The Value-Added Model: Teacher Evaluation Tool of the Future?

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Introduction

Since the beginning of education, there has always been a need to evaluate teachers. Parents do not want to see their child stuck with a “bad” teacher, while students want a teacher that can challenge and connect with them. However, this evaluation process is extremely difficult as educators and legislators alike have struggled to define “good teaching”. Evaluation takes many forms including: formative, summative, formal, informal, walk through, full class, portfolios, student/parent evaluation, and various others. While these evaluations are valuable, they often leave evaluators struggling to decipher fact from opinion. Mandinach and Jackson (2012) point out teachers who do not possess data on their students just serve as another opinion. Applied to evaluators, this statement is just as powerful. They need data to show student achievement as it correlates directly to an individual teacher.

Although the value-added model (VAM) is not a new concept, it has taken a recent foothold in education. VAM, an extremely complicated mathematical equation, can simply be defined as the growth that an individual student attains during one school year, while having the ability to isolate individual factors that influence a student’s education. The growth, then, is the “value-added”. The passage of Race to the Top as part of the American Recovery and Reinvestment Act of 2009 drastically changed the way educators look at student achievement and evaluation. At the root of this legislation is the goal of “improving teacher and principal effectiveness based on performance” (Race to the Top Program Executive Summary, 2009, p.9). This legislation aimed to build great teaches and leaders by placing an emphasis on student growth and achievement in teacher evaluations. This process would be supported by data. The evaluation is not simply summative in nature; it is designed to provide professional development to all based on the data received (Race to the Top Program Executive Summary, 2009).
Throughout Race to the Top, there are numerous mentions of data and data informed decisions, proving that these ideas are here to stay. The design of this program was competitive in nature, and it was not long before states began re-evaluating their systems of teacher evaluation.

The accountability movement is supported by Piro, Wiemers, and Shutt (2011) as stated that “legislation requiring the inclusion of student achievement data in teacher evaluation is being enacted in many states in response to the concerns that teaching is not directly tied to improved student learning” (p. 2). With the technology and data available today, it must be utilized to improve student achievement, and one potential way is the use of student achievement data through VAM. For instance, in Tennessee, up to fifty percent of a teacher’s evaluation will consist of student achievement data (Piro, Wiemers & Shutt, 2011, p. 4). The state of Michigan followed suit with §380.1249 of the Revised School Code Act 451 (1976) as it states that by the 2015-16 school year, fifty percent of a teacher’s evaluation will consist of student achievement data. Many other states are beginning to utilize student achievement data in teacher evaluations including: Arkansas, Florida, Illinois, Idaho, Indiana, Nevada, Ohio, and Utah, along with many others (Piro, Wiemers & Shutt, 2011, p. 6). Clearly, student achievement data and the VAM are here to stay, but what role will they come to play in teacher evaluation and is it the best gauge of teacher effectiveness?

The V.A.M. and student achievement data are sure to play an even larger role in education and teacher evaluation as individual states and districts roll out their plans to fit new federal legislation. This idea is steeped in teacher improvement as U.S. Secretary of Education Arne Duncan states “it defies logic that we have not tied student achievement and learning gains to [instructional] improvement” (Rich, 2009, p. 1). In the following pages, the use of student achievement data in teacher evaluation will be investigated through a review of the pertinent and
current literature, a report on the findings, concluding with recommendations for the field based upon the findings.

**Literature Review**

Data is not a new concept in education. Utilizing data in the value-added model, especially when evaluating teachers and often making employment decisions, is more recent. Because of its recent arrival onto the educational scene with the passage of Race to the Top in 2009, there is not a wealth of applicable data on the effects of using the VAM as a form of teacher evaluation. Studies compare multiple years of data for both students and teachers and with the recent implementation of Race to the Top, there simply has not been time to properly conduct many longitudinal studies. However, the concept of VAM is not new and has been used in classrooms and other fields for years, leaving plenty of information available for review. This literature recognizes many positives, as well as negatives, of using VAM for teacher evaluation.

Many authors recognize the pressing need for changes in evaluation design as the current models of evaluation do not take in all factors. Koretz (2008) argues that evaluators are looking at and measuring not just educational factors, but much more. Outside factors like student motivation, teacher seniority, or the student’s educational background often affect data (Braun, 2005). Jacob (2012) argues that although gauging teacher effectiveness is difficult, the process has greatly expanded beyond simply looking at a teacher’s certification, graduate degree(s), and years of experience.

Even when adding in classroom observations, Kyriakides (2005) discusses the problems associated with this method, including the lack of observations and the fact that many are pre-planned. Many authors suggest qualifications even with the use of VAM. Newton, Darling-Hammond, Haertel, and Thomas (2010) point out any model needs to take in the demographics
of the student body as the results can be impacted every year. Other authors suggest ideas of including teachers in the process (Peterson, Kelly, Caskey, 2002),

Clearly, the evaluation system used in schools across the country is in need of a change. Despite some shortcomings of VAM, Jennings & Corcoran (2009) acknowledge that such a model is the way of the future for at least a portion of a teacher’s evaluation and “provide an important lens into how our schools are doing” (p.639). Education is under scrutiny and stakeholders are constantly looking for insight as to how schools are performing.

A portion of the success of the VAM deals with the types of assessments utilized. If a VAM is to be used effectively, a high quality assessment is of the utmost importance and the results need to be tied only to the teachers that come into contact with the tested students (Everson, Feinauer & Sudweeks, 2013). Caldas (2012) states the main success of VAM is in figuring out how various factors influence outcomes, mainly a student’s education. Certainly, in such a complex field, there will be error, but VAM still offers insight into the many factors of a student’s achievement with the emphasis on the teacher outcomes.

Despite those heralding the success of using VAM in teacher evaluation, some opponents do not believe its methods will yield what schools and administrators are expecting. Schochet and Chiang (2010) conclude that the error rates in the analysis of teachers are far too high, registering at over twenty-five percent (p.35). This research points educators to use caution when evaluating solely with a VAM, especially in situations involving tenure and dismissal. While Namaghi (2010) agrees with the idea of using data in teacher evaluations, the author argues that this information should be used throughout evaluation and not just be summative in nature. Data gleaned from a VAM could greatly influence teaching if used as a formative evaluation.
Still yet, others support different forms of evaluation, including using teachers to evaluate their colleagues (Peterson, Kelly & Caskey, 2002), using student perception surveys along with student growth scores (White, 2013), and finally, placing the teacher at the center of the evaluation process (Peterson, 2000). Milanowski, Kimball, and White (2004) suggest a standards-based teacher evaluation, including observations, classroom artifacts, and examples of student work. These pieces would combine to provide a more accurate day to day picture of happenings within the classroom. All of these forms of evaluation have merit; however, the majority of the authors point out that they are not proven by any data and are much more subjective in nature than VAM would be.

**Data Regarding the Value-Added Model**

Despite the recent push to utilize VAM in the evaluation process, a remarkably large amount of data has already been collected regarding its effectiveness. This data paints VAM in both a positive and negative light, leaving educational leaders to decide if this method will truly be effective in teacher evaluation.

Raudenbush (2004) claims that VAM is a step in the right direction for evaluation from “comparing unadjusted mean levels of achievement or, as is currently common practice, the percent of students in a school or class who are classified as “proficient”” (p. 121). VAM adds many other factors into a complex algorithm that presents a much more accurate picture that combats the often skewed results that selected classes of students can contain. Raudenbush (2004) furthers his claim by discussing two types of effects often found within VAM, Type A and Type B. Type A effect allows parents to see the potential added value to their child’s education if he/she were to attend that school; Type B effect looks at different practices within the school, including teacher action (p. 122-123). However, as Type B effect appears to let the
researcher separate data, it still raises the question of whether the gains can be attributed to an individual teacher. Raudenbush believes the use of VAM when looking at the entire school can be extremely successful, but the certainty decreases when trying to isolate an individual teacher.

Jacob & Lefgren (2008) argue that will VAM can greatly impact teacher evaluation, but the effect on student achievement is not extraordinary. Their research on elementary students in a western state suggests that moving a student from an average teacher to a teacher one step above the mean would likely add two to three percentile points on that student’s test results (Jacob & Lefgren, 2008, p. 14-15). While the gains may not be huge, it does showcase that VAM worked to identify the effective teachers and resulted in an increase in student achievement. Goldhaber and Hansen (2008) support this notion as their study found the number of teachers receiving tenure between the fourth and fifth year was in line with the initial estimate provided by the VAM, concluding it to be a “reasonable metric to use as a factor in making substantive teacher selection decisions” (p. 7).

Numerous studies have depicted the use of VAM to result in unpredictable and inconsistent scores. Darling-Hammond, Amrein-Beardsley, Haertel, and Rothstein (2012) examined five school districts and found great inconsistencies across different tests, subjects, and years. Their study found that “teachers who scored in the bottom 20% of rankings in one year, only 20% to 30% had similar ratings the next year” (Darling-Hammond et al., 2012, p. 2-3). These results show the unpredictable nature of this data and highlight the ideas that teachers could teach to the test as huge changes may be seen when a different assessment is utilized.

A major concern throughout education regarding VAM is the actual amount of impact that a teacher may have on a student’s achievement. Certainly not to discredit the field of education, but many factors go into a student’s success including: community, home life, school
environment, intrinsic factors within the student, and finally, the teacher (Corcoran, 2010). While the teacher does compose a percentage of a student’s achievement, many other factors play in which are outside of a teacher’s control and skew the potential results of VAM.

**Educational Leadership Recommendations Regarding the Value-Added Model**

Clearly, VAM is certain to play a major role in the evaluation of educators across the country. With funds made available to states through Race to the Top, numerous states added VAM as a major percentage of their evaluations and many are sure to follow. As an educational leader, VAM will impact my career in many ways. Currently, a much simpler version of the VAM is used to evaluate me as a teacher, predominately through one standardized assessment. As a future principal, VAM will play a major role in my evaluations of teachers and will require myself to educate staff on the topic.

Historically, large percentages of teachers have received above a satisfactory rating, with an extremely small percentage ever landing in the unsatisfactory category (Lee, 2011). The current evaluation system is lacking in numerous regards, especially in numerical and objective data. The more sources that compose a teacher’s evaluation certainly will add to the success of education and paint a much more accurate picture of our schools (Peterson, Wahlquist, Bone, Thompson & Chatterton, 2001). Educational leaders will need to provide data to prove that students are learning and that educators are driving that process; the ability to create and analyze that data will be essential (Swan, 2009).

However, as years pass and more data is published, educators must continue to evaluate the use of VAM as it certainly contains a number of drawbacks including potential issues with tenure laws, collective bargaining agreements and employment decisions (Paige, 2012, p. 29). Many in the field are afraid that using VAM in high stakes employment decisions will not hold
up in legal situations due to the “lack of reliability and validity, bias, errors, and inherent problems and overreliance on achievement tests” (Amrein-Beardsley, Collins, Polasky & Sloat, 2013, p. 5). This information regarding legal cases makes the outlook for utilizing VAM in the future to be a sole determiner of a teacher’s effectiveness slim. However, it was never the true purpose of a value-added model. Its use was to supplement a principal’s observation, a teacher’s portfolio and classroom artifacts, and other forms of evaluation; it was never to be the entire evaluation. Principals have the ability to identify their top and bottom teachers, but often struggle with the middle grouping (Jacob & Lefgren, 2008). VAM will certainly help identify those teachers and give an insight into their teaching effectiveness, while always keeping in mind the validity and potential bias encountered with these numbers.

In conclusion, VAM will continue to play an evolving role in teacher evaluation. Educational leaders must fight to make sure that this type of evaluation is conducted fairly and with no bias. VAM is an expensive and time-consuming process that produces data so complex that often only the most mathematically gifted can interpret. While previous evaluation methods were centered on “infrequent or poor classroom observations or administrator bias…”, VAM allows a more factually based and objectively designed form of evaluation (David, 2010). VAM and other data-based methods of evaluation will not become the sole determiner of a teacher’s value as it certainly has issues, but does supply educators with valuable information regarding educators and schools, all leading back to the goal of increased student achievement.
References


