As children, we all remember that moment when Toto runs behind the curtain and reveals that the great and powerful Wizard of Oz was not what he seemed. He did not have magical powers that could help Dorothy and Toto go back to Kansas. Despite being built up by the community of Oz and all the bells and whistles, he simply was an ordinary man.

As educators, it is our responsibility to dig deep in the research and literature to ensure we are applying the best practices in our schools. The Pennsylvania Department of Education (PDE), as with many state departments of education under the guidance of the U.S. Department of Education, has adopted value-added measures as valid indicators of student progress and educator effectiveness. Just because these agencies have adopted these practices does not excuse us from questioning the validity of such measures. Principals and school leaders have an obligation to exhaust all means to get the facts. We have an obligation to look behind the curtain as our students, teachers and communities deserve nothing less!

Value-added measures (VAM for short; the Pennsylvania Value Added Assessment System or PVAAS in Pennsylvania) have been adopted in most states as a part of the competition for Race to the Top grants or No Child Left Behind (NCLB) waivers. In a nutshell, VAMs, through complicated statistical algorithms, are supposed to be able to predict human behavior. In education, it is being used to predict (or report) how much “value” a school or teacher should add (or has added) to a student’s learning. VAM formulas are also reported to be able to account for many factors that impact student achievement such as poverty. In Pennsylvania, the PA System of School Assessment (PSSA) is the lone student assessment data entered in the formula.

Interestingly, VAM’s start in Pennsylvania was intended for “school evaluation and planning, grade/subject level evaluation and planning and for student level planning” (PVAAS Overview…, 2008). During its rollout in which these intended purposes were stated, PDE also shared that PVAAS was “not being used for teacher-level accountability in Pennsylvania” and even that PVAAS “does not yield a metric on the effectiveness of a teacher” (PVAAS Overview…, 2008). These statements regarding what PVAAS does and does not do were shared during PDE’s trainings provided at intermediate units and school districts. This echoed information was shared in a PDE Penn-Link the prior year, stating “…PVAAS is a powerful tool for school improvement…It is the intent of the Pennsylvania Department of Education that this data will be used solely as a school improvement tool. The data should be used to make decisions pertaining to curriculum and instructional materials, but should not be used for the purpose of evaluating or compensating teachers” (Zahorchak, 2007).

As the popularity of VAM increases and its use is now being expanded to evaluate educators, administrators and schools, more and more research is revealing that VAM is not all-powerful and that predicting human behavior is not something a math formula can do. As principals and leaders of schools, we need to question what exactly VAM does for us.

In a joint statement by the National Association of Elementary School Principals (NAESP) and the National Association of Secondary School Principals (NASSP), the associations warned the chairman of the Senate’s Health, Education, Labor and Pensions Committee that they did not want a proposed educator preparation program evaluated with VAM stating (2014):

NAESP and NASSP have concerns about any proposed grant program that would require states to rate all preparation programs using value-added measures. We
believe there are multiple ways that states can strengthen accountability and standards for preparation programs without developing such a rating system, which will conflate the multiple concerns that research has exposed in terms of the efficacy of VAM with teacher and principal evaluations (NAESP/NASSP, para. 8, 2014).

VAM has also caught criticism from the organization that represents statisticians across the country, the American Statistical Association (ASA) (2014), warns, “VAMs are generally based on standardized test scores, and do not directly measure potential teacher contributions toward other student outcomes” (para. 2). The ASA later goes on to say that VAM studies find that teachers account for 1% to 14% of the variability in test scores. This is a stern warning that ranking educators by their VAM scores can have unintended consequences that reduce teacher quality.

Even in a study prepared for the U.S. Department of Education by Schochet and Chiang (2010), part of the conclusion states that their results were “largely driven by findings from the literature and new analyses that more than 90 percent of the variation in student gain scores is due to the variation in student-level factors that are not under the control of the teacher” (p. 35). This same study concluded that VAMs used at the teacher level “are subject to a considerable degree of random error when based on the amount of data that are typically used in practice for estimation” (p. 35).

The reliability and validity of VAM has raised red flags by our national associations and many researchers. Scherrer (2011) states, “Questions of validity arise when one starts to make inferences based on value-added scores. To begin with, labeling a teacher as ‘effective’ based on mathematics and English Language Arts scores is invalid” (p. 130).

Fortunately, the state only includes a small portion of an educator’s evaluation on VAM; however, that portion is consuming mass amounts of time due to collecting evidence for the evaluation. In the end, the unreliable nature of VAM is causing educators to lose precious time that could be well-spent on academic planning (Darling-Hammond, 2010; McCaffrey, Lockwood, Koretz & Hamilton, 2003; Ravitch, 2013). Moreover, the VAM training from the state cautions us that VAM “does not infer causal relationships between educational variables and student growth!” When it comes to crunching the numbers to measure teacher effectiveness, the multitude of tests that are used as the basis of a VAM each produce different results. If the data were reliable, teachers’ VAM scores would not vary from one year to the next. Obviously, this would lead one to question the reliability of the mathematical calculations behind VAMs.

Why are VAMs accepted by so many? VAM formulas are complex and confusing. The complexity of VAMs leads to confusion and as a result intimidation by the people being evaluated with such measures (Ewing, 2011). Unfortunately, this complexity results in many simply accepting the numbers as valid. This is a mistake, and educators need to look to the literature and research as guidance and support.

Students, teachers, principals and schools are so much more than a test score. Working with young human beings who are undergoing rapid changes is unique to the field of education. In every school, the experiences offered to students enable them to grow socially and emotionally, which is not measured by a VAM. There is not a mathematical formula that can measure the effectiveness of all the wonderful things that occur in our schools each and every day. No VAM formula can account for a jazz band program that a school adds, the incorporation of a morning intramurals program, a peer-to-peer buddy program that supports students with autism or a charity drive orchestrated by students. However, if a school narrows the curriculum for test prep purposes, which frequently happens, and eliminates opportunities such as the arts, physical education, exploratory, etc., then a school’s VAM score may increase especially since VAM data are ultimately derived from a single test. In the end, is it worth it? Did the school improve the overall learning experience of those students? School leaders and teachers are the only ones that we can depend on to hold the line of what is right and what works best for children. Darling-Hammond, Amrein-Beardsley, Haertel & Rothstein (2013) write, Using VAMs for individual teacher evaluation is based on the belief that measured achievement gains for a specific teacher’s students reflect that teacher’s effectiveness. This attribution, however, assumes that student learning is measured well by a given test, is influenced by the teacher alone and is independent from the growth of classmates and other aspects of the classroom context. None of these assumptions is well supported by current evidence (p. 8).

Simply put, the use of a tool that was designed to measure student growth based on high-stakes assessments is not effective, nor is it realistic to estimate an educator’s causal growth.

The literature that does support the use of VAM states that they should be used as part of a tool for improvement and not determining an educator’s contribution to student growth. This is a
“Our data so far show decreased behavior referrals, increased parent involvement in student problems and improvement in teacher/student relationships...”

Lesson #4: Never take for granted that the kids know it.

Our model is, true to the State College way, uniquely our own. Instead of a pullout transition class, we created an integrated, infused curriculum of study skills, behavior expectations, peer relationships, citizenship and academic planning topics that are negotiated by each team of teachers. They determine who teaches what lessons and the other teachers in the cohort back up the lessons by knowing what was taught and using the same language and expectations in their own content courses. Resoundingly the teachers are saying, “Why did we think they came to us knowing this?” They have seen over and over that intentionally establishing expectations for learning transition skills has shown the kids didn’t know how to negotiate learning and study skills. Our “good” students perhaps did, but many of our students did not. This year they are learning.

Lesson #5: We have only just begun.

I recently went to a professional learning community conference, and as I sat through the first session, my thought was: “Wow...we’ve started this right.” I moved on to the second session and my thoughts turned to: “Wow...we have a long way to go.” Both were correct. We have come so far in two years, but now we have to start tracking and determining if what we are doing is working to improve student learning. Our data so far show decreased behavior referrals, increased parent involvement in student problems and improvement in teacher/student relationships (teachers by way of common conversations about what works for a given child feel they are getting to know their students at a deeper level). However, we can’t stop here. Is the 9LC improving academic student learning? To get the answer to this we are collecting data to compare to our pre-9LC year, refining our curriculum so that it is aligned to what students need to be active and invested learners and continuing to make time and relationship a priority.

As our school moves forward in planning our new educational model for the 10th- through 12th-grade students, it will be exciting to see how the lessons we’ve learned can be adapted and used as a resource for the learning communities to come. We have many exciting, yet demanding, days ahead of us. I imagine by the end of the year I will have more lessons learned than I can possibly write about in an article. I look forward to watching and learning as we continue to strive to ensure our students learn.

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Looking Behind the Value-Added Measures Curtain

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Like Toto, who revealed that the Wizard of Oz was nothing more than a deceptive ordinary man, school leaders must take action by ‘pulling the curtain’ back on VAMs to understand the detrimental impact they can have on their educational community. As school leaders, we cannot let the effectiveness of our teachers and the culture of our schools be determined by a ‘magical’ mathematical formula that does not calculate humanity in the equation!

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The year ended on an even higher note for the students. In July, the College Board published stunning AP scores for South Side High School. The school had a record number of AP Scholars and as an added bonus, as “The American Experience” was designed as an 11th-grade course offering, they were mostly juniors! With that, enrollment in senior-level AP courses ballooned. The number of students who had achieved a “3” or higher on multiple exams tripled. Many of these students had never taken an AP course before and probably thought they didn’t have what it takes. They know better now. These results have been a game-changer for the students of South Side.

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Additionally, our school achievement data can also be substantiated by a reduction of failure rates and a drastic increase in honors’ and distinguished honors’ recipients using our local assessment data such as report cards and cumulative promotion rates. Combined with a steady increase in our state required Pennsylvania System of School Assessment (PSSA) data, it completes a full picture of improvement in academic achievement as well as cultural data improvement.

In 2013, the National Association of Middle School Principals (NAMSP) recognized our school improvement challenges and achievements when we were chosen as a distinguished runner-up for the NAMSP Middle School of the Year. In honor of this distinction, the NAMSP presented Northeastern Middle School was selected as a national runner-up for the National Association of Middle School Principals annual Middle School of the Year during the 2013-14 school year.

Looking Behind the Value-Added Measures Curtain

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The progressive and innovative thinking that led to these results is typically not associated with small, rural school districts. With a poverty level close to 30% and an estimated 10% of district residents or fewer holding a bachelor’s degree or higher, college has become a reality, rather than a dream in this community. Thoughtfully managed, collaboration produces results.

For more information, contact Mr. Paull at acp@sssd.k12.pa.us.

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