

EDUCATION

# Is tutoring the answer to pandemic learning loss?

*There's compelling evidence that it can boost student achievement, but it's challenging to implement it well at scale*



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Daniel Garcia-Barnett, a Match Charter High School tutor, works with Amber Mejia on a geometry problem. (Photo by Michael Jonas)

**ALMOST FOUR YEARS** after the coronavirus pandemic upended schooling across the US, millions of students still struggling to regain the learning loss that set in from months of shuttered classrooms. In Massachusetts,

achievement levels in math and English remain well-below pre-pandemic levels, according to the most recent MCAS scores. As the *Globe* [reported](#) in September, at the rate of improvement seen from 2022 to 2023, it would take eight more years for student achievement to return to pre-pandemic levels.

As schools across the country face the daunting challenge of making up ground lost due to the Covid disruptions, one of the most promising strategies for doing that is an approach launched in Boston 20 years ago – on the top floor of a former auto parts store.

In 2002, the Match Charter Public High School, which had opened two years earlier in temporary space, moved into a new home on Commonwealth Avenue. The three-story building it acquired had been home for decades to Ellis Inc., better known as Ellis the Rim Man, an auto parts and accessories dealer whose rooftop billboard was nearly as well-known as the Citgo sign that rises over Kenmore Square a mile to the east.

The school had quickly recognized that many of its students, predominantly Black and Hispanic teenagers from lower-income homes, were arriving significantly behind grade level. Match supplemented classes with tutoring sessions, but school founder Michael Goldstein said the volunteers and graduate students they recruited to “do an hour here and an hour there” didn’t seem to be making much difference. That’s when he and other Match leaders came up with an unusual proposal that they brought to the school’s board of trustees.

While Match transformed the first two floors of their new home into classrooms and offices, the top floor of the former auto parts building was empty. The school had planned to rent it out to generate revenue, but didn’t have a tenant lined up. “We went to the board and said, here’s a crazy idea: We could build that place out as a dorm and have a bunch of live-in tutors,” said Goldstein.

The board signed off on what became known as the Match Corps, a year-long fellowship for recent college graduates who would earn a modest stipend through the federal AmeriCorps program while serving as full-time tutors to the school’s students. Most tutors lived on the top floor of the building, which was converted to a makeshift dormitory, and the school dramatically ramped up tutoring to become a central part of its approach to instruction.

The school was inundated with applications to join its new tutor corps, with [460 people applying for 45 slots](#) for the 2004-2005 school year. With just 186 students at that time, Match was able to have one tutor for every four pupils. A key element of the initiative was having tutoring baked into the regular school day, with students spending two class periods each day in small-group sessions with a recent college grad.

Unlike a traditional classroom of 20 or 25, where it’s easy for struggling students to get lost in the crowd, “there’s nowhere to hide” when they are one of only two or three students in a tutoring session, said Goldstein. “It’s class size reduction on steroids.”

The results following the introduction of daily tutoring were striking. In one year, proficiency rates on the 10th grade MCAS among Match students jumped from 56 percent to 92 percent in English and from 72 percent to 96 percent in

math.



Once home to an auto parts and accessories store, the Commonwealth Avenue building was converted to a high school, with the top floor built out as dormitory space for several dozen recent college graduates who worked as full-time tutors. (Photo by Jeff Behn)

Over time, versions of the Match model, which has become known as “high-dose” or “high-impact” tutoring, usually defined as at least three 40- to 50-minute sessions per week, have been implemented in districts around the country. More recently, some state-level initiatives have been launched to address pandemic learning loss.

Research on high-dose tutoring shows that it generates larger effects on student learning than almost any other proven education intervention – from lowering class sizes to early childhood programs. Tutoring over the course of a standard school year can move student achievement “multiple months ahead per year,” said Matthew Kraft, an education economist at Brown University, with some studies showing even larger gains of a year or more.

For all of its clear benefits, however, tutoring has joined lots of other innovations in education that seem to offer great promise but have been stubbornly difficult to implement at the kind of scale that would really drive population-wide improvements.

There are virtually no other education improvement strategies that have the rigorous, research-based evidence of tutoring “to meaningfully move the needle for students’ academic achievement,” said Kraft. “What we know far less

about is how to take the kind of smaller, boutique one-off models [that have shown such effects] and take that to scale.”

## **HELP WHEN YOU NEED IT**

It was a Wednesday afternoon at Match Charter High School, and Amber Mejia was deep into trigonometric ratios and the Pythagorean theorem. But Mejia, a South End resident who was a 16-year-old sophomore during a visit to the school last year, wasn't making her way through the geometry concepts on her own. Sitting across from her in a large sunny room on the school's ground floor was Daniel Garcia-Barnett, who graduated the previous spring from Dartmouth College, where he majored in cognitive science.

Garcia-Barnett, 22, is part of a cadre of a dozen or so tutors Match now has working at the school. “I have very young energy, so I feel connected with these kids, more so than I expected,” he said. With that, Garcia-Barnett hit on one feature of the program – that he's a “near peer” to Mejia – that tutoring experts say can contribute to the relationship-building that bolsters the effectiveness of the sessions.

“Usually in class I'm not able to get the help I want,” said Mejia. “It's good to know that somebody's always going to be there to help you,” she said of the four times per week that she meets with Garcia-Barnett.

“It's more focused,” Myles Clark, also a 10th grader at Match, said of the tutoring sessions. “You get the help as soon as you ask for it.”



Myles Clark: “You get the help as soon as you ask for it,” he said of the Match school’s high-dose tutoring program. (Photo by Michael Jonas)

After more than two decades of experience, Match school leaders say the effectiveness of their tutoring program is grounded in a handful of key principles, including having tutors work with small groups of no more than three students, integrating tutoring into the schedule of the standard school day, and making sure tutors are regarded as fully part of the school staff and are following a curriculum that aligns with lessons being taught by classroom teachers.

The school also puts a lot of stock in the relationships that are fostered by making sure students have the same tutor throughout the school year. The work of tutors, like that of teachers at the school, often extends well beyond the school day hours.

“There were students I had to call every night – ‘did you complete the assignment?’” said David Steefel-Moore, who started as a Match tutor in 2012 and now oversees network operations for the organization, which has grown to also operate an elementary and middle school in Boston. “It’s the whole relationship thing that makes it effective.”

The high-dose tutoring approach has been replicated with strong results in districts across the country, including in Lawrence when the Merrimack Valley district was first put into state receivership in 2011 because of years of mismanagement and low student achievement. Around the same time, Match leaders helped bring the model to a set of

low-performing schools in Houston, where research by Harvard economist Roland Fryer **showed it boosted achievement**.

A nonprofit called **Saga Education**, co-founded in 2014 by a former Match administrator and a Match graduate who was in the first cohort of students there to get high-dose tutoring, has helped deploy the approach in schools in Chicago and other cities, with strong results emerging from rigorously conducted research trials.

A **2020 paper** that considered all the available evidence on tutoring concluded that, on average, it generates math learning gains over the course of a school year that can **close about half the achievement gap** seen between low-income and higher-income students, suggesting that divide could be closed in two years.

The federal government has sent billions of dollars to states to address the impact of the pandemic, with schools using funding on everything from HVAC improvements to curriculum programming. Massachusetts has received \$2.6 billion over three rounds of funding from the Elementary and Secondary School Emergency Relief Fund, or ESSER. The third and largest round funneled \$1.6 billion to the state, with districts required to spend at least 20 percent addressing learning loss between now and September of this year, when the federal funding program ends.

Several states have launched large-scale statewide tutoring initiatives using the federal money – Tennessee is spending \$200 million to target one in every five students. But Massachusetts, with a strong tradition of local control of schools, has largely deferred decision-making about how to address learning loss to individual districts.

The state has set aside \$8.2 million this school year for grants to districts for early literacy tutoring for students in kindergarten through third grade and \$3.2 million for math tutoring for grades 4 and 8, but otherwise left it to districts to decide how to spend the emergency federal money.

“We’re trying to be thoughtful,” said Jeff Riley, the state education commissioner. He pointed out that the state overrode local control during the pandemic by ordering schools to reopen when his office thought it was safe to do so. But Massachusetts is a state that, by and large, “lives by control,” Riley said. “We have to trust people in the field to put together plans that will work for their individual communities.”

“I’m a big fan of tutoring,” said Riley, who brought it to Lawrence where he served as the state-appointed receiver before becoming commissioner. But it has to be done well by districts committed to the effort, he said, or you risk “diluting the product.”

The Massachusetts Business Alliance for Education, citing the strong evidence behind high-dose tutoring, has voiced frustration that the strategy isn’t being used more widely in the state to address pandemic learning loss. The group has urged state officials to push harder, using the bully pulpit and stronger incentives, to see tutoring implemented by more districts. Ed Lambert, the group’s executive director, said he gives Riley lots of credit for stepping in to get schools reopened. “We need that same urgency now for learning loss,” he said.

The business alliance said a review of plans submitted by the state's 20 largest districts for use of the final round of federal emergency funding showed only Salem planning to use the money on high-dose tutoring.

Kate Carbone, the deputy school superintendent in Salem, said the tutoring programs the school system launched in 2021, which are staffed by outside vendors vetted by the state, have been a welcome addition to the district's efforts to address the disruption to learning from the pandemic.

Unlike at Match, not all Salem students in a given grade are receiving tutoring. This year, the funds are providing early literacy tutoring for 200 students in kindergarten through second grade and math tutoring for 100 students in grades 4 and 8. Salem has also delivered English language arts tutoring to 50 middle school students and math tutoring for 85 students in grades 3 to 5. Some of the tutoring is done in classrooms, some is done by pulling kids out of class, and some is taking place during after school programs for students who were already staying for that.

Without a formal evaluation, Carbone said teasing out the impact of the tutoring is difficult, but Salem saw larger proficiency gains on the 2023 MCAS than the state overall for English in grades 3, 4, and 5, and larger math gains in two of the three grades.

"It's never one thing that creates the improvement that we're after," she said. "I would say tutoring is part of a greater portfolio of supports for students, but an important one, and one we believe has paid dividends for us."



Match student Michael Hogan and math tutor Courtney Todaro. (Photo by Michael Jonas)

Diman Regional Vocational Technical High School in Fall River has also used federal funding to pay for tutoring. “Learning loss is real,” said Andrew Rebello, the school’s principal. “And there were disproportionate effects on kids who were in crisis before the pandemic.”

He said the challenge to make up lost ground was even greater for vocational schools, because their schedule involves alternating weeks of academic classes and time devoted to vocational training.

The school hired a retired math teacher and a second former school official as tutors. Highest need students were pulled out of math classes to get small group tutoring. Meanwhile, the school negotiated its teachers’ contract so that each teacher stayed late at school one afternoon per week to provide individualized help to students. The school added bus service for students who stayed late for that help, and it had online tutoring available in the evening from 6 to 8 pm.

The school’s most recent 10th grade MCAS proficiency score in English was still below its pre-pandemic level, but for math, which has been the focus of most of its tutoring effort, proficiency was nine percentage points higher than in 2019.



One reason districts may have been reluctant to develop tutoring programs with the federal pandemic funds is that the money must all be spent over a few years. A challenge for schools and districts that think the introduction of tutoring has been helpful will be figuring out whether there's a way to continue the services after the emergency federal funding runs out.

"I would say this is something that has undoubtedly worked," said Rebello. "And we should not just want to return to the pre-pandemic status quo. We should scale what's working and support these initiatives after ESSER funding ends," he said, using the acronym for the federal emergency aid. "That's where true transformation will come from."

## A QUESTION OF SCALING

In the world of education, where silver bullet solutions are rare, the appeal of bringing to scale something with as strong an evidence base as high-dose tutoring is obvious. The track record of past such efforts, however, is not encouraging.

A Clinton administration tutoring initiative dubbed "America Reads" fizzled out before ever really getting off the ground. Meanwhile, the No Child Left Behind law, signed by President George W. Bush in 2001, provided more than \$2 billion annually for tutoring. But that effort saw uneven attendance rates, tutoring was often provided at low "dosage," and it suffered from low adoption, with only 23 percent of eligible students participating. What's more, "for those students, the average effect was close to zero," [wrote Susanna Loeb](#), a professor of education at Stanford University, in a commentary piece for *The Conversation*.

Even in places that have successfully deployed tutoring, changes in leadership, cost considerations, or other competing demands on school resources have led to a dialing back of programs or abandoning of the initiative altogether.

Lawrence, where high-dose tutoring was part of the early successful turnaround effort under state receivership, moved away from tutoring as one-time federal money it had relied to pay for it ran out. The district decided its limited dollars could go farther with "acceleration academies," remediation lessons delivered by regular classroom teachers during school vacation weeks and over the summer that have also been shown to yield strong results.

Even Match high school, one of the original proof points for the high-dose tutoring, has significantly cut back its original tutoring schedule. The school now has only 10 or 12 tutors, not the 45 tutors of the program's early years. They now live off-site as the one-time dorm space on the school's third floor was converted to classrooms to accommodate enrollment growth over time. Rather than tutoring all students in math and English, Match now only tutors 9th and 10th grade students in math, and they have four sessions per week, not the two sessions per day that were part of the school schedule when the program started 20 years ago. (Match also has 10 or 12 tutors per year working at its middle school.)

Leaders at the high school say the decision to focus on math was based on some evidence that tutoring can drive stronger gains there than in English. Another reason for the changes, said Steefel-Moore, the Match administrator, has been the challenge of hiring tutors today compared with two decades ago. The Match tutoring initiative was launched

during the heyday of Teach for America and other service-oriented programs that recent college graduates were clamoring to take part in.



Recent cohorts of the Match Corps tutoring program at the Match Charter Public High School in Boston. (Photo by Michael Jonas)

Despite the challenges it has faced, there has been a surge of interest in trying to scale up tutoring in the wake of the enormous learning loss from the pandemic.

In 2021, Tennessee launched its three-year \$200 million tutoring initiative targeting lower-performing students in elementary and middle school. The program aims to offer high-dose tutoring to 200,000 students, or roughly 20 percent of the state's 1 million public school students.

The state reported last fall that proficiency rates in math remain below 2019 levels, but English proficiency rates have returned to pre-pandemic levels among all students, including those from low-income households, where the tutoring is concentrated. At the same time, the share of low-income students scoring in the lowest of four achievement categories on state tests **has increased** over this time, raising doubts about whether tutoring is helping those students who were the farthest behind.

In September, Virginia announced plans to distribute \$481 million to districts for academic recovery, recommending that 70 percent of the money be spent on tutoring for all low-scoring students in grades 3 through 8. But a month later, the ambitious undertaking was **already facing logistical challenges**, starting with the difficulty of recruiting and training the thousands of tutors needed.

Goldstein, the Match school founder who helped seed the high-dose tutoring model in the US, said he remains a big believer in its effectiveness, but is increasingly skeptical of efforts to do it on a massive scale.

“When something is done organically with people obsessed with detail and excellence it works. It’s not something that deploys well when someone waves a wand and says, let’s just start a tutoring program,” he said. “Ten years ago I would have said, we’ve got the data, this stuff is unbelievable, we’ve got to scale this up. Now I’m older and I’m grumpier,” said Goldstein, who left Match in 2013.

Goldstein outlined some of his concerns about the challenge of scaling up tutoring in **a series of posts** he co-authored for the Washington-based Fordham Institute and in **a piece for the Brookings Institution**, co-authored with Kraft, the Brown University economist.

The education landscape is littered with examples of things that showed strong results when led by people “obsessed with detail and excellence,” but whose effects weren’t sustained when rolled out on a wider scale, including extended school days and smaller high schools. Everything from difficulty recruiting high-quality tutors, to the logistics of reworking school days to ensure that tutoring is reaching the students who need it most, could trip up efforts to do it at scale, Goldstein said.

Still, there are plenty of education leaders who think it’s worth considering how tutoring could be deployed across all US school districts.

The pandemic “created a moment where people could rethink how schools could deliver instruction, especially to compensate for significant learning interruptions,” said Alan Safran, the former Match school leader who left to start the tutoring nonprofit Saga Education. “Schools had not been doing the job for kids who come from poverty anyway. With the pandemic, people noticed that every kid was falling behind.”

Saga is now working in 16 states to help districts establish high-dose tutoring programs and it directly oversees programs in six cities, including Chicago, where randomized trials have shown its tutoring regimen yielding as much as a year or two of added math learning. “We know it will work if it’s done right,” said Safran.

Safran thinks a realistic approach to scaling tutoring nationally would be to focus on getting third grade students to proficiency in reading and helping ninth graders successfully complete algebra, two key benchmarks that are strongly linked to better long-term outcomes, including high school graduation rates.

Targeting students who are not on track at those crucial junctures would mean tutoring 3 million students nationwide, he said. Those students could be served by 100,000 tutors, at a cost of about \$3 billion a year, or \$1,000 per student. Safran calls that a “drop in the bucket,” in the context of the almost \$800 billion spent annually on K-12 schooling in the US, and the roughly \$100,000 we spend on each student from kindergarten through eighth grade.

“There is a pathway to creating a nationwide tutoring initiative if there’s the will to explore it,” said AJ Gutierrez, the former Match student who went on after college to co-found Saga Education with Safran. “We’re facing an educational crisis the likes of which we’ve never seen before, and it’s an all hands on deck moment.”

Kraft, the Brown economist, shares the sense of urgency over the impact of the pandemic, but he questions whether tutoring can be deployed quickly on a massive scale to tackle the current learning loss problem. The strongest evidence for tutoring comes from efforts like those at Match, which have dramatically reshaped how schools operate in order to incorporate it into the standard school day.

Kraft said we may need to look to successful, smaller-scale efforts growing out of the pandemic that could help spur that kind of fundamental thinking about how we structure and operate schools.

Big changes in education often take decades to gain wide scale acceptance. While it may not provide the answer to pandemic learning loss, for better or worse, Kraft thinks it may be best to think about tutoring as **a long-term innovation comparable to kindergarten**, which took 30 years or more to become fully baked into US public school systems.

“I think that we’re going to see tutoring as a failure if we don’t think about it through this lens of this decades-long incremental change process,” he said. “And also, I think it’s going to have to happen organically from the ground up, because there are just very few examples of any type of top-down changes in education that are successful because of the diversity of our country and because education is principally an interpersonal act, and changing behavior is hard to do from any type of top-down way.”