Measuring Academic Success Post-Pandemic: A Vital Metric for Recovery
The Need for a Recovery Metric

The effects of interrupted learning are unmistakable in the latest National Assessment of Educational Progress (NAEP) results. While Grade 4 Mathematics scores rose by 15 points from 2000 to 2019, they fell five points from 2019 to 2022—a third of the progress made in nearly 20 years was wiped away by two years of interrupted learning.

This decline also manifests itself in Grade 4 Reading scores, in which students saw a four-point drop, returning us to 1998 performance levels. Reading score improvements have materialized much more slowly than mathematics gains, and post-pandemic setbacks have eliminated the entirety of our progress in recent decades.
This phenomenon is most concerning for students of color and students in low-income areas. Numerous studies have found that these students were hit hardest by school closures and other interruptions to learning opportunities. While almost every school district has more students working below grade level, schools primarily serving students of color and low-income households have seen the greatest increases in students placing below grade level.

The graphic below depicts the number of students placing more than a year below grade level in Reading. For students in schools with a median household income below $50,000, the drop-off from pre-pandemic norms to spring 2021 is the greatest for all income groups.

Examining post-pandemic learning loss by racial makeup uncovers a similarly upsetting trend. In schools that primarily serve Black and Latino students, post-pandemic setbacks were larger than the declines observed in schools serving primarily White students.

While all of the student groups above have regained academic ground since spring 2021, the current pace of that recovery has been insufficient to win back the lost ground on a reasonable timeline.
The Missing Metric

In an environment marked by fewer students than ever prepared for grade-level work, the educators we serve largely agree that we need new measures of progress—a “recovery metric” to chart our path back to pre-pandemic levels of success. Widely used pre-pandemic metrics like “a year’s worth of growth” and “average growth” feel less and less relevant in the current environment. For the multitudes of students placing below grade level, maintaining “average” growth based on pre-pandemic norms is likely to result in perpetual performance below grade level.

In the example below, using the Smarter Balanced Assessment (SBA), we see the progression of a student at the 50th percentile in Grade 3 who grows consistently at the “average” and maintains that 50th percentile performance. Because state test proficiency is based on the progression of grade-level standards, and the average is untethered to grade-level expectations, the student slips further from proficiency over time. While the SBA—an established assessment used in multiple states—is depicted here, this phenomenon is true of many state summative assessments.

![Figure 5: 50th Percentile and State Test Proficiency](image)

In the current environment, with more students placing significantly below grade level and the 50th percentile, the gaps to grade level will logically be even greater than the ones illustrated above. For a student placing below grade level, goals grounded in averages fail to account for the ground the student needs to recoup to “recover” academically. Below-grade level students maintaining the growth we’ve expected historically will never catch up to grade-level standards.
The Ideal Recovery Metric

For educators looking to reach and surpass pre-pandemic levels of success, a simple question is top of mind: How much growth is enough? While there is no single rule for determining which students are and are not on track for recovery, there are a few principles that make sense when designing a recovery metric. At Curriculum Associates, our team would recommend three design principles as a starting point:

- **Ambitious.** Any measure of student recovery will need to be ambitious. Metrics like “average growth” or “a year’s worth of growth” were likely insufficient before interruptions to student learning and make even less sense in a post-pandemic era. But, if average growth doesn’t work, what will? An appropriately ambitious recovery metric needs to be grounded in the standards and measure a student’s progress toward reaching grade level and succeeding with grade-level work.

- **Attainable.** The ideal recovery metric is both ambitious and attainable. It needs to be grounded in reality and attainable by students coming from widely varied starting points and circumstances.

- **Efficient.** Teacher and principal time are in short supply, so a recovery metric cannot create an additional burden on the frontline for educators already tasked with meeting the many needs of students. The ideal metric would introduce no additional work or mindshare to set goals and track progress.

Stretch Growth®: A Proven Starting Place

The *i-Ready* Stretch Growth measure provides a practical, proven starting point for educators searching for a recovery metric. Developed years before the pandemic to provide an aspirational or “stretch” target for students working below grade level, Stretch Growth was created to give students and educators an ambitious, attainable, and efficient path to grade-level attainment.

- **Ambitious.** Stretch Growth was reverse engineered from the growth of students who reached *i-Ready*’s benchmarks for grade-level proficiency and beyond. It highlights the growth path of students with widely varied starting points—including those placing below grade level—on their way to grade-level success.

- **Attainable.** Stretch Growth targets are attainable by design. In addition to being built from the historical growth of real students, they are also capped at the 80th percentile of growth, ensuring a sufficiently large share of students have achieved these aspirational levels of growth in the past.

- **Efficient.** Stretch Growth is automatically calculated for every student following their fall *i-Ready Diagnostic*, with no additional work needed from educators. Stretch Growth is also embedded in student-, class-, and school-level reports, making it immediately accessible to educators working with students to set goals.
In isolation, no metric offers a perfect solution for students working below grade level. A measure on its own merely marks the efforts, strategies, and inherent greatness of our students and their teachers. While metrics are not sufficient on their own, work by multiple thought leaders has pointed to the criticality of ambitious goal setting and high expectations as tools for putting students on a path to grade-level success, most notably The New Teacher Project, whose *The Opportunity Myth* cited “high expectations” as one of its four keys to grade-level success.

## Recent Research: Students Who Reach Stretch Growth

The ultimate goal of a recovery metric is to chart a path to academic success for students. In recent research by the Curriculum Associates Research team, we studied assessment data from more than 1.9 million students who took *i-Ready Diagnostics* during the 2017–2018 and 2018–2019 academic years (i.e., pre-pandemic). In this study, our research team analyzed the starting and ending placements of the students who achieved Stretch Growth in one or both of the studied years.

Students who achieved Stretch Growth in one year uniformly improved their criterion-referenced placements. Looking at students progressing from fall of Grade 3 to spring of Grade 3, after making Stretch Growth in just one year, we saw dramatic improvement across the population—the number of students working on grade level jumped from 21 percent to 93 percent, and the number of students placing more than a year behind fell from 21 percent to less than one percent.

**Figure 6: Students Achieving Stretch Growth in One Year, Grade 3 Mathematics**

*Mid, On Grade +
Early, On Grade
One Grade Level Below
Two Grade Levels Below
Three or More Grade Levels Below*
Students who achieved Stretch Growth in two consecutive years experienced even more dramatic results. At the end of the second academic year, more than 98 percent of students reached a grade-level placement.

**Figure 7: Students Achieving Stretch Growth in Two Years, Grades 3 and 4 Mathematics**

<table>
<thead>
<tr>
<th>Year</th>
<th>Percentage of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall, Year 1</td>
<td>6%</td>
</tr>
<tr>
<td>Spring, Year 1</td>
<td>58%</td>
</tr>
<tr>
<td>Spring, Year 2</td>
<td>89%</td>
</tr>
</tbody>
</table>

Note: While Grades 3 and 4 mathematics are shared here, similar patterns of success occurred across grades and subjects. Data for reading and mathematics, as well as multiple grades, are available in the full report.

While the overall results for students achieving Stretch Growth were uniformly impressive, more aspirational metrics are most critical for students working below their chronological grade level. To support the students in greatest need, achieving Stretch Growth needs to have similarly remarkable results for students with the most academic ground to make up. Encouragingly, students placing more than a year below grade level showed transformative change after achieving Stretch Growth.

**Figure 8: Stretch Growth for Students Placing Two Grade Levels Below, Grades 3 and 4 Mathematics**

<table>
<thead>
<tr>
<th>Year</th>
<th>Percentage of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall, Year 1</td>
<td>100%</td>
</tr>
<tr>
<td>Spring, Year 1</td>
<td>59%</td>
</tr>
<tr>
<td>Spring, Year 2</td>
<td>7%</td>
</tr>
</tbody>
</table>

In this example—looking only at students placing two grade levels below in fall of Grade 3—the results of achieving Stretch Growth in one year are remarkable. One hundred percent of students moved within one placement level of their chronological grade, and 73 percent of students reached a grade-level placement despite starting Grade 3 more than a year behind. After two consecutive years of Stretch Growth, the results are life-changing, with 93 percent of students now working at grade level and the remaining seven percent within close reach of grade level.
More Than Metrics

While these examples show the remarkable outcomes achieved by students reaching Stretch Growth, they are ultimately just measurements. The actual work of teaching and learning occurred in thousands of classrooms, led by heroic teachers and determined students.

The efforts of some of these exceptional educators and students are captured in the Keys to Unlocking Success, which reviews the practices of education leaders who drove exceptional growth in the year following pandemic closures.

Read the complete research: The preceding data are small excerpts from our full research, i-Ready Stretch Growth as a Path toward Proficiency. Read the full research study here.

To learn how i-Ready Diagnostic can connect directly to instructional content and tools that help your students grow, explore the benefits here.

To learn more about Stretch Growth and how it can inform goal setting and recovery measurement in your district, please reach out to your local i-Ready Partners team.
To see how other educators are maximizing their *i-Ready* experience, follow us on social media!

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