Student Growth Percentiles in Virginia
Answers to Frequently Asked Questions

What is a student growth percentile?

A student growth percentile describes how much progress a student has made relative to the progress of students whose achievement was similar on previous Standards of Learning (SOL) assessments in either reading or mathematics.

Student growth percentiles are calculated by identifying all students in the state whose previous SOL scaled scores in a subject are statistically similar, and then comparing the achievement of these students on the test they take in the next grade level. The performance of each student relative to that of the other students in the group is expressed as a percentile.

Student growth percentiles range from 1 to 99, and represent the percent of students who had similar SOL score histories but earned lower scores on the most recent SOL test in the content area. For example, a student who earns a student growth percentile of 65 scored better than 65 percent of students who had similar SOL score histories in the same content area. A student with a student growth percentile of 13 scored better than only 13 percent of the students with similar SOL score histories in the same content area. Higher student growth percentiles represent higher growth and lower student growth percentiles represent lower growth.

Let's examine the meaning of the hypothetical student growth percentiles of four elementary students who all achieved scaled scores of 313 on the 2010 grade 3 reading test.

Example Grade-3 Reading:
SOL Scores and Student Growth Percentiles

Name	Grade 3 Reading	Grade 4 Reading	Growth Percentile
Student A	313	307	15
Student B	313	358	48
Student C	313	387	66
Student D	313	445	91

In the chart above, Student D was the highest achieving of the group, and the only one to exceed the minimum scaled score for proficiency of 400. Student D also showed the most growth with a student growth percentile of 91. This means Student D achieved at a higher level than 91 percent of students statewide with similar SOL score histories in reading.

VIRGINIA DEPARTMENT OF EDUCATION

Student A was the lowest achieving of the four students on the grade 4 reading test. The student growth percentile of 15 indicates that Student A achieved at a higher level than 15 percent of students statewide with similar SOL score histories.

Student B, had a student growth percentile of 48 in reading compared with students with similar score histories. About half of the students who performed similarly on past assessments experienced more growth and about half experienced less.

How may student growth percentile data be used in teacher evaluation?
For more than 10 years, the *Code of Virginia* has required that local school boards evaluate all instructional personnel in a way that addresses, among other things, **student academic progress** (§ 22.1-295. Employment of teachers). The *Code* also requires that teacher performance evaluations be consistent with the performance objectives included in the *Guidelines for Uniform Performance Standards and Evaluation Criteria for Teachers*. One performance objective or performance standard for teacher evaluation that was included in the April 2011 revision to the Guidelines is Standard 7: Student Academic Progress. The Virginia Board of Education approved these guidelines to become effective on July 1, 2012; however, school boards and divisions are authorized to implement the standards prior to July 1, 2012.

Whether to include student growth percentiles in teacher performance evaluation is a local decision. Use of growth percentiles in evaluation is not required by law or regulation. The Virginia Board of Education recommended that local school divisions include student growth percentiles as one of multiple measures of student academic progress when available and appropriate. The Board recommended that student growth percentiles comprise, at most, 20 percent of any teacher performance evaluation.

In order to include student growth percentile data in a teacher's evaluation, the Board further recommended that at least two and ideally three years of data be available, that data are available for at least 40 students, and that available student data be representative of the students who were taught.

More information is available on the VDOE Web site at:
http://www.doe.virginia.gov/teaching/performance_evaluation/index.shtml.

What is the value of having student growth percentile data as well as Standards of Learning (SOL) scores?
Growth percentiles provide an indication of how much academic progress a student has made relative to other students in the state with similar SOL score histories. It does not provide information about student achievement. On an individual basis, a student growth percentile provides a more comprehensive understanding of student performance when considered with the SOL achievement information such as scale score or proficiency level. On a group basis, the

percentage of students in each growth level—low, moderate, and high—can be used as an indication of how much progress a group of students made compared to other students statewide. In conjunction with SOL scores, growth information can reveal progress in the face of low overall achievement, or limited progress despite a high pass rate. Disaggregating student growth percentile data at the division, school and/or grade level across multiple years can also reveal trends that might reflect curriculum or professional development needs.

What does it mean that student growth percentiles are calculated based on students with similar SOL score histories?

Students with similar SOL score histories are students who participated in the same SOL tests for two or more consecutive years and had statistically similar SOL scores in reading or mathematics. A student's growth percentile is calculated by comparing the student's SOL score for the current year with the scores of other students in the same content area who had similar SOL score histories the previous year. For example, students A, B, and C are participating in the Algebra I assessment during their eighth-grade year. Each of these students participated in the grade 6 and grade 7 mathematics SOL assessments and skipped the grade 8 assessment prior to taking Algebra I. These students' Algebra I growth percentiles will be based on all students in the state with similar SOL score histories who participated in the same sequence of mathematics assessments. Students who participated in a mathematics sequence that included grade 6, grade 7, and grade 8 mathematics prior to taking the Algebra I assessment are compared to other students who participated in the same sequence of mathematics assessments and have similar SOL score histories.

How should student growth percentile data be used to inform decision making in my school?

Student growth percentile data is one component within a broader context of data-informed decision making and should not be used in isolation. Student growth percentile data can be used like other data: it can be aggregated and disaggregated according to student or school characteristics; it can be examined for trends over time; and it can be used as an additional source of information to inform continuous school improvement.

Why do some students have student growth percentiles and others do not?

A student may not have a growth percentile for several reasons. One reason is that growth percentiles are only being calculated for reading and mathematics in grades four through eight, and for students who take the Algebra I test through grade nine. A second reason is that a student must have at least two years' of consecutive SOL scores in a subject area in order to have a growth percentile. Lastly, high achieving students with two or more consecutive years of SOL scores in the advanced proficient range will not receive growth percentiles at this time.

Why would a student perform well on the test but have a low student growth percentile?
A student's SOL score represents student achievement and should be considered separately from his or her student growth percentile. Consider students A and B in the table below. In this case, both students have achieved a passing score of 476. Student A achieved this score by making large gains in their mathematics achievement from the prior year, and scoring higher than 90 percent of students who earned a score of 401 on the third grade mathematics assessment. Student B reached a score of 476 after earning an advanced proficient score of 550 on the prior year's mathematics assessment. This student would be characterized as having low growth, having scored higher than only 15 percent of students in the state who had the same SOL scaled score the prior year.

Name	Grade 3 Mathematics	Grade 4 Mathematics	Growth Percentile
Student A	401	476	90
Student B	550	476	15

Is the student growth percentile a better measure of student performance than SOL proficiency data?
No. Student growth percentile data answer a different question. If you want to know how well a student learned the content and skills represented by the Standards of Learning for mathematics or reading by the end of the 6th grade, the SOL scaled score and performance levels are the best indicators. If you are trying to determine how much a student's performance has changed from 2010 to 2011 relative to other students in the state who had similar prior SOL score histories, student growth percentiles provide an appropriate indicator. A more complete understanding of student performance can be obtained by using both measures.

Do student growth percentiles reflect school quality?
At the aggregate level, growth percentiles are designed to provide information that complements SOL pass rates and that may be used as another tool for school division personnel in making instructional decisions that support continuous school improvement.

Why is growth data only available for reading and mathematics?
Growth percentiles are available for SOL subject areas in which statewide testing takes place each year beginning with grade 3. Currently, this includes reading and mathematics only.

Can growth data differentiate between more and less effective schools or teachers?
There are many different sources of information that must be considered to understand the quality of schools and educators. Student growth percentile data represent only one component and should not be used in isolation from other indicators and contextual factors.

Will growth data be made public?

Student growth percentile data are being provided to school divisions at the individual student level at this time. These data are considered personally identifiable information and will not be available to the public.

VIRGINIA DEPARTMENT OF EDUCATION