



High Achievement *and* High Growth:

(PSSA & Keystone) (PVAAS)

Can It Be Done?

PSSA and Keystone as a Basis for PVAAS Growth Measures

The PSSA and Keystone exams are designed to provide stretch to discriminate between PROFICIENT and NON-PROFICIENT, and to meaningfully discriminate between the academic performance levels of Below Basic, Basic, Proficient, and Advanced.

The PSSA and Keystone assessments meet the three requirements to be used in value-added, or growth, analyses:

1. They demonstrate sufficient stretch so that students with a history of lower and higher achievement can show growth;
2. They are aligned to state curriculum standards; and
3. The scales are reliable from year to year.

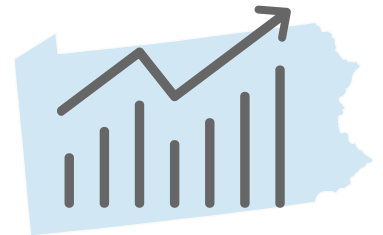
How many students score at the top end of the PSSA and Keystone exams annually?

When a school has a high percentage of students who are reaching proficiency, or even scoring at the Advanced level, we cannot necessarily assume that all students are scoring at the highest point within the Advanced range. In fact, of the approximately 720,000 students assessed on the PSSA in 2023:

- less than 0.09% (< 690 students) scored at the highest point of the Advanced range in at least one subject;
- less than 0.01% (<30 students) scored at the highest point of the Advanced range in Math two years in a row; and
- 3 students scored at the highest point of the Advanced range in ELA two years in a row.

For the Keystone assessments that were administered in the 2022-2023 school year, approximately 158,000 to 215,000 test scores were included in the PVAAS model for each subject. Of these test scores:

- less than 0.01% (< 10 students) scored at the highest point of the Advanced range in Algebra I;
- less than 0.01% (< 10 students) scored at the highest point of the Advanced range in Biology; and
- less than 0.01% (< 10 students) scored at the highest point of the Advanced range in Literature.





Defining High Achievement & Growth

What does it mean to be higher achieving? How is your LEA/district or school defining high achievement?

- Having students reach proficiency?
- Having students score at an Advanced level on a state assessment?
- Having students score at or above a specific scaled score on a state assessment?
- Having students with a PVAAS probability of 70% or higher of reaching Advanced on the next state assessment?

What does it mean to make growth in PVAAS?

- Meeting the growth standard in PVAAS does *not* mean increasing academic achievement levels. It is about maintaining achievement, on average, for a group of students.
- PVAAS is NOT measuring growth by increases in entire academic performance levels. PVAAS is a more sensitive measure of growth.
- The ranges of performance in the academic performance levels of Pennsylvania's state assessments are quite broad. Students can lose ground within a performance level without dropping to a lower performance level. PVAAS helps you detect that change!

Regardless of the entering achievement of a group of students, students should *not* lose ground academically. A reasonable goal would be to *at least maintain* the achievement of the group. All groups of students, even groups of students with a history of high achievement, can make progress or growth!

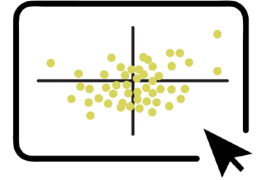


All groups of students, even students with a history of high achievement, **can make progress or growth!**



Statewide Evidence of Groups of Students with a History of High Achievement Making High Growth

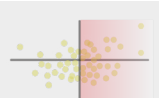
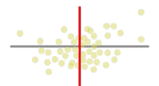
There are groups of students with a history of high achievement across Pennsylvania who are making high growth each year! PVAAS provides a means to view this evidence.



PVAAS Scatterplots

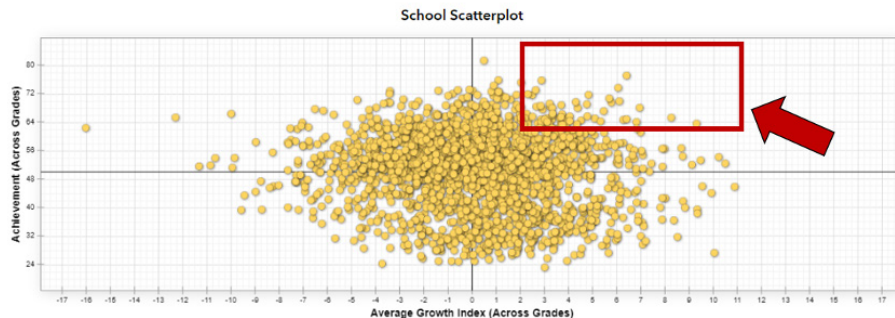
In the scatterplots below, each dot represents a real Pennsylvania school which has been placed on the graph based upon their average achievement and the PVAAS Growth Index.

- **The horizontal line** represents the average statewide achievement; the further the school is above or below the line, the higher or lower the average achievement for the student group.
- **The vertical line set at zero (0)** represents that the group of students has met the growth standard or maintained their average achievement.
- **An Average Growth Index significantly above zero** (to the right of the zero line) indicates growth greater than the growth standard.
- **An Average Growth Index significantly below zero** (to the left of the zero line) indicates that the group of students did not meet the growth standard.



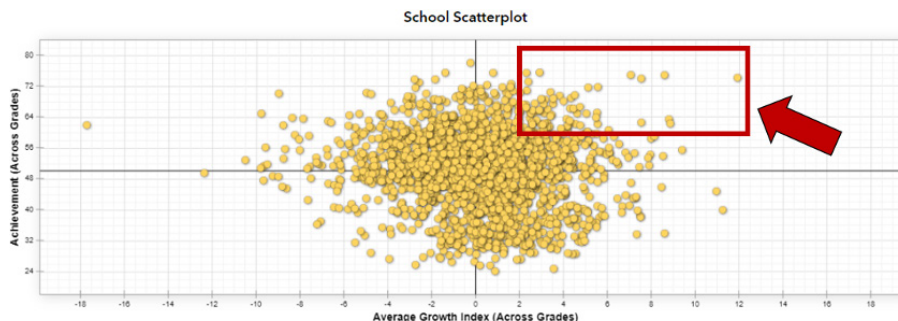
Math:

Rectangle showing schools with High Achievement & High Growth



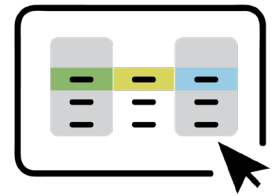
ELA:

Rectangle showing schools with High Achievement & High Growth





Using the Diagnostic Report to View the Growth of Students with a History of High Achievement



There are opportunities for growth in Pennsylvania’s schools, even with groups of students with a history of high achievement! But first, how do your groups of students with a history of high achievement profile, relative to other groups of students with a history of high achievement across Pennsylvania?

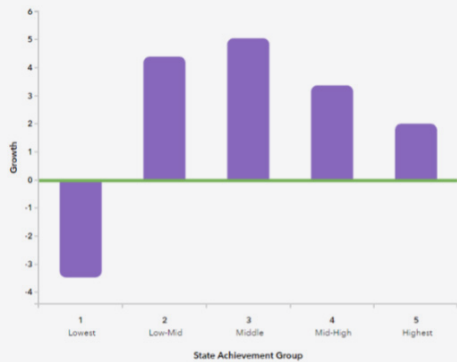
- As the Advanced performance level is a range of achievement in Pennsylvania, a classification of Advanced does not necessarily imply the highest levels of achievement.
- The **PVAAS Diagnostic Report** allows educators to view the academic growth of students not only entering the school year at an Advanced level, but also for those students who are at the highest level of achievement across Pennsylvania (the top 20% of all students in that same subject and grade level).

So, how many of your students perform in the top 20% (or, top quintile) of achievement in Pennsylvania? Are students who are performing in the top quintile meeting or exceeding the growth standard? The **PVAAS Diagnostic Report** provides the evidence!

An Example:

The **PVAAS Diagnostic Report** allows educators in this sample middle school to view the growth of their students who are in the top 20% of the state in terms of achievement. Users may use the graph and table to interpret the growth data and make best use of the data to inform their decisions.

- Achievement data shows that 54% of the middle school students performed at an Advanced level. When viewing the PVAAS Diagnostic Report that displays growth for groups of students relative to their achievement in the state, we can see from the table (below right) that only 33% of this school’s students are in the top 20% of the state in terms of achievement.



2021 PSSA Math 8th Grade					
Growth	State Achievement Group				
	1 Lowest	2 Low-Mid	3 Middle	4 Mid-High	5 Highest
Average	-3.47	4.40	5.05	3.37	2.01
Standard Error	3.28	1.60	1.53	1.57	1.15
Student Count	17	35	42	52	73
Percentage of Students	7.8	16.0	19.2	23.7	33.3

- We can also see that these students in the top 20% of the state, however, were exceeding the growth standard! We know this because of the blue diagnostic growth color in the table for the Highest achievement group.
- These students not only have a history of high achievement and performing in the top quintile (20%) in Pennsylvania in terms of achievement; they are also demonstrating high growth!

Visit education.pa.gov/pvaas for additional resources on this topic.