achievement is below the 20th percentile of the state are included in the new value-added reporting for that subject.
- The value-added reporting based only on the state's lowest achieving students uses the same statistically robust and validated approach as the value-added reporting based on all the state's students. More specifically, this approach uses all available testing data for each student and includes students with missing test scores.

### Technical Description

A more detailed description of how the value-added reports for low achieving students is provided below:

- Each student's achievement level is determined by averaging his/her Normal Curve Equivalent (NCE) scores from the current and previous years.
  - This average is calculated separately for math and reading using OAA scores.
  - For example, a student's 2011 5<sup>th</sup> grade OAA math and 2012 6<sup>th</sup> grade OAA math scores would be used to create his average math score. Similarly, the student's 2011 5<sup>th</sup> grade OAA reading and 2012 6<sup>th</sup> grade OAA reading scores would be used to create his average reading score
  - Students who do not have both scores in consecutive grades for a particular subject do not have an average and are not included.
- For each grade in a particular subject, the cut score is identified such that at least 20% of the students have an average score below that cut score. These are the students whose scores will be included in the value-added analysis for low achieving students.
- The value-added reporting based only on the state's lowest achieving students uses the same statistically robust and validated approach as the value-added reporting based on all the state's students.
  - The value-added reporting is run separately for each subject.
  - All of the students' current year and prior year scores (even from other subjects) are included in the modeling for each subject.
  - For example, if a student's average math score is in the lowest 20% for math while his average reading score is not in the lowest 20% for reading, the value-added analysis for math will include both math and reading scores from the current and prior years. However, the student is not included in the analysis for reading.