

ASA ISSUES STATEMENT WITH RECOMMENDATIONS FOR USING VAMs FOR EDUCATIONAL ASSESSMENT

ALEXANDRIA, VA, APRIL 8, 2014—The American Statistical Association (ASA) has issued a position statement to better inform the use of value-added models (VAMs) for educational assessment, announces ASA President-elect David Morganstein.

The statement, which was adopted by the association’s board of directors during its meeting April 4, notes the strengths and limitations of VAMs and makes recommendations for their use.

“The ASA is issuing this statement to provide insight to all levels of the education community on what can and cannot be reasonably expected—given current knowledge and experience—from the use of VAMs,” says Morganstein. “It is our hope that a better understanding of the statistical perspective of VAMs will constructively inform their use in the evaluation of our nation’s teachers and the ongoing discussion.”

In recent years, use of VAMs has become more prevalent, perhaps because these models are viewed as more objective or authoritative than other types of information. Also referred to as value-added assessment (VAA) models, VAMs attempt to measure the value a teacher adds to student-achievement growth by analyzing changes in standardized test scores.

In response to the growing use of VAMs, including in high-stakes decisions such as determining compensation, evaluating and ranking teachers, hiring or dismissing teachers, awarding tenure and closing schools, the ASA position statement makes the following recommendations:

- The ASA endorses wise use of data, statistical models and designed experiments for improving the quality of education.
- VAMs are complex statistical models, and high-level statistical expertise is needed to develop the models and interpret their results.
- Estimates from VAMs should always be accompanied by measures of precision and a discussion of the assumptions and possible limitations of the model.
- VAMs should be viewed within the context of quality improvement, which distinguishes aspects of quality that can be attributed to the system from those that can be attributed to individual teachers, teacher preparation programs or schools.

Noting the rich contributions of statisticians to quality-improvement processes in many fields, the ASA statement urges engaging statisticians and using sound statistical practices when using data and statistical models in the education context.

Among the expertise statisticians can provide are evaluating model assumptions, determining if the model fits the collected data, investigating sensitivity of estimates to various aspects of the model, reporting measures of estimated precision such as confidence intervals or standard errors and assessing the usefulness of the models for answering the desired questions about teacher effectiveness and how to improve the educational system.

“Statisticians can play an important role in raising the quality of education. Our members have a long, proven and ongoing record of enhancing quality improvement in many fields, such as manufacturing and health care,” says Morganstein. “The ASA and its members stand ready to help the education community in its efforts to improve the quality of our nation’s educational system.”

[Click here to read the complete ASA statement on using value-added models for educational assessment.](#)

About the American Statistical Association

The ASA is the world’s largest community of statisticians and the second-oldest continuously operating professional society in the United States. Its members serve in industry, government and academia in more than 90 countries, advancing research and promoting sound statistical practice to inform public policy and improve human welfare. For additional information, please visit the ASA website at www.amstat.org.

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