
Some Answers to Growth Model Questions



Office of Educational Accountability

What is a growth model?

Growth models measure the progress of individual students over time. These models can provide additional information for instructional planning, school improvement, and accountability under No Child Left Behind (NCLB). One type of growth model is a *value added model* (VAM), which can be used to estimate a school's effectiveness by controlling for student characteristics such as prior achievement or poverty.

How are growth models used for accountability?

NCLB accountability looks at status (percent proficient) and improvement (safe harbor), neither of which measure individual student progress. Title I regulations issued in October allow states to include a growth model in their accountability systems. However, models must be based solely on achievement against grade level standards, so models that include student characteristics, such as value added models, are not allowed. In addition, the requirement that all students must be proficient by 2013-14 must be maintained.

Eleven states piloted the use of various growth models for accountability. These models are generally of two types: growth to standards (GTS) models and transition matrices. A GTS model allows schools to count as proficient students who are "on track" to be proficient within some defined time frame. A transition matrix gives schools "credit" for moving students up through performance levels, even if those students have not yet attained the proficient level.

What is a growth report?

Growth reports included with some commercial benchmark tests typically show student scores over the course of a semester or a year. These reports may be most helpful for making instructional decisions about a student's educational program during a school year. Often these reports include normative information – such as whether a student's growth is above or below average.

What can a district do with growth model data?

Districts can use information from growth models to supplement status information for accountability and to evaluate the effectiveness of programs and schools. For example, a school might be considered as needing improvement if it has a larger percentage of students scoring below proficient than other schools. However, a growth analysis might show that in this same school students are making exceptional progress even though they have not yet met proficiency targets. That would be evidence that the school is on the right track and may be using some practices or programs from which other schools could learn. Two districts in Wisconsin use a value added model: Milwaukee Public Schools and the Madison Metropolitan School District.

What is DPI doing with growth models?

We are exploring growth models that could be included in our accountability system and other models that, although not allowed for accountability, would still be useful for program evaluation and school improvement. As part of the state data warehouse, we are involved in a project that will demonstrate a value-added model based on statewide WKCE data.

The project is led by Rob Meyer, director of the Value Added Research Center at the Wisconsin Center for Education Research. A second project is investigating the feasibility of four different growth models, including some that could be used for accountability. Doug Bates (UW-Madison), Harold Doran (American Institutes for Research), and Bob Lissitz (University of Maryland at College Park) are leading this project. We will use the results of these projects to create new reports for the data warehouse, evaluate prospective changes to our accountability system, and promote knowledge transfer with districts.

How can I get involved?

Please contact Phil Olsen, Assistant Director of OEA, at philip.olsen@dpi.wi.gov or 608-266-8779 with your questions and ideas as we explore various applications and approaches to modeling growth.
