

Explorelearning®

An Administrator's Journey to Academic Recovery and Growth



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Action Steps for Academic Recovery

What is academic recovery?

The goal of academic recovery is to identify student gaps in understanding and work to help them reach expected levels of proficiency.

Why is academic recovery necessary?

Just like a bandage won't heal a deeper underlying condition, a surface-level fix won't make up for serious gaps in critical student learning. The 2022 Nation's Report Card released by the National Assessment of Educational Progress (NAEP) revealed that 4th and 8th-grade mathematics scores had the **largest decline since initial assessments in 1990**.

It's important to note that some student learning gaps are not solely because of a slide or "loss" in learning, but rather because students never learned the material to begin with during remote learning. According to NPR, students "**simply did not learn as much or as well as they would have in person**." With post-COVID learning deficits a **reality**, student struggles need to be identified and acted upon in order to see change.



How can I support academic recovery as an administrator?

Identify areas of need

- Using student academic growth data, classroom information (such as formative assessments or weekly grades), and assessment results, partner with your teachers to identify which students are in need of right-now interventions, along with what skills require the most attention.
- Encourage your teachers to dig deeper into why a group of students is struggling to understand a concept. Perhaps they never mastered the prerequisite skills (like **math fact fluency**, for example) in prior grade levels that now serve as building blocks for the present-day material they are trying to learn.

Determine an action plan

- After identifying the key learning gaps to target, determine what student progress should be made and by when. Set clear goals for your academic recovery plan with defined checkpoint dates to ensure everyone stays on track.
- Action steps will look different for each campus depending on staff and student body size. Here are some ideas to set your recovery plan in motion.
 - Tutoring: Targeted skill groups can meet before school, after school, or during academic classroom time with more focused, one-on-one interventions from a teacher. Be sure the tutoring is thoughtfully timed so teachers aren't missing planning time to meet with a small group. If teachers are stretched thin, consider utilizing academic aides, volunteer retired teachers, or other staff members to assist with targeted recovery practice.
 - Differentiation: Classroom and homework assignments that are modified to meet different **student needs** can help students catch up and master skills at their own level. Differentiated materials can be helpful for **math remediation** as students work to master foundational concepts.
 - Funding: Recovery efforts often involve new resources, man-hours, or **technology**. Getting creative with **funding** can help make some goals possible.

Involve students and parents

- **Communicate with families** the efforts your campus is taking to help students catch up and thrive after years of far-from-ordinary learning. Family partnerships will make recovery stronger, as students might have to complete more work at home or attend tutoring sessions. Be sure to emphasize that you share a common goal: to help their child succeed and reach their full learning potential.
- Celebrate the power of a **growth mindset** on your campus. Help teachers reinforce to their students that everyone learns at their own pace and that growth is fun, but often requires hard work.

Embrace the process

Academic recovery requires time and patience. Recognize that results will not be instant, and be on the lookout for examples of successful remediation and growth to celebrate as a campus.

Shifting the Focus to Academic Growth

Across the nation, a question looms over standardized assessments. Do these year-end measures only provide snapshots of student performance at a single moment?

How standardized tests are beneficial

Standardized tests are useful in assessing progress and evaluating curriculum. They allow principals and teachers to see general areas where students are doing well and determine potential places for improvement. But they don't show a detailed picture of student learning.

One test score or letter grade in isolation provides limited information. A single measure doesn't show the range of progress. It can't highlight huge leaps or lost ground in learning. That's where the idea of examining academic growth comes into the frame.

What is academic growth?

To put it simply, academic growth is the measure of a student's progress between two points in time, often from one year to the next or between testing sessions with tools like **MAP**. But this data is much more valuable than a comparison between scores.

How to measure academic growth

Measuring student growth is not easy! Classroom demands keep piling higher. Adding another test to the list without **a plan to use the data** won't accurately show academic growth. It can create frustrations for teachers and students. Make sure that the focus is clear.

Teachers are key

Using data, teachers are the ones who will design and implement specific plans for their students. There must be buy-in for the valuable class time spent. So, be specific with your purpose for assessing and how teachers are expected to use the collected data. With explicit direction, it can become the navigation system for teachers to identify students who hit learning targets and those who require **additional resources** in order to meet academic goals.

Students are an integral part of the picture

Testing fatigue is real! For the data to be reliable, students need to be motivated and engaged when testing. Make sure they understand the value of the information from their scores. Encourage them to develop a **growth mindset** and a willingness to take academic risks. Teachers and students should work together with the data to set goals and reflect on progress. A focus on academic growth offers the opportunity for true teamwork!

Approaches to consider

Many different **approaches and models** are available to measure academic growth. But, what should be considered when choosing assessments?



Alignment with curriculum



Specific testing time intervals throughout the school year for instructional impact



Validated assessment scale



Updated pool of quality questions rooted in rich content, fairness, and depth of knowledge



Consistency with instructional methods



Insights for immediate use and long-term data



Balance with existing testing program

Academic Growth

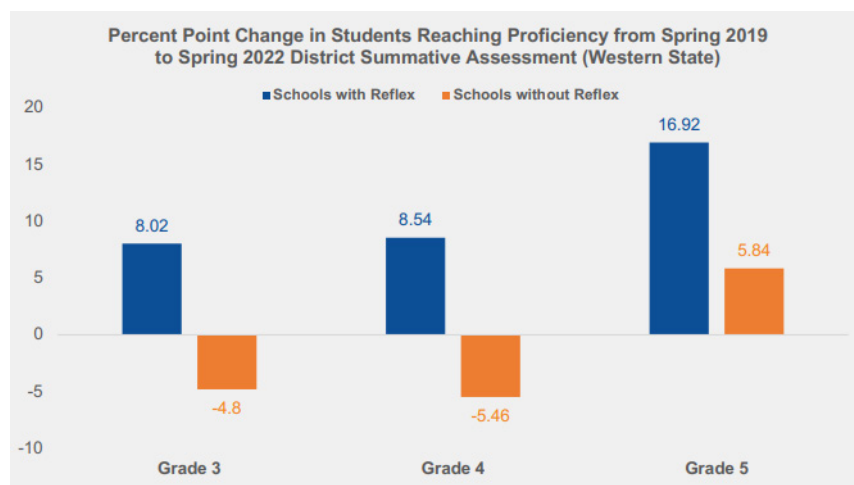
Academic growth brings the paths of student learners into a more distinct focus, allowing teachers to provide the right instructional experiences at the right time for their students. It also brings students into the testing and growth process, allowing the results to become relevant to their learning goals at the moment.

With the ultimate goal of creating lifelong learners in mind, shifting the focus to academic growth makes sense. Thoughtful use of accurate and fair assessments can bring actionable data for a complete picture of learning. And, that's what measuring academic progress is all about.

Research: Schools See Double-Digit Math Proficiency Boost

It's no secret that student learning was severely impacted during and after the COVID-19 pandemic. A longitudinal study from Cambium Assessment, [Learning Loss in the Wake of the COVID-19 Pandemic](#), followed 2.25 million students from 2019 through 2022 and found that significant gaps emerged in mathematics achievement, with proficiency dropping as much as 21 percentage points.

However, targeted support can lead to meaningful gains in learning. A recent study conducted by [ExploreLearning](#) found that schools using [Reflex](#), a math fact fluency program for students in grades 2-6, were able to **increase** grade 3-5 math proficiency between 2019 and 2022 and outperform similar schools that did not use the program by double-digit margins.



Research findings

The study included 1,662 3rd, 4th, and 5th-grade students in 10 schools in the Western region of the United States. Five schools that implemented Reflex with high classroom usage between 2020 and 2021 were matched with five control schools that did not use Reflex but demonstrated similar 2019 grade 3-5 math achievement. Researchers analyzed state math assessment scores for both groups from spring 2019 and spring 2022, comparing 2022 achievement scores and how they changed between 2019 and 2022 for each group.

[Read the full research brief to learn more.](#)

The importance of math facts

Math fact automaticity is essential because it allows students to quickly and accurately recall basic math facts, an important skill for both present and future mathematics. Without direct fact retrieval, students are “likely to experience high cognitive loads and produce work that is inaccurate” ([Baker & Cuevas, 2018](#)). Automaticity frees up working memory and enables students to focus on more complex problem-solving and reasoning. More generally, automatic recall of math facts is a strong predictor of success in math and is necessary for developing more advanced mathematical skills.

The Reflex solution

Reflex is an online program that helps students in grades 2-6 master addition, subtraction, multiplication, and division math facts. With adaptive games and individualized practice, Reflex allows learners of all ability levels to achieve automaticity. Typical classroom implementation involves students using Reflex for 10-20 minutes at least three times a week, often during a math warmup, individual practice, math centers, differentiated instruction groups, or outside of school for additional practice. Teachers using Reflex receive data reports to monitor student usage and progress.

“I wanted to help my students with their computational fluency, which was regularly showing up as a deficit area in our data. With Reflex, I’ve seen significant improvement in fact fluency. The program has opened up the opportunity for my students to work on multi-step problems without having to count out basic facts or use a multiplication fact chart. In addition to the data, my students enjoy Reflex because they are able to play games as they master new facts.” - Elementary School Math Intervention Teacher

Research: 99.7% of Teachers See Improvement in Fractions Learning

Research conducted by ExploreLearning found students using **Frax**—an adaptive, game-based program that helps students learn fractions—improved their math understanding, engagement, and confidence, with at-risk students showing even more improvement.

ExploreLearning surveyed 1,465 teachers that had been awarded a Frax Educator Grant in the 2021–2022 school year, which gave teachers free access to the program for one school year. The large majority of teachers reported substantial improvements in learning and engagement.

Key findings

99.7% of teachers said they saw improvement in student learning and engagement because of Frax, with 87% of these teachers saying that Frax was better than any other program or tool they used to teach fractions in the past.

The top three most frequently observed improvements by teachers included increased enjoyment in math learning, increased understanding of fractions concepts, and increased confidence in math abilities.

Even better news for at-risk populations

There were even larger improvements in schools reported as having especially low standardized test scores ($n=72$, 23%). Teachers reported the same or statistically larger gains with Frax than their peers in higher-scoring schools, and also noticed:

- Increased student participation in class
- Increased self-esteem
- Improved fact learning

These results align with a recent independent ESSA Level III study that found that greater usage of Frax correlated to greater gains on the STAR Math benchmark assessment. Importantly, this relationship held for students with low academic outcomes and those students who qualify for free or reduced lunch.

Why fractions knowledge is important

Fraction knowledge in grade 5 uniquely predicts students' mathematics achievement in high school. This means that many students who struggle with fractions will go on to struggle in Algebra and in turn become less likely to progress to more advanced coursework. This effectively cuts them off from the many careers in which mathematical skills are important—including in high-demand STEM fields.

How Frax works

Frax delivers the latest research-proven instructional strategies in an adaptive game-based learning format to create a better way to learn fractions.





- **In Frax, fractions are numbers first.** Each has a specific magnitude (size) and position on the number line alongside whole numbers and other fractions. Students work extensively with length models and number lines to interpret, represent, compare, order, and estimate fractions. In doing so they overcome whole number bias and develop a strong understanding of fraction magnitude.
- **Frax demystifies fraction arithmetic.** When students understand fractions as numbers they also better understand the arithmetic. They learn how to make sense of fractions operations and can draw connections to their work with whole numbers (e.g. the sum of two fractions must be larger than each individual fraction and therefore the sum of $1/2 + 1/3$ can't be $2/5$).
- **Frax is adaptive and individualized, so that students of all ability levels have early and ongoing success.** In addition, the Frax online learning system consistently rewards students for both their effort and progress. Students come to understand that if they are willing to put in the work, they really can succeed in learning fractions.
- **Frax is game-based and challenges students to perform a variety of tasks that build their fractions skills in a wide range of engaging scenarios.** The math games are supported by brief, just-in-time instruction, allowing students to learn largely by doing rather than by watching and listening. For teachers, Frax is easy to implement with simple setup and ongoing professional development opportunities. Student reports are available at the individual and group levels to monitor progress and celebrate successes.

"I love that Frax uses multiple models to help students conceptually understand fraction magnitude. It gives them a deeper understanding."
- Elementary School Teacher

"I use Frax in my classes. On our mid-year screener, my students outperformed the other 3rd-grade classes that don't use Frax. My two classes' average point increase was double that of the other five classes." - Elementary School Teacher



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-  **Support for teachers** → Professional development & student reporting
-  **Engaging for students** → Virtual simulations & game-based journeys
-  **Differentiated instruction** → Support all learners



 **G** Gizmos  **R** Reflex  **F** Frax  **S** Science4Us

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