

School Accountability Report (SAR) Growth Calculations

As mandated by state law, the School Accountability Report (SAR) must include a measure of student growth (improvement in test scores) over time for each school. Beginning in 2008, this school student growth measure is based on the Colorado Growth Model. The Colorado Growth Model gives each student with at least two consecutive years of CSAP scores a *Student Growth Percentile* in each subject area (reading, math, and writing). This percentile score is **very different** from regular CSAP scores, in the following ways:

- It is based on *how much change there was* in a student's score from the previous year, not on the latest score
- It reflects how this amount of change *compares* with that of a student's academic peers (students in the same grade and with a similar pattern of past CSAP scores)
- It is on a different scale from CSAP scores

A more detailed explanation of these differences is given below.

How are School Growth Calculations done? To figure out how well a particular school is doing, we simply take the growth scores from all the students, grades, and tests taken in a school, rank them from high to low, and find the score that is exactly in the middle. This middle score is called the *median*. It is the median student growth percentile that is reported for each school. Medians are like averages, so they give a snapshot of how the students in a school as a whole are growing (little, typical, or large amounts). Comparing groups of students on their median student growth percentiles gives us valuable information; for example, we might learn that the students in School X are making far more academic growth than any other school in the district. These comparisons can also help to inform decisions; for example, that we should investigate current practices at School X to see what they are doing so well that produces so much growth.

How are Student Growth Percentiles different from CSAP scores? CSAP scores range from about 150 to 999, depending on the year and subject area, and proficiency levels (Unsatisfactory, Partially Proficiency, Proficient, Advanced) are defined using CSAP scores above certain cut points. CSAP scale scores don't have a meaning by themselves, so we cannot say what an increase of any one point "means." Student Growth Percentiles, which go from 1 to 99, have a direct meaning: A score of 59 means that this student's CSAP point increase (since last year) was higher than the increases of 59% of similar students on the same test. Naturally, we would like students to get higher test scores every year, so student growth percentiles above 50 indicate that growth was above average for those students, and the higher the number, the better.

How is this different from just subtracting this year's CSAP score from last year's? A Student Growth Percentile score tells us whether the amount of your child's improvement since the previous year's CSAP was typical, high, or below average compared to his/her **academic peers** (other students with a similar past history of scores on CSAP). Using growth model estimates rather than just gains in CSAP points makes the growth scores more meaningful because they reflect a comparison to a student's academic peers, not to all students or to students in any particular group in Colorado (such as students of one region of the state, ethnicity, or gender, for example). For example, if you just subtract last year's CSAP score from this year's, the total number of points gained doesn't tell you anything about whether that was

a small, medium, or large-sized gain. Student growth percentiles, on the other hand, give you information that is sensitive to a student's progress in comparison with his/her academic peers.

How are Median Student Growth Percentiles used in SAR growth classifications? These school medians are used to classify schools as having Low, Typical, or High Growth. In order to make sure that schools are not unfairly classified into a lower growth category than they truly deserve, a *comparison region* is created around median growth scores for each school, based on its number of students and on how much variation there is in growth scores among that school's students. This calculation, along with rules for using the comparison region, makes it more difficult for schools to be classified into lower categories. When schools are classified as having Low Growth, it is because we are quite certain that this classification is not the result of some chance occurrence. Full documentation of these calculations is available on the [CDE website](#).

Why did my school not receive a SAR growth classification? Some schools will not receive SAR growth classifications, because they do not have at least 20 SAR-eligible students whose data can be included. In some cases a school might have 20 or more students in a particular group, but some of those students were not eligible to have their scores included in SAR. These individual exclusions can bring the number of students in a group down below 20 and cause the school not to receive a growth classification. There are several reasons that a student's scores would not be included in a school's total SAR growth numbers. The rules for eligibility are available on [the CDE website](#).

Schools are not penalized if they do not receive a growth classification. The rule of including a minimum of 20 students' data both ensures that growth classifications are based on enough data points to be stable, and protects individual student's scores from being identifiable when there are only a handful of possible students those scores could belong to.