Using PVAAS Data to Improve Student Achievement

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Williamsport Area School District

District Demographics

Williamsport Area School District (WASD) serves approximately 6000 students in 10 buildings – 6 elementary schools, 3 middle schools and a high school. The schools are located in urban, suburban and rural settings. The student population is comprised of approximately 57% economically disadvantaged students, 27% minority students, and 26% special needs students. While student enrollment has been steadily declining, the percentage of “high needs” students has been increasing. The schools within the district are a mixture of high to mid-level achieving schools. Three schools in the district did not meet the 2006 Adequate Yearly Progress (AYP) requirements within several subgroups.

Conducting Value-Added Analysis

Value-added analysis is a statistical manipulation of previous test scores to measure the influence of a district and school on the academic growth of students. Value-added analysis measures whether groups of students have made a “year’s worth of growth”. The analysis also provides information on an individual student’s likelihood to be proficient on a future Pennsylvania System of School Assessment test (PSSA). These student projections are based on past test performance in Reading and Math.
As a pilot school district, Williamsport ASD first received value-added reports during the 2004-2005 school year. 2004 Pennsylvania Value-Added Assessment System (PVAAS) results were initially shared with district administrators and building principals. In order to learn more about value-added analysis, a team of administrators attended the Battelle for Kids national conference on value-added analysis in October 2004. After attending the conference the superintendent identified the need to create a comprehensive plan for PVAAS professional development. “Superintendent leadership matters….holding administrators accountable for using data to inform the learning and instruction process is crucial to the development of a data driven culture within a district.” (Lowery).

The Superintendent, Assistant Superintendent and Director of Educational Data Analysis developed a PVAAS professional development plan for the 2005-2006 school year. While PVAAS was the impetus for the development of the plan, the goal was to develop an overall framework for using many sources of data to inform instruction in the district. Included in the plan was the creation of Building-Based Data Teams to develop teacher leaders to share ideas and strategies for using data to inform instruction. Teacher representatives from each Building-Based Data Team also served on a District Data Team along with various central office administrators. The District Team provided an opportunity for teachers to discuss data across buildings and grade spans. This was particularly important for the elementary to middle school and middle to high school transition.

The District Data Team spent an entire day in September 2005 analyzing PVAAS results. Teacher representatives worked in small groups to analyze PVAAS results and identify strengths and areas needing improvement. Each Building Data Team also participated in an entire day of training during October 2005. The training sessions for the building teams included reviewing PVAAS results, manipulating data files, and reviewing 4Sight results. 4Sight tests are quarterly PSSA benchmark assessments developed by the Success For All Foundation. At the end of the training session, each Building Data Team developed 5 goals that identified how data would be
used in their building. Common goals included making teachers aware of data and resources available to them, using data to identify students for interventions and remediation, using data to differentiate instruction, and educating parents about PVAAS. “The data team generated and shared a presentation on the use of data which resulted in teachers being more receptive to PVAAS. Teachers then became eager to proceed with using real-time data, such as 4Sight, as a tool to reflect on their own instructional practices.” (Elliot).

**Identifying Solutions**

Two overall PVAAS themes emerged from the District Data Team training. First, most students in the district were making a year’s worth of growth. In fact, one middle school serving a high-needs population (i.e. economically disadvantaged, minority and special education) and struggling to meet AYP realized its students, on average, were making more than a year’s worth of growth. In this case, the value-added analysis results validated what they already suspected to be true. While lower achieving students were not yet proficient, they were making great gains towards the goal of proficiency on the PSSA.

The second theme emerging from the District Data Team analysis was the need to take a closer look at the growth of our higher achieving students. Although many of the schools were exceeding the achievement targets from No Child Left Behind (NCLB), PVAAS results indicated a year’s worth of growth might not have been obtained by some of the “proficient” and “advanced” students. This was especially true with Math results in the elementary schools. The District overall had doubled the percentage of students proficient on the 5th grade Math PSSA from 38% in 2002 to 74% in 2005. Despite having high Math proficiency levels, PVAAS results indicated some of the “proficient” and “advanced” students were not making a year’s worth of growth. While this was a surprise to teachers and building administrators, the information helped them reassess instructional strategies utilized to provide high-achieving students with opportunities to grow. “As
the year progressed we were more attentive to our populations’ needs. We used data to ensure we assigned the appropriate students to our extended day programs. We used the PSSA and 4Sight data to focus on our strengths and weaknesses compared to the standards and gathered resources to improve our instruction. We are anxiously waiting to see our scores this year and hope our efforts are validated by exceeding the AYP cut scores and having ALL students achieve growth.” (Felix).

**Digging Deeper Learning More**

PVAAS projection data has been useful in identifying students most likely to benefit from the District tutoring program. The number of students who would likely benefit from tutoring far exceeds the number of spots available in the tutoring programs. Building administrators have been diligent in using assessment data as well as attendance information and teacher recommendations when choosing students for the programs. PVAAS provides another layer of information for principals to use.

The first round of PVAAS projections was used cautiously due to uncertainty in how to interpret low “likelihood of proficiency” projections. The PSSA results were compared to the same students’ PVAAS projections for likelihood of proficiency in order to determine which students seem to benefit the most from participation in tutoring. The comparison showed students with a 50% likelihood of proficiency often did well on the PSSA without participating in the tutoring program. The comparison also determined that students with 20%-30% likelihood of proficiency often met the proficiency threshold with the help of the tutoring program. This analysis gave building principals the ability to differentiate between students who would most likely benefit from a tutoring session as opposed to students needing further assistance within a classroom setting to reach proficiency. The longitudinal nature of PVAAS allows principals to make decisions based on a student’s growth pattern over several years rather than on the results of the most recent PSSA scores.
PVAAS information has also been used to evaluate inclusion in one of the elementary schools. The 2004-2005 school year was the first year an inclusive model was used to deliver special education services to students in the 4th and 5th grade in this school. The students’ growth during the inclusive year was compared to the growth they had obtained the prior year when they were in a pull-out model for delivering special education services. In addition, the growth during the inclusive year was also compared to the growth noted with students in regular education classes. “The comparison of PVAAS growth data confirmed our hypothesis that students will show increased growth in an inclusion program as compared to a pull-out program….we will continue to use PVAAS information to determine the effectiveness of the inclusion model.” (Gonsar).

Making Progress

PVAAS results help make us more aware of what is working and what needs to be tweaked. In the case of the middle school mentioned above, PVAAS results bolstered the spirits of teachers working hard to help students work towards the goal of proficiency. PVAAS results have also identified the need to evaluate instructional strategies in light of our “shifting” population (i.e. more higher achieving students). While our district continues to serve a population of students needing to “catch up” to their peers, we also are now seeing more of our student population predicted to be proficient than ever before. As student achievement increases, teachers will need to adjust instructional strategies to provide the higher achieving students an opportunity to grow. “PVAAS allows us to look at ourselves because it gauges growth to the individual level and the data is objective. The best element of PVAAS is schools can still feel successful and have their efforts validated even if the school fails to reach the cut scores. In addition, a school faculty can also reflect on why the high achieving students are not continuing to grow individually.” (Felix).
Steps To Address In The Future

The next step in the process of sharing PVAAS information will be to provide parents an opportunity to see their own child’s PVAAS results. Overall, teachers are becoming more comfortable with data and therefore more comfortable sharing data with parents and students. During the current school year, each Building Data Team will be asked to develop a plan to share individual student PVAAS results with parents. Teachers will share student’s PVAAS graphs and discuss projections to future PSSA test results. “Value-added data provides both a global perspective on how our group test performance compares with what was expected to occur and looks at how well individual students did in this regard. Of greatest use, however, are the individual student projections which we will use to encourage students to ‘try harder’ to reach their potential and to encourage them to look at ways in which they could do so.” (Daniels).

Summary

Achievement measures alone, like PSSA results, do not give teachers the necessary information they need to impact learning. Value-added assessment offers a unique method of analyzing student achievement data that helps teachers, schools and districts determine whether students are growing at appropriate rates based on their own individual growth pattern. However, value-added information alone is not enough. WASD strives to use PVAAS, along with many other indicators, to monitor student achievement and growth as well as reflect upon the effectiveness of our curriculum and instructional strategies. PVAAS provides staff with another tool that they can use to guide instructional practices so that we can better meet the challenge of helping each child reach his or her own potential. “PVASS is a far more accurate way to measure student progress than absolute test scores. While student progress and achievement should be holistic and never be based solely on the basis of a single measure, PVAAS can serve as one of
several powerful indicators we can better meet the challenge of helping each child reach his or her own potential.” (Lowery).
References

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