

THE RHODE ISLAND GROWTH MODEL

The RI Growth Model is a statistical model that provides a new, more comprehensive way of looking at student achievement by enabling us to look at **growth** from one year to the next, in addition to **proficiency** in any given year.

Why is it Useful?

The Rhode Island Growth Model (RIGM) provides students, parents, teachers, districts, and the state with another piece of data that contributes to a fuller, more descriptive picture of student achievement. With this information, not only can we see students' proficiency levels, we can also see how much growth they're making relative to other students with similar test score histories.

How is Growth Calculated?

At a minimum, two consecutive data points (e.g., a student's test scores from his/her grade 4 and grade 5 NECAP math tests) are needed for the RIGM. Each 3rd-7th grade student's growth is compared to that of his or her *academic peers*. Academic peers are all students **statewide** with a similar NECAP score history, regardless of student demographic data or program information (e.g., race/ethnicity, SES, IEP, ELL).

The student's growth is measured as a percentile from 1-99, with higher values indicating more growth relative to academic peers. These percentiles are similar to the height and weight percentiles that physicians use explain an infant or baby's relative growth. For example, a student with a **Student Growth Percentile (SGP)** of 90 showed more growth than 90% of his or her academic peers.

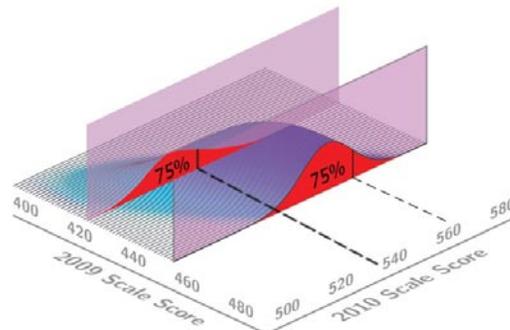
What are its Benefits?

The RIGM has "stretch," meaning students at the bottom of the proficiency scale have an equal chance to obtain a high SGP as students at the top of that scale. Because all students' scores are compared only to those of their academic peers, students at every level of proficiency can demonstrate an SGP between 1-99.

This can be encouraging to students, schools, and districts who demonstrate low proficiency but high growth. It can also discourage complacency among those that consistently demonstrate high levels of proficiency but not high levels of growth.

Can Two Students have the Same SGP?

Yes. The graph below shows how two students with different NECAP scores can have the same SGP. Notice how the first student had a 2009 score of 420 and a 2010 score of 540, yielding an SGP of 75 compared to his/her academic peers, whereas the second student, who scored a 450 in 2009 and a 560 in 2010, also received an SGP of 75 relative to his/her academic peers. The two students have different academic peers because their 2009 scores were not the same, putting them in two distinct comparison groups.



How are SGPs Aggregated?

For a group of students in a school (or district, classroom, etc.), SGP data can be aggregated (summarized) to determine the median SGP of the school. To do so, all tested students' SGPs are arranged in order (e.g., 1-99) to determine the median SGP that is most representative of the school. This median SGP is the "middle number," or the point at which half of the students' SGPs are above and half are below. For example, the median SGP of the school in the table below would be 60.

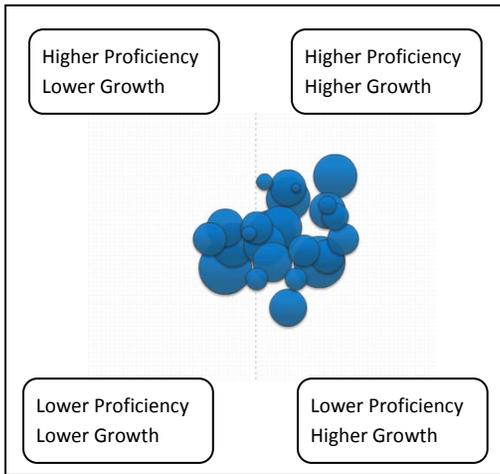
Student	SGP
Ray	25
Lauren	51
Amanda	60
Marcus	70
Jasmine	85

The RIGM uses the median instead of the mean because it is a more appropriate measure when using percentiles. The mean is highly influenced by very high and very low scores, making the median a better indicator of the true center of the data.

How are Results Presented?

The RIGM produces "bubble charts" to indicate proficiency *and* growth, which are plotted on the same graph using a scatter plot.

In the graphic on the following page, each bubble represents a grouping of students, such as a district or a school. Note that the size of each bubble indicates the size of the school/district. The bubbles that are higher demonstrate greater *proficiency* whereas those further to the right demonstrate greater *growth*.



How do I access and use the RIGM?

View the RIGM at <http://rigm.ride.ri.gov> to access and compare public data on district and school growth and proficiency for all public schools in Rhode Island.

Using the tool, users can access information on median SGP, overall proficiency levels, and side-by-side comparisons of district, school, grade, and student group levels.

On the home screen, click **Search** to view a specific school or district. Or, if interested in a broader level, click **Discover** to view school performance from a predefined list (e.g., All Districts/LEAs, Charters, Urban Schools).

By clicking on **Guide** in the upper right corner, the user is provided with a quick-reference guide for navigating the visualization tool, and is available at any time while using the tool.

Hover over each bubble for a closer look at Math or Reading growth, and click for more data including school contact information and student groups and/or ethnicities calculated in the growth score.

To start over or begin a new search, simply click **Reset** located in the upper right corner of the tool.

For more information, visit:
<http://www.ride.ri.gov/assessment/RIGM.aspx>
<http://rigm.ride.ri.gov>

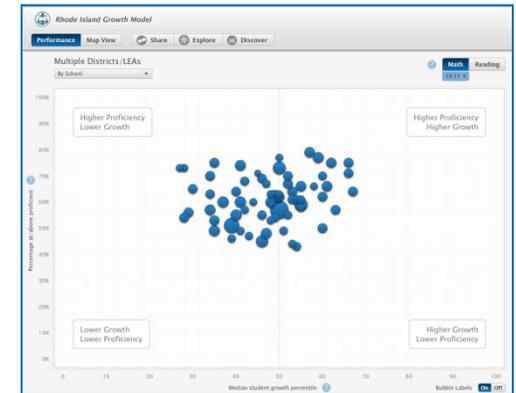
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A New Way of Looking at
Student Achievement

