

Did You Know?

MATHEMATICS

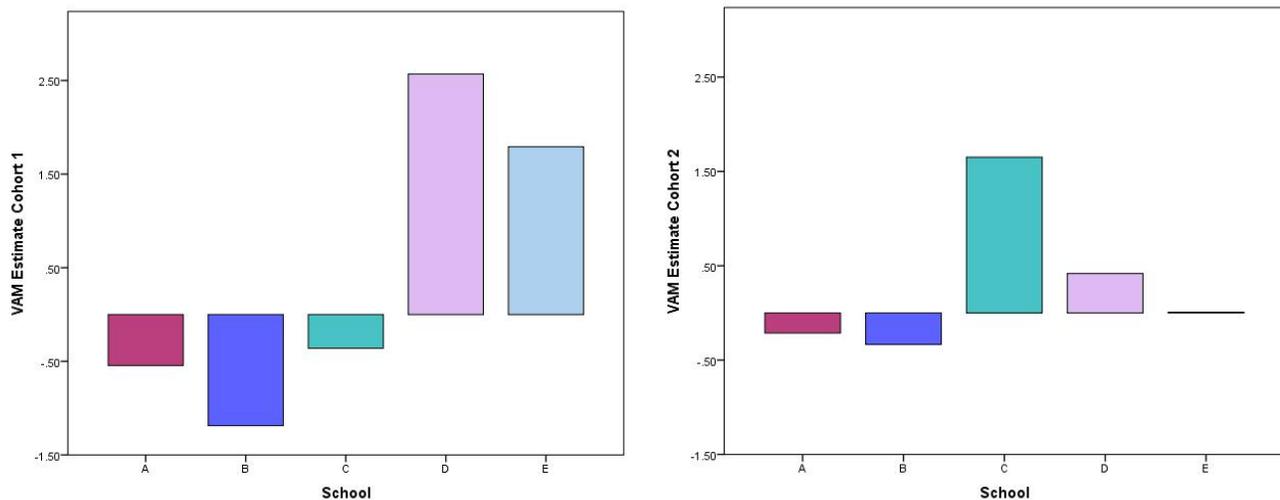
Research Note No. 7 – March 2018

Accountability model estimates of school performance vary a good deal from one student cohort to another. Without careful scrutiny, these changes in cohort composition may be misinterpreted as changes in school performance.¹

The good news: There are relatively simple ways to minimize the impact of uncertainty that occurs from cohort changes. Study of cohort differences also can result in better understanding of student progress and growth.

The challenge ahead: Schools, districts, and states need to devote additional attention and resources to take cohort variability into account in evaluating academic performance.

VAM Estimates for Five Example Schools Across Two Successive Student Cohorts



- A value-added model (VAM) estimate of zero is as *predicted*, a negative VAM estimate is *below prediction*, and a positive VAM estimate is *above prediction*. The figure above shows that school VAM estimates in one academic year (panel on left) change markedly for the next cohort of students (panel on right) in Oregon middle school mathematics.
- These cohort changes likely have little to do with reliable changes in actual school performance, but are more likely related to changes in the composition of student cohorts from one year to another (e.g., changes in percentage of students with disabilities in the school or percentage of economically disadvantaged students in the school).

¹ For more information, see:

Stevens, J. J. et al. (2017). *A Comparison of Alternative Models for Estimating School Performance in Mathematics and Reading/Language Arts in Four State Accountability Systems: Oregon Results*. Available from our website: www.ncaase.com

Acknowledgement: This research was funded through the Institute of Education Sciences (IES) (<http://ies.ed.gov>) through a Cooperative Service Agreement establishing the National Center on Assessment and Accountability for Special Education NCAASE (PR/Award Number R324C110004). The findings and conclusions expressed do not necessarily represent the views or opinions of the U.S. Department of Education.

NCAASE
NATIONAL CENTER ON ASSESSMENT AND
ACCOUNTABILITY FOR SPECIAL EDUCATION