

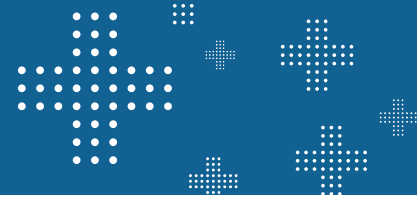


STATE SOLUTIONS RESOURCE

# Through-year assessment data: Considerations for accountability, reporting, and school improvement systems

**nwea** State Solutions

# Introduction



All students deserve the support they need to prepare for the future. To best provide that support, educators need information about what students know and what they are still learning so they can meet students where they are and help them progress academically. Considering the disproportionate impact of the pandemic on student outcomes, there is an increased urgency to better understand where students are starting and how they are progressing throughout the year so educators can target resources and support accordingly. At the same time, policymakers need information at the system level to direct interventions and supports and measure the impact of statewide policies and initiatives. Assessments give us that information, but not all assessments are the same.

Rather than relying solely on a single statewide assessment given once at the end of the school year, state leaders are increasingly striving for more-coherent assessment systems and designing assessment systems to serve multiple purposes. For many state leaders, that means thinking about how to continue to support teachers on formative assessment practices while also identifying interim assessments that both serve as checkpoints during the year and are more deliberately aligned with the summative determination. Thinking about all these elements as a whole generates synergy and efficiency in a way that best supports effective use of data while also creating a better balance among the different types of assessments. Aligning interim assessments to the summative assessment, for example, allows the system to track progress against end-of-year expectations and better target interventions throughout the year to support students in reaching the goals set by their system. When designed and considered as a whole, assessment systems provide more value to students, educators, school leaders, families, community members, and policymakers.

These innovative approaches to statewide systems of assessment provide educators with data at multiple points in time, offering various ways for them to think about student growth. Different assessment systems allow for more real-time data, better identification of root causes of challenges to then better target supports and interventions, and new ways to publicly report different types of school- or district-level growth to both identify bright spots and find ways to engage communities in problem-solving in areas where they need help. Having the ability to monitor growth throughout the year also supports student and family engagement, allowing students and families to set goals and track progress throughout the year to foster positive feedback loops.<sup>1</sup> All of this helps state leaders provide the necessary support so district and school leaders have the resources they need to take action.

As a nation, we are already writing our post-pandemic education story. What educators do now to identify and meet students' needs, especially the students most disproportionately harmed by the pandemic, will affect families, communities, and the nation for years to come. States have an opportunity to rethink and rebuild education systems that better support student learning and educator practice. This guide is intended to help state leaders to be bold, to think differently about how student growth data can empower educators in their state and change the future for their students.

# Approaches to Measuring Student Growth

Measuring student growth is a powerful tool for educators, students, and families. It is also complicated.<sup>2</sup> Over the last 20 years, since the advent of No Child Left Behind, states have increasingly begun measuring growth for purposes of federal accountability, with nearly every state measuring student growth under the Every Student Succeeds Act. There are many ways to measure growth, so defining why a state is measuring growth, what it wants to measure, and how it wants to use growth data is an important first step. A state can make different comparisons according to its approach. If a state has assessment data from multiple points in time, it can look at growth in multiple ways to help inform the actions it will take and the resources it will provide to support students.

**Here are a few examples of approaches to analyzing student growth data:**

## YEAR-OVER-YEAR

This approach focuses on how much a student has progressed over an entire year, typically using summative assessment results from the spring. This reflects potential impacts from the summer.

## FALL-SPRING OR WITHIN-YEAR GROWTH

This approach focuses on how much progress a student makes within the school year using assessment results from the fall and the spring. This does not account for the impact of summer.

## SPRING-FALL

This approach focuses on how much progress, or loss, students experience during the summer, comparing assessment results from the spring to the following fall.

Currently, districts primarily have access to multiple assessment data points by supplementing the state assessment with interim assessment systems. However, several states are moving toward state assessment systems that provide multiple assessment data points throughout a school year. State leaders can work with their technical advisory committees or other technical experts to understand their options and determine what approach works best for them according to their specific theory of action and their vision for the role the state education agency plays in supporting student learning.

No matter which growth measure a state uses, it is important to ensure that the state, districts, and schools use the data to better understand how to make more-informed programmatic and instructional decisions to improve student outcomes.

## DEVELOPMENT OF A THEORY OF ACTION

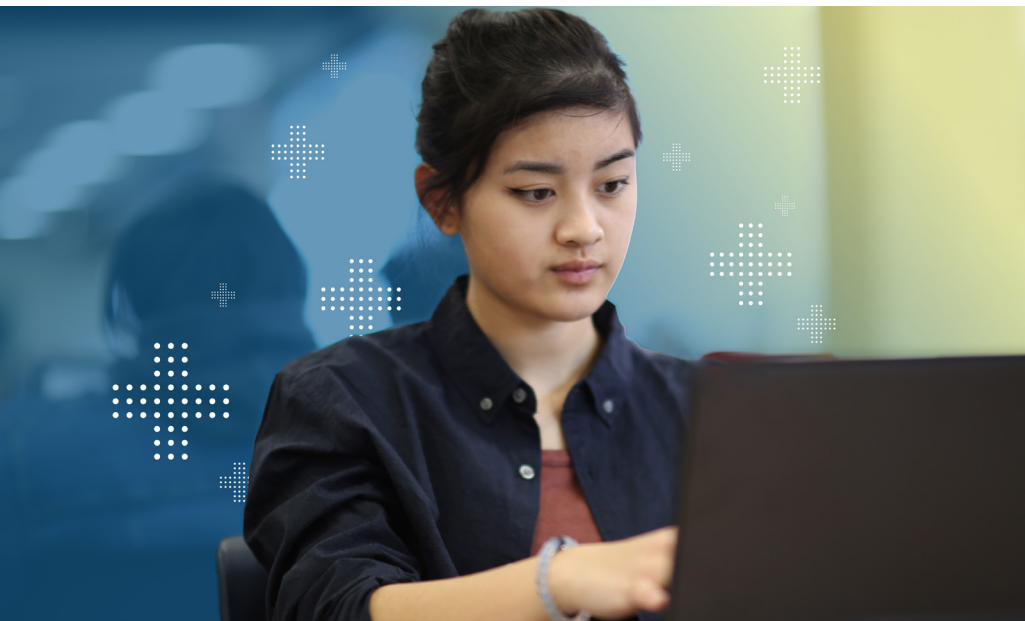
Many decisions inform how to approach measuring growth and, in turn, how to use growth data. Standards, assessment, accountability, and school improvement are all part of a state's coherent strategy, supporting the set goals based on the state's theory of action.<sup>3</sup> Establishing a strong theory of action is a critical first step for state leaders, and every decision should then be considered in light of that theory of action. What are the goals for students in the state, and what will determine success?

In designing a theory of action, state leaders can engage closely with district leaders, teachers, and community members to cocreate a shared sense of priorities for students in the state and lay the groundwork for a coherent strategy at the state, district, and school level. Moving to a coherent assessment system—such as a through-year assessment system—impacts data use in different ways, including affecting what measures can be used to inform school improvement strategies, what data can be publicly reported, and what indicators can be incorporated in a state's accountability system. The decisions made about how to assess will impact what can be done with the results, so state leaders must simultaneously consider the assessment design and the intended use of the results.

# State Assessment Strategies

A state can take different approaches when designing a statewide assessment system, and what a state, in collaboration with district leaders, chooses will depend on its theory of action. In deciding which approach to take, state leaders can consider how their assessment system can build local capacity, how the system can support student progress and outcomes, and how they want to use data from the system.

Under a traditional model, state leaders focus primarily on the summative assessment. This typically means one end-of-year assessment given in the spring that is then used for federal accountability systems, among other possible uses. It allows states to measure proficiency on an annual basis and determine year-over-year growth. In this model, state leaders may provide guidance and support on the use of balanced assessment systems that include interim and formative practices identified at the local level. Districts typically lead the effort to provide through-year measures from interim assessments, which means they may or may not align with the summative assessment. For some states, this approach may be the best choice because of the state's theory of action and the needs of stakeholders.<sup>4</sup>



**+ Currently, states use an end-of-year assessment for growth measures, measuring year-over-year growth.**

## STATE ASSESSMENT STRATEGIES

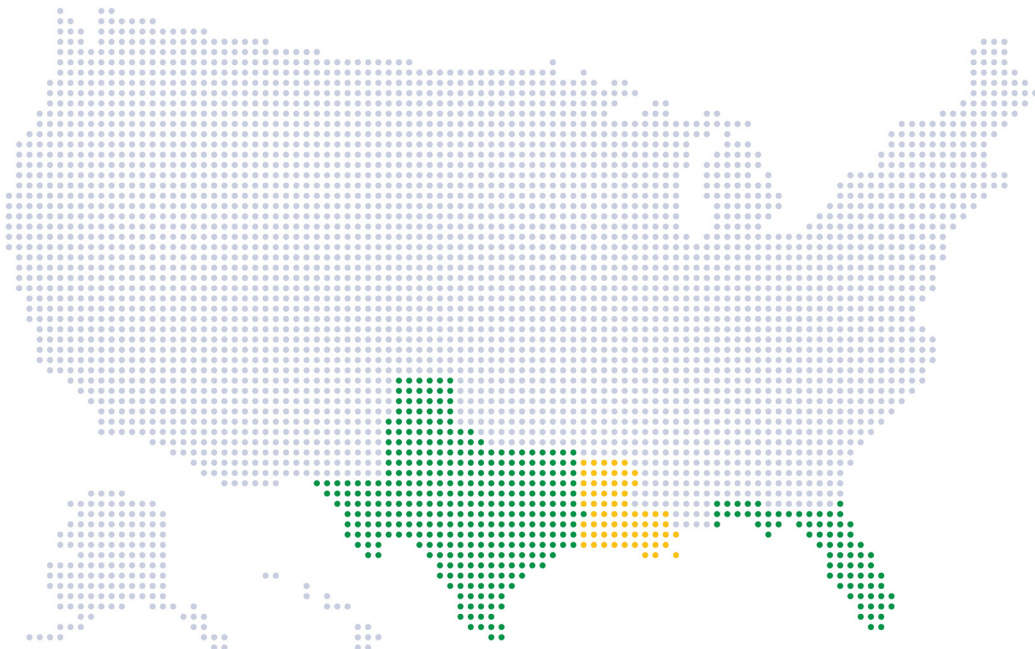
For other states, a different approach to an assessment system may better meet their needs. Here are some examples of different approaches states can take and the ways states can use data from those systems.



### A THROUGH-YEAR ASSESSMENT MODEL

According to the goals states want to attain, they may deliberately align assessments throughout the year to provide multiple opportunities to understand achievement and generate consistent statewide data points. In this design, an assessment is administered at multiple points in the year. With each assessment, the state can get a reliable measure of achievement, as well as growth scores as the year progresses. As a result of having multiple data points, educators can look at growth in many ways, including normative growth (comparing a student's growth with the average growth of a student group), within-year growth, spring-to-fall growth, and year-over-year growth. Educators can use all this data in different ways to support student outcomes.

Several states are already leading the way on adapting this approach. Nebraska has built a through-year model, the Nebraska Student-Centered Assessment System (NSCAS) Growth assessment. This system of computer-adaptive assessments provides information on student performance against both grade-level expectations and personalized learning needs with the underlying goal to make assessment information more timely and instructionally useful.<sup>5</sup>





## STATE ASSESSMENT STRATEGIES

Florida is moving to the Florida Assessment of Student Thinking. With this switch, the state intends to reduce testing time and minimize the stress of testing by administering three much shorter “check-in” assessments in the fall, winter, and spring.<sup>6</sup>

Texas is launching a multipart through-year assessment pilot that may ultimately replace its current summative assessment. In deciding what approach to take, the state identified the benefits its stakeholders valued, including more-timely and more-frequent feedback to support instruction before students move on to the next grade or class, multiple opportunities for students to show what they’ve learned, and the ability to get within-year growth information.<sup>7</sup>

Louisiana is developing a through-year assessment model that consists of a series of shorter assessments administered over the course of the year. These collectively cover all grade-level standards and can be aggregated and compared to provide a comprehensive measure of standards mastery for summative purposes. The assessments will connect flexibly with high-quality curriculum across the state based on analyses of commonalities in English language arts curricula and learning progressions in math. Unlike traditional summative-assessment designs, Louisiana’s through-year assessments will provide dynamic, real-time data on learning to educators, parents, and students.<sup>8</sup>



### A CONNECTED ASSESSMENT MODEL

Other states may design a coherent system differently. Rather than measure achievement relative to on-grade expectations (i.e., summative) multiple times, states can focus on projected growth to start the year and end with an aligned summative assessment that checks proficiency. This approach still allows for multiple statewide data points and multiple opportunities for growth analysis, but it provides more flexibility in terms of when and how interim assessments are given. In this model, educators are again able to look at growth in many ways—including within-year normative growth, spring-to-fall growth, and year-over-year growth—and use this data in various ways to support student outcomes.

Alaska has decided that this approach best meets its needs. The state is moving to AK STAR, the Alaska System of Academic Readiness, which will connect district MAP Growth tests to the state summative test. The state notes that it is making this change so it can better align its standards, assessment, and instruction, with the goal to improve student growth outcomes.<sup>9</sup> Virginia is also heading in a new direction. It is moving to a system in which reading and mathematics growth assessments will be administered to students once in the fall and once in the winter (midyear). In addition to these growth assessments, the state will continue to give its Standards of Learning summative assessment at the end of the year.<sup>10</sup>

# Ways to Use Growth Data

Growth data can be calculated and used in many ways, most of which are not mutually exclusive.<sup>11, 12</sup> A state's theory of action will help to determine how to use the data to support schools and whether to publicly report the data or incorporate it into the state's federal accountability system. Just like the assessment system, a state's accountability, reporting, and school improvement strategies must be connected and coherent. Understanding, for example, how indicators included for accountability are then used to inform school improvement helps make the data more meaningful and impactful. Below are some ways to consider using growth data.

## QUESTIONS TO ASK WHEN ANALYZING DATA

Having multiple ways to look at student growth allows for various solutions to support students. States can start by analyzing the data at the state level and supporting teachers and school and district leaders to analyze their data at the district, school, student group, and student level. Asking the following questions can help determine what support is needed and where:

- ❓ Does statewide data show there is a subject area, for example, in which students are consistently growing across the state?
- ❓ How are students performing at the beginning of the year as compared to grade-level expectations?
- ❓ How much did students progress between the first and second assessment? Second and third?
- ❓ How much growth did students make within the school year? How did that vary by grade? By subject? By school? By district?
- ❓ How did growth vary for students based on their starting points? Did students who started the year a grade level behind have the same level of growth as those who were six months behind?
- ❓ What was the impact of the summer on student scores?
- ❓ Are students on track to reach proficiency? On what timeline?
- ❓ How do the answers to these questions vary by subgroup?



## SUPPORTS AND INTERVENTIONS

Rich data answering key questions can play an instrumental role in a state’s school improvement process. Having data from different points in time that can be broken down in various ways allows educators to better understand the root causes of a school’s challenges. For example, the data may indicate that students made average or above-average growth within the school year but lost ground over the summer. A blunt year-over-year analysis may show their progress as limited, but a nuanced analysis that pinpoints the impact of summer can lead to a conversation about what supports students need during the summer to maintain and continue to gain.<sup>13,14</sup> Having a reliable measure of student proficiency in math for fifth-graders midyear may signal to a school that students are not making the progress they had hoped, and targeted interventions may be necessary starting that school year, allowing real-time change that is harder to make with lagging results. Instructional coaches, for example, could be reallocated within the building to work with the fifth-grade teachers to help address learning challenges in their classrooms.

**At a systems level, policymakers and state and local leaders may use growth measures to inform their actions and support. State leaders can use growth data to:**



**Local leaders can use the data to:**



This type of data and analysis creates a clearer picture that allows for more-customized solutions as part of a state’s school improvement process. State leaders can work with their school improvement teams to identify strategies for supporting educators to effectively use this type of data, such as including questions that rely on growth data as part of needs assessments or improvement plans that schools share with the state. Building on support for data analysis, the state can also provide support for actions to take based on what the state finds. If a district identifies that English learners are progressing at a slower rate in math starting in third grade, for example, the state can provide resources, materials, guidance, and financial resources, when appropriate, to support evidence-based practices to address the identified challenge.



## WAYS TO USE GROWTH DATA

### TIMELINESS AND UTILITY OF DATA

States using through-year or connected assessment models can report data in a timely manner to educators and families. Providing preliminary data within days of the assessment allows school leaders and educators to use the data to inform or reset interventions and instructional programming. Additionally, families can know prior to the end-of-year test how their students are doing compared to grade-level expectations.

Both assessment models described in the prior “State Assessment Strategies” section provide statewide growth data that is more frequent and precise than data generated by the traditional summative method. States can ultimately use this data to identify schools that are making progress and target struggling schools within the school year instead of waiting until the end-of-year assessment.

### THE IMPORTANT ROLE OF ASSESSMENT AND DATA LITERACY

Educators, especially teachers, may not have received the training needed to effectively understand and analyze assessment data. Educational-preparation programs may not provide sufficient background to support the volume, detail, and complexity of student data that teachers routinely contend with, especially given the various types of assessments. As a result, educators need professional learning opportunities to gain assessment literacy so they can comprehend what the data says and understand the variety of ways they can review, compare, and use it to inform instructional decisions. A comprehensive assessment system should include strategies for providing professional learning focused on the different types of assessments in the system as well as how to use data effectively.<sup>15</sup>

Many states, including Indiana and Colorado, have taken the first step by providing assessment literacy resources on their websites. In Michigan, the state education agency works closely with the Michigan Assessment Consortium.<sup>16</sup> Through a broad range of resources, learning modules, and training opportunities, this organization is committed to helping educators understand assessment data and make it meaningful.

### PUBLIC REPORTING

A state, district, or school may choose to publicly report growth data. School report cards serve a critical function of providing clear, relevant information to parents, students, and other community members.<sup>17</sup> They help to ensure transparency and can provide opportunities to engage the community in supporting the school. Since the enactment of the Every Student Succeeds Act, states have made great strides in improving how they report education data to the public.



## WAYS TO USE GROWTH DATA

If a school or district is looking to mobilize support for students during the summer, for example, publicly sharing data could lead to a conversation with community-based organizations that may be able to partner with schools to provide support. If a district reports that within-year growth for fourth-graders in math lags behind other grades, parents and educators may come together to examine what it is about that year that is challenging for students across the district. Being transparent about the data, and honest about the challenges, can allow for creative solutions and partnership outside the schoolhouse doors.

A state will likely make different decisions about what it reports publicly according to its theory of action and which assessment model it chooses. In a through-year model, a state may be more inclined to share data on achievement based on grade-level standards and growth. In the connected approach, the state would likely choose to share results based on growth from spring to fall and fall to winter. States may also consider the role public reporting can play as a stepping stone or pilot for accountability. As educators transition to new assessment models, they may be reluctant to jump right in to high-stakes use of new growth data. Using this data for school improvement and then perhaps reporting with an eye toward eventually incorporating it as an accountability measure could help ensure educators are comfortable with the data and confident about using it for various purposes.



## ACCOUNTABILITY DETERMINATIONS

Finally, collecting data multiple times a year could allow a state to use within-year growth for purposes of state or federal accountability. Under the Every Student Succeeds Act, states have some choices about how to include growth measure indicators. For third through eighth grade, states have the option to use a measure of student growth or another valid and reliable statewide academic indicator, though most states use a growth measure indicator. Currently, most use some form of year-over-year growth measures as part of their systems, which some may continue to prefer. Others, though, could possibly better support their specific theory of action using within-year growth data from a through-year or connected assessment model. If the state's priority is to understand the growth that occurs during the school year to better grasp the impact of teaching and learning at the school level, the state may prefer a within-year growth indicator. To include a growth indicator for purposes of accountability, the state would need to ensure the data is valid, reliable, and comparable. Therefore, a state could potentially use a through-year or connected model to collect growth data for the growth indicator as part of its accountability system.<sup>18</sup>

A state may also decide to use multiple growth measures to meet its theory of action, such as using both year-over-year and within-year growth. A state could, for example, include an indicator based on these different types of growth measures for purposes of the school quality or student success indicator, since students across the state are all taking the



## WAYS TO USE GROWTH DATA

assessments. State leaders may also consider how much weight to give a growth indicator as part of these decisions, potentially giving more weight than before.

In considering the use of within-year growth in an accountability system, state leaders will have to think about the perception of each testing event. If district and school leaders now perceive that they are in a high-stakes testing environment three times a year as opposed to just one, the benefits of streamlining the system may be overshadowed, even if the overall testing time is less than it was with the summative assessments. State leaders can work with their stakeholders to figure out the pros and cons of each approach and ultimately decide what is in the best interest of students in their state. These decisions should be part of a comprehensive discussion about a state's accountability system and how to use it to advance the state's policy goals.<sup>19</sup>

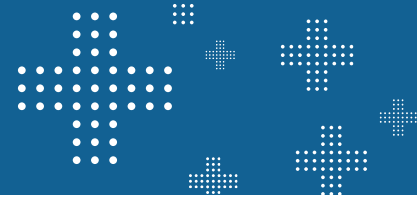
### ADDED INSIGHT FROM THROUGH-YEAR ASSESSMENTS

Through-year assessment systems open the door to new ways of looking at students' learning progress and can help to isolate what happens during the school year versus over the summer or a full year. When state leaders are considering how best to support their students, having added insight into these patterns of learning can help them identify what supports might be most appropriate and when.

### HIGH-STAKES USE OF GROWTH DATA: THINGS TO CONSIDER

While innovation allows room for improvement and change, it also means new questions emerge. As increased focus is put on growth throughout the year, people may ask if some may try to “game the system,” maybe without even realizing it, encouraging lower scores early in the year to demonstrate increased growth by the end. It is important to address this question early and often and consider it in conversations about how to design assessments and how to use growth data. For some, the concern may be greater, leading to focusing more on lower-stakes uses. For others, the value of using within-year growth data for higher stakes outweighs the low risk of bad actors. In that case, states may consider including protections in the assessment design, such as flags in the system that can signal a potential problem.

# Where To Go From Here



Understanding how students are progressing in their learning throughout the year and beyond is critically important to improving student outcomes. State leaders have an opportunity to use growth data in new ways to tailor support to better meet students' needs, moving beyond traditional approaches that have failed to close gaps and raise achievement levels for too long. Several states are already on this path toward new assessment models. Next they will need to think through how they will use the assessment model to inform accountability, reporting, and school improvement decisions. When making these decisions, states and districts should keep responsiveness to schools and the needs of educators at the forefront, providing them with appropriate support and the resources needed to address the challenges identified from the assessment data—resulting in a system that truly works coherently to support students as they prepare for future success.

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1 Caprara, G. V., Fida, R., Vecchione, M., Del Bove, G., Vecchio, G. M., Barbaranelli, C., & Bandura, A. (2008). Longitudinal analysis of the role of perceived self-efficacy for self-regulated learning in academic continuance and achievement. *Journal of Educational Psychology*, 100(3), 525-534. <https://doi.org/10.1037/0022-0663.100.3.525>; Pajares, F., & Schunk, D. (2001). Self-beliefs and school success: Self-efficacy, self-concept, and school achievement. In R. J. Riding & S. G. Rayner (Eds.), *International perspectives on individual differences: Self-perception* (Vol. 2, pp. 239-265). Ablex Publishing; Pekrun, R. (2011). Emotions as drivers of learning and cognitive development. In R. A. Calvo & S. K. D'Mello (Eds.), *New perspectives on affect and learning technologies* (Vol. 3, pp. 23-39). Springer. [https://doi.org/10.1007/978-1-4419-9625-1\\_3](https://doi.org/10.1007/978-1-4419-9625-1_3); Yeager, D. S., & Dweck, C. S. (2012). Mindsets that promote resilience: When students believe that personal characteristics can be developed. *Educational Psychologist*, 47(4), 302-314. <https://doi.org/10.1080/00461520.2012.722805>

2 <https://dataqualitycampaign.org/wp-content/uploads/2019/04/DQC-Growth-Data-Resources.pdf>

3 For more information on developing a theory of action, see [https://www.nciea.org/wp-content/uploads/2021/11/Theories-of-Action-for-ESSA\\_040506\\_2.pdf](https://www.nciea.org/wp-content/uploads/2021/11/Theories-of-Action-for-ESSA_040506_2.pdf).

4 Given that states have been pursuing this approach and the field already has significant examples of using growth data from a single summative assessment, this resource does not discuss it in more detail.

5 <https://www.education.ne.gov/assessment/nscas-growth/>

6 <https://www.fldoe.org/accountability/assessments/k-12-student-assessment/best/>

7 <https://tea.texas.gov/sites/default/files/2022-TTAP-informational-webinar.pdf>

8 [https://oese.ed.gov/files/2022/08/LouisianaCGSA2022application1\\_Redacted.pdf](https://oese.ed.gov/files/2022/08/LouisianaCGSA2022application1_Redacted.pdf)

9 [https://education.alaska.gov/State\\_Board/december-2021/4A%20Board%20Updates%20Presentation%2012.8%20ht.pdf](https://education.alaska.gov/State_Board/december-2021/4A%20Board%20Updates%20Presentation%2012.8%20ht.pdf)

10 <https://www.doe.virginia.gov/teaching-learning-assessment/student-assessment/virginia-sol-assessment-program/growth-assessments>

11 <https://dataqualitycam.wpenginepowered.com/wp-content/uploads/2019/04/DQC-Growth-Data-Resources.pdf>

12 [https://scholar.harvard.edu/files/andrewwho/files/a\\_pracitioners\\_guide\\_to\\_growth\\_models.pdf](https://scholar.harvard.edu/files/andrewwho/files/a_pracitioners_guide_to_growth_models.pdf)

13 [https://www.nwea.org/resource-center/brief/38365/academic-growth-for-students-with-disabilities\\_NWEA\\_brief.pdf/](https://www.nwea.org/resource-center/brief/38365/academic-growth-for-students-with-disabilities_NWEA_brief.pdf/)

14 [https://www.nwea.org/resource-center/brief/48232/Academic-Growth-for-English-Learners\\_NWEA\\_brief-1.pdf/](https://www.nwea.org/resource-center/brief/48232/Academic-Growth-for-English-Learners_NWEA_brief-1.pdf/)

15 [https://www.nwea.org/resource-center/white-paper/26702/Why-investing-in-professional-learning-is-essential-for-educatorsand-students-too\\_NWEA\\_Whitepaper.pdf/](https://www.nwea.org/resource-center/white-paper/26702/Why-investing-in-professional-learning-is-essential-for-educatorsand-students-too_NWEA_Whitepaper.pdf/)

16 For more about the work in these states, see <https://www.in.gov/doe/students/assessment/assessment-literacy/>, <https://www.cde.state.co.us/assessment/coassessmentlitprog>, <https://www.michigan.gov/mde/services/student-assessment/assessment-literacy>, <https://www.michiganassessmentconsortium.org/assessment-resources/>.

17 See *Communicating Performance: A Best Practice Resource for Encouraging the Use of State and School Report Cards* and DQC's work on making data publicly available for more information about effective reporting strategies.

18 We are not aware of any state that has tried this approach yet; due to this lack of data, the U.S. Department of Education has not approved states to measure growth in this way at this time.

19 [https://www.nciea.org/wp-content/uploads/2021/11/Theories-of-Action-for-ESSA\\_040506\\_2.pdf](https://www.nciea.org/wp-content/uploads/2021/11/Theories-of-Action-for-ESSA_040506_2.pdf)