

Tennessee Value-Added Assessment System: A Brief Overview

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The Tennessee Value-Added Assessment System, known as TVAAS, is a statistical method used to measure the influence of a district, school, or teacher on the academic progress (growth rates) of individual students or groups of students from year to year.¹ The concept behind TVAAS is that schools should “add value” every school year for each student, whether their starting point is above, at, or below grade level.

The use of value-added assessment to measure “the impact that the teacher, school and school district have on the educational progress of students” was enacted in Tennessee statute in 1992 as part of the Education Improvement Act. State law requires annual estimates of teacher, school, and school district effects on student progress.²

Who owns and administers the statistical model used for TVAAS? Can anyone have access to the model?

The statistical model used for the Tennessee Value-Added Assessment System was originally developed by Dr. William Sanders, formerly of the University of Tennessee and currently Senior Manager of Value-Added Assessment and Research for the SAS Institute.³ The proprietary model, called SAS EVAAS for K-12 (EVAAS), is owned by the SAS Institute.

According to Tennessee Department of Education staff, TDOE submits TCAP scores and rosters identifying teachers and students to SAS on June 1 of each year. SAS provides TVAAS results back to TDOE by June 15.⁴ Districts, schools, and teachers have private login status allowing them access to in-depth TVAAS data that can be used as a diagnostic tool to identify individual students’ academic needs, as well as teacher effectiveness. SAS does not allow researchers access to TVAAS data without the explicit consent of the Tennessee Department of Education.⁵

How much does TVAAS cost the State of Tennessee?

TDOE has contracted for services related to value-added assessment since 1992. Each contract has been a sole source contract because Tennessee statute requires the use of methodologies provided by Dr. William Sanders’ value-added model.⁶ Originally, the contract was with the University of Tennessee, but has been with the SAS Institute since 2000, following Dr. Sanders’ employment with SAS.

Between January 1, 2005, and December 31, 2009, the Tennessee Department of Education contracted with SAS Institute, Inc., to administer TVAAS for a total of \$8,530,999.32, of which slightly more than \$2 million was paid with federal money. For the period between January 1, 2010, and December 31, 2014, the amount of the contract with SAS totals \$14,367,250.00, reflecting an increase to be paid for primarily with federal American Recovery and Reinvestment Act (ARRA) funds. The increased amount was used to meet requirements concerning teacher training and evaluation related to Race to the Top.⁷ This includes the development of learning modules and WebEx sessions for teachers, principals, and district administrators to help them develop the capacity to use value-added information to improve student achievement.⁸ See Exhibit 1 for the total cost of contracts between Tennessee and SAS from FY 2005 through FY 2014.

What are some common concerns about TVAAS?

According to the Tennessee State Collaborative on Reforming Education,⁹ common concerns about TVAAS among educators, researchers, and policymakers include:

- complexity – the system is too complex for non-statisticians to interpret and use
- timing of TVAAS data release – the data are

made available too late to be used in performance evaluations for the school year in which they were collected

- lack of TVAAS data for teachers in grades and subject areas without standardized assessments – two-thirds of teachers have significant portions of their evaluations based on school-wide TVAAS scores
- determining which teacher has affected student learning growth is not clear in all cases – some subject areas may have content overlap, and team-teaching occurs in some schools

What are some benefits of TVAAS?

According to TDOE,¹⁰ Tennessee educators have used TVAAS throughout the years for

- school improvement planning
- identifying students who need academic interventions
- ensuring that instruction is effectively differentiated

According to SAS,¹¹ the benefits of TVAAS include:

- generating data for teachers on the academic preparedness of their students, and generating data for administrators to assist in identifying teachers' individual professional development needs
- providing data and information that supports the modification of instructional strategies to address individual student needs

Do other states use a similar statistical model?

The SAS statistical model used by Tennessee, known as EVAAS for K-12, is also used statewide in North Carolina, Ohio, and Pennsylvania. A number of districts throughout the country have adopted the SAS model, including the Houston Independent School District and the Fort Worth Independent School District. Teacher Advancement Program (TAP) schools in Texas, Louisiana, and South Carolina also use the SAS model.¹²

Exhibit 1: Cost of contracts with SAS Institute, Inc. for administering TVAAS, FY2005 – FY 2014

Contract Period January 1, 2005 – December 31, 2009			
Fiscal Year	State	Federal	Total Contract Amount
2005	\$589,399.94	\$0.00	\$589,399.94
2006	\$1,198,799.80	\$401,000.00	\$1,599,799.80
2007	\$1,243,049.88	\$401,000.00	\$1,644,049.88
2008	\$1,243,049.88	\$401,000.00	\$1,644,049.88
2009	\$1,243,049.88	\$401,000.00	\$1,644,049.88
2010	\$1,008,649.94	\$401,000.00	\$1,409,649.94
Total	\$6,525,999.32	\$2,005,000.00	\$8,530,999.32

Contract Period January 1, 2010 – December 31, 2014			
Fiscal Year	State	Federal	Total Contract Amount
2010	\$488,250.00	\$0.00	\$488,250.00
2011	\$1,732,250.00	\$1,389,500.00	\$3,121,750.00
2012	\$1,732,250.00	\$1,368,500.00	\$3,100,750.00
2013	\$1,732,250.00	\$1,368,500.00	\$3,100,750.00
2014	\$1,732,250.00	\$1,368,500.00	\$3,100,750.00
2015	\$1,244,000.00	\$211,000.00	\$1,455,000.00
Total	\$8,661,250.00	\$5,706,000.00	\$14,367,250.00

Note: Additional federal funding amounts in the contract period from 2010 through 2014 reflect American Recovery and Reinvestment Act (ARRA) funding used to meet requirements concerning teacher training and evaluation under Race to the Top.

Sources: Contract # FA-05-16315-01 (Jan. 1, 2005 – Dec. 31, 2009) obtained from Tennessee Department of Education; Contract #FA1030469 (Jan. 1, 2010 – Dec. 31, 2015) obtained from Comptroller of the Treasury. Zachary Rossley, Tennessee Department of Education, Deputy Assistant Commissioner, Data and Research Division, e-mail, July 10, 2013.

Endnotes

- ¹ The annual State Report Card includes value-added results at the district and school levels in grades 3 through 8 for math, reading/ language arts, social studies, and science, and in high school grades for Gateway/End of Course tests, the ACT test, and the 11th grade writing exam.
- ² Tennessee Code Annotated 49-1-603 through 49-1-606.
- ³ SAS Institute is a Cary, North Carolina-based developer of analytics software. SAS draws from statistics, predictive analytics, data mining, data visualization, operations research, quality improvement, graph theory, and text analytics to help organizations predict, measure, analyze, and make decisions.
- ⁴ Zachary Rossley, Tennessee Department of Education, Deputy Assistant Commissioner, Data and Research Division, e-mail, July 10, 2013.
- ⁵ Ibid.
- ⁶ Tennessee Code Annotated 49-1-604; Offices of Research and Education Accountability, Comptroller of the Treasury, *The Education Improvement Act: A Progress Report*, p. C-63, <http://www.comptroller.tn.gov/> (accessed July 19, 2013).
- ⁷ Zachary Rossley, Tennessee Department of Education, Deputy Assistant Commissioner, Data and Research Division, e-mail, July 10, 2013.
- ⁸ Contract #FA1030469, Amendment #1, Oct. 2010.
- ⁹ State Collaborative on Reforming Education, *TVAAS: An Introduction to Value-Added in Tennessee*, June 2012, p. 3, <http://www.tnscore.org/> (accessed July 9, 2013).
- ¹⁰ Tennessee Department of Education, Tennessee First to the Top, *Teacher Model, Understanding TVAAS, Overview*, (video series explaining TVAAS), <http://team-tn.org/> (accessed July 10, 2013).
- ¹¹ SAS Institute, Inc., *SAS EVAAS for K-12*, <http://www.sas.com/> (accessed July 10, 2013).
- ¹² Center on Great Teachers and Leaders at the American Institutes for Research, *Guide to Evaluation Products*, Tool Name: *SAS Education Value-Added Assessment System (EVAAS)*, <http://resource.tgsources.org/> (accessed July 10, 2013).



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