2020-21 VALUE-ADDED MODEL CONSIDERATIONS

This brief explains what a value-added model is, describes the skip-year growth calculated for the 2020-21 report cards, and discusses considerations for measuring growth during the pandemic.

What is a value-added model?

Value-added models quantify to the extent possible a particular school's contribution to the learning that a student experienced over the year. Value added is the difference between the actual and predicted growth over time of students who are similar in their prior achievement and characteristics.
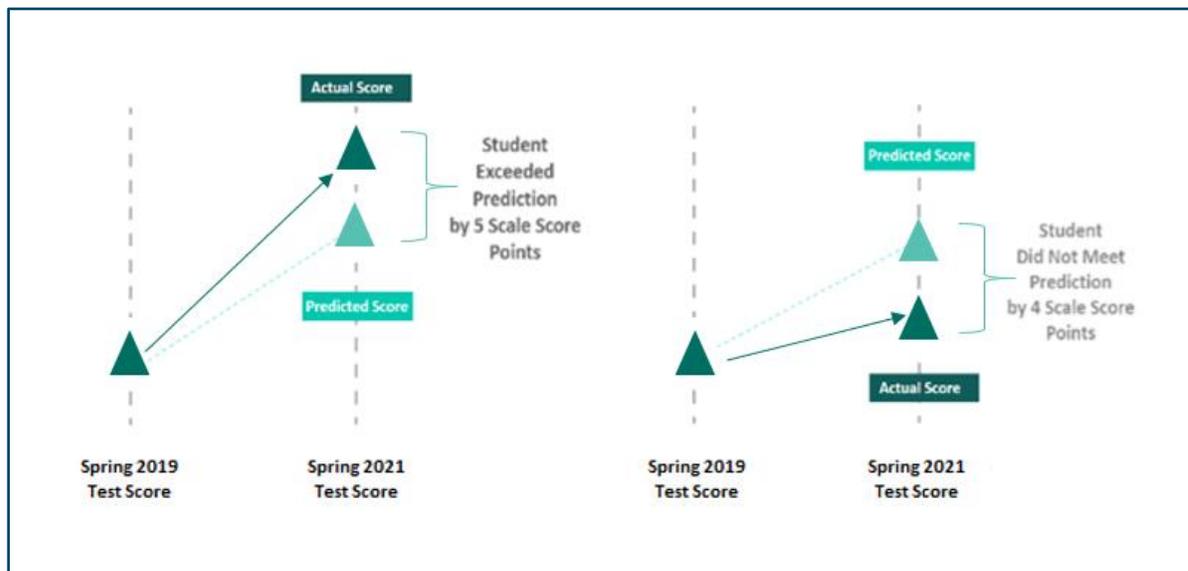

Figure 1. Visual Representation of Value Added

The left side of figure 1 shows an example of a student who scored higher than their predicted score, thus contributing more than average to their school's value-added score. On the right side, the student grew but scored lower than their predicted score, thus contributing less than average to their school's value-added score. For more information on value-added growth, please see the resources linked at the end of this brief.

Skip-Year Growth

As a result of the spring of 2020 assessments not being administered, the 2020-21 value-added growth model employs skip-year growth, in which growth is measured from the spring of 2019 (pre-test) to the spring of 2021 (post-test). Between the two assessments, students will have attended two consecutive grades and (in some cases) multiple different schools over two consecutive years. School-level growth will more closely reflect a school's combined two-year effect on a cohort of students (e.g., grades 4 and 5 for 2019-20 and 2020-21) than it will for a single grade over one year (e.g., grade 5 for 2020-21 alone). When students attend two different schools between 2019-20 and 2020-21, that student's growth is attributed with 50% weight to the school attended in 2019-20 and with 50% weight to the school attended in 2020-21.

Considerations Unique to 2020-21

The COVID-19 pandemic has presented unique challenges that have prompted rethinking of many aspects of education, including data evaluation. Since value-added growth is calculated using student characteristics and prior achievement, it is designed to zero in on learning that occurred in the classroom apart from other factors. During the pandemic, school closures and remote learning changed the way students interacted with their lessons and grew academically. Student growth can still be estimated, despite these changes in educational delivery. However, growth this year is different because we know there is variability in factors affecting student learning that are not captured within our current model, such as access to the internet, home life, and family interactions.

Links to more Resources

DPI Accountability Resources

Growth Models: Issues and Advice from the States

Using Growth Models to Measure Child/Student Outcomes for State Systemic Improvement Plans

Measuring Growth in 2021: What State Leaders Need to Know