Value-Added & Accountability Report Cards
September 2016

What is value-added?

Value-added is a type of student growth model that measures how much students improve from one year to the next on state standardized assessments, in comparison to similar students. Like all growth models, value-added models look at growth over time focusing on the pace of improvement in students' performance, compared to other, similar students. Value-added models try to pinpoint how much a particular school contributed to that improvement.

Value-added quantifies how much growth students make over time after applying statistical controls for factors that are generally beyond a school's control, but may be related to how much growth students make. This is meant to facilitate "apples to apples" comparisons of school performance between schools that often serve very different student populations. The measure reflects growth across the entire spectrum of student performance, regardless of the student's starting point.

How are value-added scores used in the report card?

As of the 2015-16 report cards, the Student Growth Priority Area calculation is based on a value-added model, produced by the Value-Added Research Center (VARC) at the University of Wisconsin-Madison. Student Growth is no longer based on Student Growth Percentiles (SGPs); instead, the Student Growth Priority Area is now a school-based growth measure based on value-added scores. What remains the same is that regardless of which model used, growth calculations measure how rapidly students are gaining knowledge and skills from year to year, focusing on the pace of improvement in student performance. Specifically, value-added calculations are designed to identify and measure <u>the difference between predicted growth and actual growth</u> for a group of students.

The Student Growth measure provides a single score that characterizes the growth of a district or school's students, regardless of their prior achievement levels. It takes into account decline as well as improvement in student performance on the annual state test. In addition to prior achievement, the value-added model includes statistical controls for students' family income status (as measured by free/reduced lunch eligibility), disability status, English Language proficiency level, and race/ethnicity. Value-added calculations for 2015-16 report cards are based on 2014-15 Badger and 2015-16 Forward results. Growth scores are calculated for both ELA and mathematics.
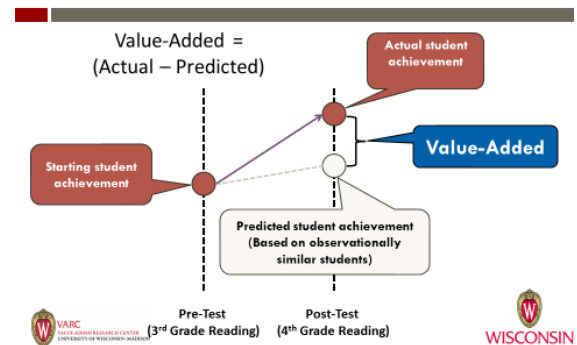
How does the value-added calculation work?

Value-added uses a student's prior year test score as the starting point, controls for demographic characteristics, and then compares the student's performance to others like her or him. Value-added models predict what a student's post-test score would be – or the expected growth – assuming that the student was in the average school. If the school produced more growth than expected, then the school would have a higher value-added score.

While the calculations behind value-added are complex, the concept is fairly straightforward. Value-added, simply put, is the difference between the *actual* and *predicted* growth over time of students who are "observationally similar," as defined by prior achievement and a selected set of characteristics about the students themselves.

In short, value-added works as such:

- Value-added starts with one (or more, if available) pre-test scores – such as a 3rd grade ELA score – to generate predictions based on the students' prior test score history of how much growth students are likely to make.

- When a second, post-test score – such as a 4th grade ELA score – is available, the actual scores of students within a school are compared to their predicted scores.

- If, collectively, the school's actual scores are higher than predicted scores, we call this **positive value-added**, meaning that the school produced more growth than schools which serve similar student populations.

- The value-added model also includes a statistical correction for measurement error, a common issue in standardized assessments.

Value-Added: A Visual Representation

For further details on the value-added calculations used in the School and District Report Cards, please see the Value-Added Technical Manual (http://dpi.wi.gov/accountability/resources).

Where can I find more information on value-added?

The Value-Added Research Center at the Wisconsin Center for Education Research, which has a long history of working with educators in Wisconsin and around the nation, works with DPI to provide value-added data. They have a number of valuable resources to help educators understand value-added:

- VARC Tutorials
  http://varc.wceruw.org/tutorials/

- VARC Professional Development
  http://varc.wceruw.org/what-we-do/professional-development.aspx

The resources provided above can be used to build a general understanding of what value-added is and how it works. However, these resources are not specific to the School and District Report Card. For specifics on the calculations used in the School and District Report Cards, please refer to the Value-Added Technical Manual (http://dpi.wi.gov/accountability/resources).