



SAS® EVAAS® for K-12

Reliably assess and predict student performance

What does SAS® EVAAS® for K-12 do?

SAS EVAAS for K-12 utilizes a longitudinal analysis to track individual student progress by year, subject and grade, based on a variety of assessments, providing educators and policymakers with two kinds of school improvement tools: reflective value-added reports to assess the effectiveness of districts, schools and teachers; and proactive projection reports on individual students' future performance.

Why is SAS® EVAAS® for K-12 important?

Value-added measures ascertain how much educators are accelerating student progress. Individual student trajectories facilitate customized, proactive planning for students so that they can graduate prepared for college and career. With these tools, educators can provide more effective instruction to students, regardless of their achievement level.

For whom is SAS® EVAAS® for K-12 intended?

Teachers can differentiate instruction and provide early response to interventions based on reliable student data. **Principals** can differentiate professional development, achieve highly effective teaching within their schools, and anticipate staffing needs based on students' projected achievement levels. **Superintendents** can identify greatest areas of need for human capital resource allocation and assess the effectiveness of district policies and practices. **Policymakers** can use this critical information to guide the development and monitoring of their goals. **Parents/Students** can engage in school conferences with forward-looking data to support student progress and make informed course placement decisions.

America's school children are as diverse as its landscape, and with growing competition in the global economy, they truly represent our nation's future. SAS EVAAS for K-12 is based on the underlying belief that all students can learn and deserve to make appropriate academic progress each year, regardless of their prior achievement level.

Testing changes, policy decisions, missing test data, mobility of teachers and students are all examples of how the varying education climate demands a flexible system to provide the most accurate and comprehensive information to educators. Expedient reporting at the state, district, school, classroom and student level is more important than ever.

As education entities strive for continuous improvement with limited resources, school districts across the country need to develop their most valuable human capital investment – their teachers. With shrinking budgets and growing class sizes, teachers are challenged to effectively differentiate instruction to ensure that high achievers are challenged, middle achievers are encouraged, and low achievers are supported with appropriate strategies.

Easily understandable reporting gives teachers, guidance counselors, principals and other administrators the reliable information they need to have meaningful conversations regarding appropriate instructional strategies for each student.

After 20 years of development and practice, SAS EVAAS for K-12 is the most comprehensive reporting package of value-added metrics available in the educational market because it solves all these challenges. Used in thousands of districts – statewide in Tennessee, Ohio, Pennsylvania and North Carolina – SAS EVAAS for K-12 assesses the influence of districts, schools and teachers on student progress rates and enables personalized educational planning at the student level. Through the breadth of reporting and interactive nature of Web delivery, districts and schools can set their own policy goals and assess their success.

Some examples of how educators are using SAS EVAAS include to:

- Facilitate data-driven school improvement planning.
- Inform human capital decisions such as teacher allocation, evaluation and award models.
- Differentiate professional development for teachers and schools based on their individual needs.
- Identify and increase student enrollment in rigorous coursework.
- Increase the percentage of students who are proficient and college- or career-ready.
- Prevent dropouts and increase graduation rates through early identification of at-risk students.
- Facilitate data-driven parent-teacher conversations.
- Support policy changes and aid in state and federal accountability.



Solution Overview

Reliability of information has been, and always will be, the primary driver behind the development of all SAS EVAAS models. By following the progress of individual students over time, SAS EVAAS provides balanced reporting that protects student opportunity while more fairly and transparently assessing the effectiveness of educators.

Reflectively Identify Strengths and Opportunities for Improvement

Insights derived from analyzing years of data lead to more intelligent resource and instructional decisions that improve teaching and learning. SAS EVAAS for K-12 provides value-added analysis grade-to-grade and subject-to-subject for districts, schools and teachers, and reporting provides valuable feedback about curriculum implementation and the success of the instructional strategies.

Proactively Predict Student Success Probabilities

SAS EVAAS for K-12 reports on students' predicted success probabilities at numerous academic milestones. Individual student reporting is accessible at the desktop of every teacher who is authorized by local policy to view the student-level information. Not only does

this reporting include historical data, but it also includes predictions for each student at a variety of academic milestones: the upcoming grade level proficiency, high school graduation requirements and various college success indicators, such as advanced placement exams, the SAT and the ACT.

Gain Interactive Insight to Make Comparisons

Interactive scatterplots allow users to visualize the impact of various progress metrics and the students who are served. For example, student achievement or growth can be compared to a variety of socioeconomic and demographic variables to ensure that all subgroups experience optimum educational outcomes. This powerful feature allows users to select the x and y axes variables to plot; drill down to detailed performance information at the district, school and teacher level; and zoom into any area within the scatterplot for further analysis.

Identify Students at Risk for Underachievement

By viewing the incoming levels of the academic preparedness of students as well as the growth patterns within classrooms, educators have the opportunity to plan effectively, differentiate instruction and help students progress year to year. SAS EVAAS for K-12 diag-

nostic reports reveal at-risk students, thereby enabling earlier intervention.

Customize Reports

With custom reports, end users are empowered with the flexibility to display information in a variety of forms such as District and School AYP Dashboards, College Readiness Dashboards, or custom student lists to monitor the effectiveness of programs. SAS can also build customized reports into the Web application for expedient and frequent use based on specific needs.

Export Data for Ownership

Authorized users can export both value-added and projection estimate results, and download them into a variety of formats for independent use and research.

Assign Student-Teacher Linkages

The SAS EVAAS roster verification process allows teachers and administrators to assign individual student-teacher linkages and to select different scheduling conditions and proportions of instructional responsibility. This double layer of authentication allows teachers to be a part of the linkage process, ensuring full transparency in this first, crucial data quality step.

Build Confidence with a Secure, Proven Process

Upon receipt of the student testing data through a secure transfer process, the SAS EVAAS team performs analysis of the data, including read-in, merging and quality control processes. The flexible and transparent EVAAS modeling is robust enough to accommodate a variety of adjustments in support of district or state policy changes. The district, school and teacher value-added modeling analysis and student projections are then provided through a secure, hosted website and can be customized to fit a particular state or district.

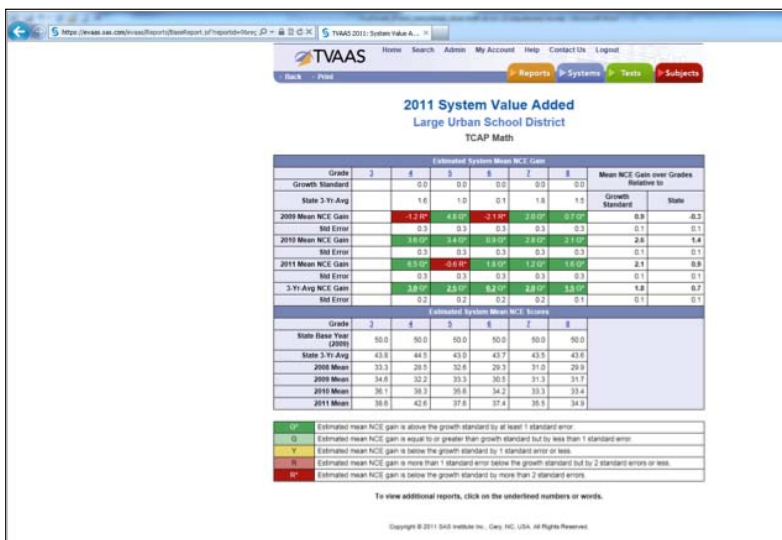


Figure 1. Sample Value-Added Report for a District

Key Benefits

Collaborate with SAS for Continuous Improvement

SAS works with our education, research, client and business partners to continuously improve the quality of our products, services and delivery methods. Understanding the importance of a complete rollout and delivery strategy, we provide ongoing services to our client partners and stakeholders to support them from the communication plan to implementation, training and well beyond.

Include More Students for More Reliable Progress Estimates

SAS EVAAS for K-12 accommodates student and teacher mobility by not excluding students with missing test scores from the analysis. By avoiding the bias that can occur from systematically excluding those students, this approach provides the most reliable estimate of effectiveness for a district, school or teacher.

Include More Data for More Precise Progress Estimates

By using SAS software's multivariate longitudinal analysis, educators are not held accountable based on a single test score. SAS EVAAS for K-12 uses up to five years of data for an individual student by simultaneously analyzing scores across all grades and subjects. This process minimizes the influence of measurement error associated with individual assessments and increases the precision of the estimates. SAS' value-added models are continually refined to combine features of random and fixed effects models in order to increase precision while reducing measurement error and bias.

Accommodate Team Teaching

The SAS EVAAS for K-12 teacher value-added reporting accommodates team teaching and other teaching arrangements, where more than one teacher has instructional responsibility for a student's learning.

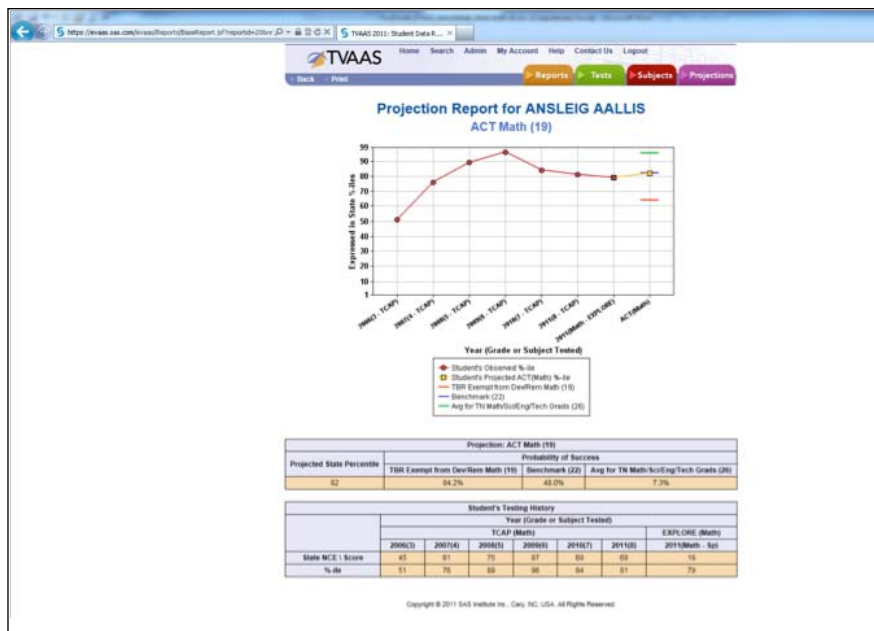


Figure 2. Sample Student-Level Projection

Increase Flexibility in Assessments Among Policymakers

SAS EVAAS for K-12 uses tests that are on differing vertical or horizontal scales. This flexibility around scaling ensures continuity of reporting when test regimes change over time, giving policymakers more options in their testing. The criteria for inclusion in assessments are: reliability, high correlation with curricular standards, and sufficient stretch in the reporting scale to measure the achievement of both very low- and very high-achieving students in a grade and subject.

Any assessment meeting these criteria can be utilized in the modeling, including some interim or short-cycle assessments. The ability to refresh the EVAAS reporting multiple times within the school year gives educators the instructional tools needed to formatively adjust their practice to best meet the needs of all students.

Gain the Benefits of a SAS-Hosted Environment

Because SAS EVAAS for K-12 is a hosted application, reports can be delivered in as little as four to six weeks after SAS

receives clean and usable data. There are no hardware, software or staff investments needed. SAS manages sensitive data for a variety of global customers on secure servers with all of the required system backups in place to ensure the safety and confidentiality of sensitive data.

Gain Savings Through Ease of Deployment

SAS provides an intuitive Web interface and built-in login security. This reduces the investment in hardware, specialized personnel and software installation and maintenance.

Advance Knowledge Through Training

SAS EVAAS provides professional development specific to the educational intent of each client. The learning opportunities include:

- Interactive webinars that introduce users to the reporting and address real-world educational problems with actual SAS EVAAS reporting.
- Embedded learning within the reporting system through instant access to video learning modules that are embedded within the application.

- Help files in the Web application to guide the user through interpreting and applying the reporting on that page, as well as provide instant answers to many common questions.
- Direct access to the SAS EVAAS Support team of experts dedicated to answering questions through a link on the Web application.

Gain the Advantages of Decades of Experience

The SAS EVAAS team is composed of former educators, professional statisticians, policy analysts and Web specialists with as many as 20 years of experience delivering value-added modeling in a production environment across 20 states.

Hear Expert Confirmation Through External Validation

The reliability of SAS EVAAS reporting has been reviewed and confirmed by prominent experts such as four US Department of Education Peer Review Committees, the Government Accountability Office and the RAND Corporation.

SAS® EVAAS® for K-12 System Requirements

To learn more about SAS EVAAS for K-12 system requirements, download white papers, view screenshots and see other related material, please visit www.sas.com/evaas.

SAS EVAAS for K-12 furnishes the statistical rigor necessary to provide precise and reliable information on the effective influence of student progress by addressing these challenges:

- Accommodating fractured student records (missing data) without introducing major biases that come from either eliminating the data from students or by using overly simplistic imputation procedures.
- Exploiting all of the longitudinal data for each student when not all of the historical data is on the same scale.
- Providing educational policymakers flexibility in the use of historical data when testing regimes have changed over time.
- Managing the data challenges associated with student and teacher mobility.

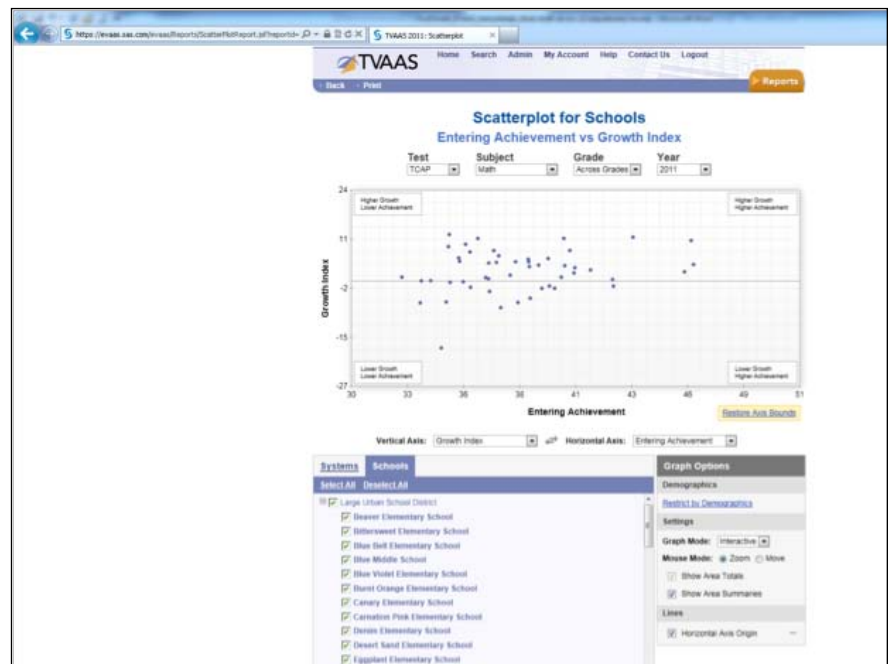


Figure 3. Sample Scatterplot