Rhode Island Growth Model:
Talking Points for Administrators & Educators

May 2012

General Growth Model Points

1. **What is the Rhode Island Growth Model?**

   The Rhode Island Growth Model is a statistical model based on student state test scores (NECAP Reading and NECAP Mathematics). Student's scores are used to calculate student growth percentiles (SGP), which are then aggregated to find median SGPs for teachers, schools, LEAs, and other groups.

2. **How many years of data are required to measure growth?**
   The Growth Model requires at least two years of NECAP data in order to measure growth for an academic year. Therefore, growth scores are only calculated for grades 3-7 as NECAP tests are given in grades 3-8. An 8th grade growth score is not available because students are not tested in grade 9.

3. **For which content areas are growth scores available?**
   Growth scores are available for Reading and Mathematics as growth is calculated from the state NECAP assessments in those subjects.

4. **How is a growth score (or an SGP) calculated?**
   The RIGM uses a statistical model to create student growth percentiles (SGP). In creating SGPs students are compared to their academic peers—those who scored similarly on the NECAP in the past (the model goes as far back as possible to calculate a "cohort" for each student). Academic history is the *only* factor by which students are grouped. Low-performing students are compared to other low-performing students; high-performing students are compared to other high-performing students, etc. Student demographic characteristics, such as disability or ELL status, are not used to create a student cohort.

   The most recent NECAP score distribution for each cohort is used to determine the percentile at which an individual student scored within his or her cohort. That percentile number is their SGP, which range from 1 to 99. A student with an SGP of 20, for example, had higher growth than 20% of his academic peers, but lower growth than the remaining 80%; similarly a student with an SGP of 90 had higher growth than 90% of his academic peers, but lower growth than the remaining 10%.

5. **What is a median? What is a median student growth percentile?**
   The median is a measure of central tendency; it is the number that separates a range of numbers so that half of the numbers are above and half are below the median. The median may not be as familiar as the *mean* or *average*, but it is nonetheless similar in interpretation. Medians have been

shown to be more appropriate for use than averages when summarizing a collection of percentile scores.

A median SGP is calculated by taking all the individual SGPs of the students in the group being analyzed, ordering them from lowest to highest, and then identifying the middle score, which is the median SGP.

6. **How do I interpret a median student growth percentile for an LEA, school, or other group?**
Median percentiles range from 1-99, with most medians occurring at the middle of this distribution at 50; therefore a median of 50 is typical. Median SGPs above 50 can be interpreted as better than typical; median SGPs below 50 can be interpreted as less than typical.

A median SGP of 60, for example, represents a group that had better than typical growth. It also represents that half of the group had SGPs below 60 and the other half had SGPs above 60.

7. **How is growth categorized? Will Rhode Island categorize growth as low, typical, or high as other states have done?**
RIDE has not yet determined cut points to categorize the median percentile distribution, but in a state using the same growth model as Rhode Island "low growth" represents percentiles less than 35, "high growth" represents percentiles greater than 65, and "typical growth" represents percentiles between 35 to 65.

8. **Is it more difficult for students who are scoring at the high end of the NECAP scale to make growth?**
It is not more difficult for these students because the way SGPs are calculated is relative, not absolute. For example, highly-proficient students are only compared to other highly-proficient students to calculate an SGP. In any cohort of academic peers, the 99th percentile is set by an actual student who had the highest score in his/her group.

9. **What questions can the Rhode Island Growth Model help us answer?**
The RIGM enables LEAs and schools to more easily identify promising or potentially struggling programs and practices and thus look deeper into what may or may not be working. It can also help answer questions such as:

- How much academic progress did a group of students in a school or LEA make in one year on the NECAP assessment relative their academic peers?
- Are there gaps between subgroups of students, and if so, how large are those gaps in terms of growth?
- Which schools or LEAs demonstrate better than (or less than) typical[1] growth for their students as compared to schools or LEAs with similar overall NECAP achievement?
- Which schools or LEAs produced the highest (or lowest) growth? How does that compare to their proficiency results?

[1] "Typical" in this context indicates neither high nor low growth, but moderate growth that places a school's or LEA's performance somewhere in the middle of a distribution.

10. **What should I consider when drawing conclusions from the growth model results?**
    Although the growth data is useful for many reasons, there is a danger in over-interpreting or misinterpreting the results of the growth model. When interpreting the results, keep in mind that currently only one year's worth of growth data is being displayed in the visualization tool; for this reason we are unable to make inferences about the long term growth trends of a school or LEA. If a school or LEA has a high median SGP in one year it does not necessarily indicate that the school will have a high median SGP the next year; likewise, if a school (or LEA) has a low median SGP in one year it does not necessarily indicate that the school will have a low median SGP the next year. Therefore, such conclusions should not be drawn from these data.

11. **How are growth scores used in the Rhode Island Educator Evaluation System?**
    The RI model of the educator evaluation system is comprised of three components: Professional Practice, Professional Responsibility and Student Learning. The RIGM score is one factor in the student learning component of the model (RIGM + SLO). Please refer to the guidance on the RI model for more information on growth and evaluation; also Frequently Asked Questions about this topic are available at http://www.ride.ri.gov/EducatorQuality/EducatorEvaluation/EdEvalRIGM.aspx

Growth Model Visualization Tool Points

1. **For what year does the visualization tool display data?**
   Currently the tool displays data for the 2010-11 school year. This means that students took the test in fall 2011, but the results displayed reflect content that was taught and learned during the 2010-11 school year. *(See next talking point for more information on grade levels.)*

2. **The NECAP tests prior grade level content in the fall of the current year. What does the visualization tool display—teaching year or testing year data?**
   The prior school year is known as the teaching year because that was the year in which the student was instructed on the GLEs/GSEs tested in the fall of the following year (or testing year). The model displays *teaching* year data; therefore a bubble for grade 6 represents how well students performed on grade 6 GLEs/GSEs when they took the test in the fall as 7th graders.

3. **What students are being included in the bubbles?**
   The growth visualization tool includes growth data for students who completed either (or both) the NECAP Reading or Mathematics assessment in the fall of 2011. Students who completed the alternate assessment are not included in the visualization tool. Students who are placed by an LEA in an out-placement school, but who took NECAP, are included in the data being displayed for their original LEA.

For more talking points related to the Growth Model Visualization Tool visit the tool at http://rigm.ride.ri.gov/ and click on the "More Information" button on the top right