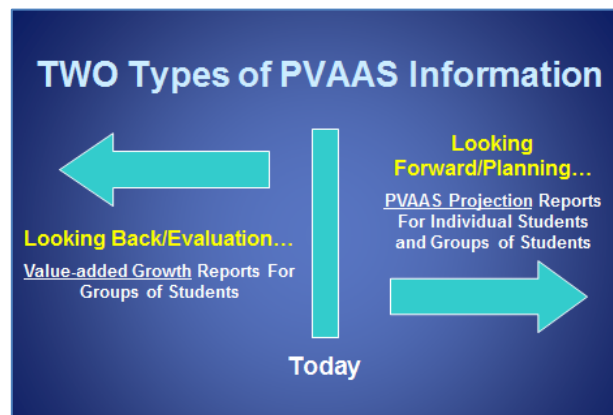# Using the PVAAS Student Projection Data with Other Student-Level Data for Improved Decision Making

The PVAAS student projection data provides educators with a glimpse to the possible future of how a student is likely to perform on a future assessment. These student projection data help in providing information on where a student is likely to be headed in their academic career.

As illustrated in the graphic above, PVAAS provides two types of information: (1) growth data to help educators assess how much academic growth groups of students have made during the past school year, and (2) individual student projection data on how students are likely to perform on a future assessment.

The vertical "Today" line is a look at how students are currently performing. For example, this could be current benchmark data on how students are likely to perform on the PA Core Standards given their current knowledge and understanding. This could also be current diagnostic data used to identify concepts and skill areas that are a strength or need improvement.

When addressing the needs of students through student-level planning, schools should consider multiple data sources for each student. For an initial student-level planning meeting, a school may wish to consider data:

1. that "looks back," such as previous PSSA or Keystone scores;
2. on how the student is performing currently, such as current benchmark and diagnostic data; and
3. that "looks forward," such as PVAAS student projections.

Questions to ask may include:

- How did the student perform on the last PSSA and/or Keystone exam? On previous state assessments?
- Where did the student perform recently on the benchmark assessment?
- Using current diagnostic data, what concepts or skill areas has the student mastered? What concepts or skill areas need improvement?
- Where is the student likely to be headed in the future in terms of PSSA and Keystone exam performance if we continue on the same path? Is the student on a solid path to proficiency? Or, is the student at risk of not reaching proficiency? Is the student at risk of maintaining or reaching an Advanced level of performance?
- If applicable, where is the student likely to perform on a future AP exam? Is the student currently on a path to being successful (scoring a 3 or higher) on a future AP exam?
- If applicable, where is the student likely to perform on a future PSAT, SAT, or ACT exam? Is the student currently on a path to being "college-ready"?
- What do other data sources tell us about this student?
- What do these results tell us about the student's needs?

Let's look at a few different scheduling scenarios to see how PVAAS projection probabilities can be used with other data to help make individual student scheduling decisions.

Note: *The examples that follow are only to be used as general examples. Any numbers or decisions indicated in these examples are shown for illustration purposes only!*

Example 1

In the first example, let's consider a student who is currently enrolled in 4th grade. We want to look at multiple data sources to make the decision about whether this student should be considered for placement into a reading or language arts intervention in 5th grade. The data illustrated in the table below represents the district's decision-making criteria for placement in an intervention.

Student 1 – NOW in 4th Grade

Schedule in a reading or language arts intervention?

PSSA – ELA	Grade 3 Proficiency Range: 1000-1142	978 – Basic	
Benchmark – ELA	Grade 4 Proficiency Range: 1000-1106	**Baseline**	**Mid Year**
		947	970
PVAAS Projections – ELA	To Basic or above: To Proficiency or above: To Advanced:	**3rd to 4th**	**3rd to 5th**
		88.4% 56.8% 17.3%	50.3% 19.5% 1.7%
DIBELS Oral Reading Fluency	Grade 4	**BOY**	**MOY**
		83 words 92% accuracy	100 words 90% accuracy

Looking at the data, we can see that the student received a scale score of 978 on the 3rd grade PSSA, which falls into the higher end of the Basic range. Their baseline score on the 4th grade benchmark ELA assessment was a 947, and their mid-year benchmark score was a 970. So, what do you think so far? Should this student be considered for a reading or ELA intervention?

Let's look at the additional data we have. We've recorded this student's PVAAS projection probabilities to all three academic performance levels for both one year (to 4th grade) and two years (to 5th grade) into the future. We can see that this student has a 56.8% probability of scoring Proficient or higher on this year's 4th grade PSSA assessment. If we look at their projection for 5th grade, we see they only have a 19.5% probability of scoring Proficient or higher. In this example, the PVAAS projections are confirming the other data we've gathered. Additionally, this student's score on the DIBELS Oral Reading Fluency assessment falls into the "strategic" range on both the beginning of year and mid-year assessments, indicating that the student is likely in need of strategic support.

So, what would you do? Would you schedule this student for an intervention in 5th grade? Each district or school has to establish the criteria used for identifying students for intervention. And, the criteria could vary greatly from school to school, and from district to district. However, many scheduling teams would certainly consider this student for a reading or ELA intervention.

Example 2

In the second example, let's consider a student currently enrolled in 8th grade. Similar to the last example, we want to look at multiple data sources to make the decision about whether this student should be considered for placement into a math intervention in 8th grade. The data illustrated below represents the district's decision-making criteria for placement in an intervention.

Student 2 – NOW in 8th Grade
Schedule in a math intervention?

Benchmark Baseline – Math	Grade 7 Proficiency Range: 1000-1108	Baseline	Mid Year
		1020	988
PSSA – Math	Grade 7 Proficiency Range: 1000-1108	1023– Proficient	
PVAAS Projections – Math		7th to 8th Grade	
	To Basic or above:	70.9%	
	To Proficiency or above:	47.5%	
	To Advanced:	1.6%	

Looking at the data, in 7th grade this student scored low in the Proficient range on the baseline benchmark assessment and high in the Basic range on the mid-year assessment. On the 7th grade PSSA Math assessment, the student scored 1023, which falls into the lower end of the Proficient range. With just these data in hand, the school did not schedule the student for a Math intervention in 8th grade.

When the PVAAS data were released, the school decided to review the projections. The PVAAS projection data show that the student has only a 47.5% probability of scoring Proficient or higher on this year's 8th grade PSSA Math assessment. Even though the student scored in the Proficient range the previous year, they have less than a 50% probability of reaching proficiency this year; additional support and intervention may be warranted. Diagnostic data, such as the Classroom Diagnostic Tool (CDT), could also be used to provide further insight into this decision.

Based on the data that includes the PVAAS projections and other diagnostic data, many scheduling teams may consider adding a Math intervention period for this student. There is no right or wrong answer. Your approach will depend on the criteria your school or district has established for selecting students for such interventions and on what data are available to add to the student's profile to help inform that decision.

Example 3

In this last example, let's consider a student currently enrolled in 7th grade and whether or not the student should be considered a candidate for Algebra I in 8th grade.

Student 3 – NOW in 7th Grade
Schedule in Algebra I?

Commonly Used Criteria:
- Final course grades – 6th and 7th Math
- 6th and 7th grade Math PSSA score
- Algebra readiness assessment score
- 7th grade mid-year benchmark score
- Teacher recommendation

Most middle schools base this type of decision on a wide variety of criteria, which might include some, if not all, of the following data sources:
1. student's final grades in 6th and 7th grade Math;
2. student's performance on the 6th and 7th grade PSSA Math assessment;
3. student's score on an Algebra I readiness assessment;
4. student's score on a 7th grade mid-year benchmark assessment; and
5. recommendation of the 7th grade Math teacher.

In this example, however, the school has always made the initial Algebra I placement decision based on:
- students' performance level on the 6th grade PSSA Math assessment;
- student's grades in the first half of the 7th grade Math course; and
- recommendation of the 7th grade Math teacher.

Let's take a look at that data but also include this student's PVAAS projection to the Algebra I Keystone exam. As you can see from the data shown, this student scored in the Advanced range on the 6th grade PSSA Math exam. However, their grade for the first semester of 7th grade Math is a C. The 7th grade Math teacher is concerned that the student doesn't apply their efforts

fully and has failed to turn in a number of homework assignments; hence, the teacher does not recommend that the student be placed into Algebra I in the coming 8th grade year.

Student 3 – NOW in 7th Grade
Schedule in Algebra I?

PSSA – Math	Grade 6 Proficiency Range 1000-1104	1187– Advanced
Mid-Year Math	Grade 7	C
Teacher Recommendation	Grade 7	Not recommended for Algebra 1
PVAAS Projection - Math		6th to Algebra I Keystone
	Proficient or above	99.1%
	Advanced	92.4%

Next, let's look at the PVAAS Algebra I projection. It shows that the student has a 92.4% probability of scoring in the Advanced range on the Keystone Algebra I exam in the future. Would this change our placement decision? There is no right or wrong answer. Similar to our last example, diagnostic data, such as the Classroom Diagnostic Tool (CDT), could also be used to provide further insight into this decision.

We would want to determine why the PVAAS projection disagrees with the teacher's recommendation. In this example, it is possible that the student has been bored in 7th grade Math, and as a result, has not been very engaged in the class. The "C" grade may be a result of this student not turning in homework, rather than an indication that the student has not mastered the material. We should not ignore the student's lack of engagement in 7th grade Math, but given the rest of the data, including the PVAAS projection, it might not be a strong enough reason to keep the student out of Algebra I in 8th grade.

The final questions regarding this placement decision may be more focused on the school's Algebra I curriculum and instruction. Does the school have a history of supporting students at similar achievement levels in making adequate growth? Are there sufficient supports in place to keep this student on a trajectory towards a Proficient or Advanced level on the Keystone Algebra I exam when taking the Algebra I course in 8th grade?