Changes in Pennsylvania’s Assessment System: Is There an Impact on PVAAS?

PDE’s Executive Leadership, PDE’s Bureau of Assessment and Accountability, along with the PVAAS Statewide Team, work with SAS® EVAAS® continuously as any changes are considered or implemented with Pennsylvania’s statewide assessment system. This work is done to ensure continued PVAAS reporting for Pennsylvania’s schools. The goal has always been, and will continue to be, to provide fair, accurate, and meaningful value-added measures for PA districts, schools, and educators.

Pennsylvania’s state assessment data is assessed annually to ensure the quality needed to provide value-added reporting at all levels for all students, such as reliability and sufficient stretch to measure the growth of students with higher and lower achievement.

When a change is made in Pennsylvania’s state assessments and even if the assessment is being given for the first time in a particular subject, academic growth as measured by PVAAS can be calculated – as long as sufficient evidence exists regarding the relationships between and among the assessments, as well as the strength of these relationships. Examples of these types of situations include, but are not limited to:

- Tests are made more rigorous, or have a higher level of difficulty
- Tests are transitioned to be aligned to new standards
- Tests given for the first time statewide in a particular subject, grade level, or course
- Tests are shortened or lengthened

Even if the statewide performance changes significantly (i.e., a significant change in the percentage of students performing at Proficient or Advanced levels), PVAAS assesses whether a group of students exceeded, met, or fell short of the standard for PA Academic Growth. For example, when measuring growth for PSSA Math and ELA, the PVAAS growth models analyze whether the group of students maintained their relative position on the statewide distribution of scores relative to themselves.

A Visual Example

The following example illustrates one transition of PA’s state assessments that occurred in 2015 to align the state assessment to the more rigorous PA Core Standards, and its impact on growth as measured by PVAAS. This visual demonstrates how growth is measured, and more
importantly, how a group of students can meet the standard for PA Academic Growth even if the percentage of students reaching proficiency is lower due to more rigorous standards, for example.

In the figure that follows, the first vertical line represents what could be a “year 1” distribution of Grade 7 scores, with scores at the top representing higher achievement while those at the bottom represent lower achievement. The yellow star represents where our example group of Grade 7 students scored relative to the distribution. In “year 2” of our example, fewer students scored proficient on the state assessment than in “year 1.”

The second vertical line represents the “year 2” distribution of Grade 8 scores. The group of students (who were in Grade 8 in “year 2”) scored, on average, lower in Grade 8 than in “year 1,” as represented by the yellow star. Remember, though, that the distribution of achievement of all students statewide is lower in our example – meaning fewer students were Proficient in “year 2” as compared to “year 1.”

The question is, “Is the group of students at the same RELATIVE position in the distribution of statewide scores?” This is what PVAAS looks at to determine growth. Notice in this example that they are at the same relative position, which means this group of students met the standard for PA Academic Growth, indicated by a green in PVAAS. In other words, these students “maintained their achievement.”

**Example: Transition of PA State Assessments**

*Is the group of students (indicated by the yellow star) at the same RELATIVE position in the distribution of statewide scores from year 1 to year 2? Yes = Green on PVAAS*
Evidence: PVAAS and Pennsylvania’s Assessment Transition in Prior Years

The pie charts below illustrate the distribution of school value-added indicators over three school years (SY13-14, SY14-15 and SY15-16) for PSSA Math and Reading/ELA in grades 4-8. Despite the changes in proficiency from SY13-14 to SY14-15, the distribution of PVAAS value-added indicators has remained constant (red is the lowest indicator and dark blue is the highest indicator).

More Information

If you have additional questions about changes of Pennsylvania’s state assessments and its impact on PVAAS value-added measures, please email the PVAAS Statewide Team at pdepvaas@iu13.org.