EducationWeek® | SPOTLIGHT®

2025

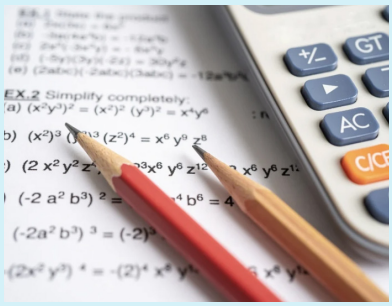
MTSS: Pathways to Achievement

iStock/Getty

Page 2

EDITOR'S NOTE

A Multi-Tiered System of Supports (MTSS) is essential for providing pathways to achievement for everyone. This Spotlight explores key components of effective MTSS implementation and strategies for supporting struggling learners across all grade levels. From identifying the critical skills students need for future job success and addressing stalled learning recovery to specific strategies for identifying and supporting struggling older readers, these articles offer valuable perspectives.



Canva

Page 13

OPINION

Published April 21, 2025

The Skill Students Need Most To Succeed in Future Jobs

By Arianna Prothero

What are the most important skills for students to have before entering the workforce? It's not necessarily factoring polynomials.

Put this question to a group of people working in K-12 education and they're more likely to name a number of soft skills, such as adaptability and critical thinking.

That's according to the responses Education Week received on social media when it posed that question. An informal LinkedIn poll conducted by Education Week found that among participants, nearly three-quarters listed adaptability as the most important skill graduates need. Around 15 percent selected "ability to focus," and 9 percent said "empathy."

Survey participants also listed additional skills in the comments section, such as resilience, punctuality, critical thinking, self-regulation, and a strong work ethic. All told, around 1,900 people participated in the LinkedIn poll.

This LinkedIn poll is not a nationally representative, scientific survey, but it does provide a snapshot of what people who work in K-12-related fields are thinking at a time when many are reevaluating what skills students need to function in a labor market where artificial intelligence and economic shifts are already changing many jobs.

Below is a sample of how some educators responded to Education Week's query on LinkedIn and Facebook.

- "Industriousness and the ability to learn from mistakes" will be essential skills for students entering the workforce, said an Ohio-based teacher on LinkedIn.
- "Listening, asking clarifying questions, and following directions," said an educator on Facebook where EdWeek posted the same question.
- "Communication skills: written and oral," said another teacher on Facebook from Tennessee.

iStock/Getty

- "As a former HS teacher, I'd say reliability and ability to stay off their phones is what they need most," said a former teacher on LinkedIn from Nevada.
- "Perseverance and integrity," said an educator on Facebook.

But those responses don't necessarily mean technical know-how isn't important. As one educator said on Facebook, students will need "creativity that knows no bounds and okay with criticism, but can also make nice with AI."

American company executives and educators agree on many of the skills students need

Many of these responses align with what senior executives at major companies say they want to see in their future employees.

Education Week reached out to some of the nation's biggest employers late last year to ask what social-emotional skills they view as essential for successful employees. Among them: relationship skills, self-control, curiosity, communication, teamwork, reliability, and problem-solving.

"The world of work is being fundamentally changed by AI," Microsoft's vice president of education, Paige Johnson, told Education Week. "However, the top skills required to navigate complexity and change remain uniquely human with emotional intelligence, cognitive flexibility, and communication referenced as top skills leaders believe will be essential for employees in an AI-powered future."

But when the EdWeek Research Center has surveyed educators about the quality of students' soft skills, they have reported declines in some areas.

For example, 78 percent of educators said in a nationally representative February survey that their students' ability to be independent—by directing their own learning and advocating for themselves—was lower than it was 10 years ago. And in another EdWeek Research Center survey last summer, 62 percent of teachers, principals, and district leaders said students' ability to make and maintain appropriate eye-contact was worse than it was a decade ago.

How can schools address these workforce skills gaps? Some have found success using social-emotional learning to bolster students' soft skills, although high schools can struggle to find ways to make it relevant to older students.

A majority of teachers, principals, and district leaders think social-emotional learning has some impact on their students' development of soft skills, such the ability to communicate and think critically, according to an EdWeek Research Center survey from December.

Fifty-five percent said SEL had a somewhat positive effect on students' soft skills, while 21 percent said it had a very positive effect.

But even as business leaders and educators say many of the skills taught through social-emotional learning programming are important to students' success in the workforce, making it work at the high school level, when students are preparing to move into the world of jobs and careers, has proven difficult. There are fewer SEL curricula designed specifically for the developmental needs of middle and high school students, and with the demands of academics, high schools struggle to carve out time to devote to SEL.

"We do not have any more time in our schedule to add another thing to the plate of the teachers," one educator told the EdWeek Research Center in its December survey. "Yes, SEL is important, especially because our students are not getting a lot of this at home. But we are also understaffed and we are overworked." ■

RETURN TO PAGE 1

Can you guess which students are at risk?

Jason, Grade 12

Most likely to: be prom king, take his team to state, ace accelerated courses

Shenelle, Grade 8

Most likely to: have her nose in a book, be bored in English class, turn in assignments late

Ploy, Grade 7

Most likely to: speak multiple languages, avoid class (especially the library), become an artist

Gabriel, Grade 10

Most likely to: become a pro soccer player, be tardy to class, retake Algebra 1 (twice)

Allison Shelley for All4Ed

A group of high school girls work together to solve an algebra problem during their precalculus class. Nearly 4 in 10 educators said the level of unfinished learning in secondary math was "severe" or "very severe," a new survey shows.

Published January 28, 2025

Learning Recovery Has Stalled. What Should Schools Do Next?

By Olina Banerji

Schools have tried a combination of moves—including in- and after-school tutoring, an emphasis on social-emotional well-being, and summer school—to get learning levels back to where they were before the pandemic. But students are still not fully caught up, educators say in a new survey.

In the nationally representative poll of 990 teachers, principals, and district leaders, conducted in December by the EdWeek Research Center, respondents indicated that the levels of unfinished learning or "learning loss" still fell largely in the "moderate" or "severe" categories. Unfinished learning refers to when students haven't fully mastered the concepts and skills at their grade level and need help to cover the gaps in their learning to succeed in future grades.

The educators' perception reflects academic trends of the past few years—while academic interventions did improve the learning gaps created by the pandemic, the recovery process hasn't been as rapid as schools had hoped. Researchers have pegged this to uneven implementation of efforts like high-dosage tutoring.

"The share of students receiving summer school and the share of students attending summer school was lower than needed. The recovery efforts were not intensive enough," said Thomas Kane, a professor at the Harvard Graduate School of Education. "Second, districts implementing large-scale tutoring for the first time had challenges."

Kane was a co-author of a research paper that had tracked the overall gains made by students across the country in the 2022-23 school year. The data and analysis, published by the Center for Education Policy Research at Harvard University and the Education Opportunity Project at Stanford University in early 2024, telegraphed that federal recovery dollars, spent on efforts like tutoring and summer school, did help catch students up on unfinished learning.

In a single year—between spring 2022 and 2023—students on average gained back one-third of their original loss in math, and one-quarter of the original loss in reading, the study found. The improvements amounted to more than what students would have learned in a regular, pre-pandemic academic year, but students were still below the level where they needed to be, the researchers noted. The gains were also not equally distributed across student subgroups.

However, the impact of these high-intensity tutoring models, and other efforts to close learning gaps, lessened when applied to schools at scale, according to a meta-analysis of 265 randomized control trials on impact of tutoring, published in October 2024.

Also, data published by the assessment provider NWEA indicate that learning recovery hasn't just stalled—in some grades, students are losing academic ground. NWEA analyzed data from students in grades 3-8 from schools nationwide, and compared how much students had progressed over the 2023-24 school year to the aggregate learning growth of a pre-pandemic comparison group.

Educators point to learning loss across subjects, grade levels

The educators who were polled by the EdWeek Research Center were asked their perception of how much learning remained unfinished for students across subject areas and grades.

In elementary grades, about 40 percent of educators said students were still at "moderate" levels of unfinished learning or learning loss in math and English/language arts.

Thirty-three percent of educators said the level of unfinished learning in elementary math was "severe" or "very severe," and 31 percent said the same about unfinished learning in English/language arts.

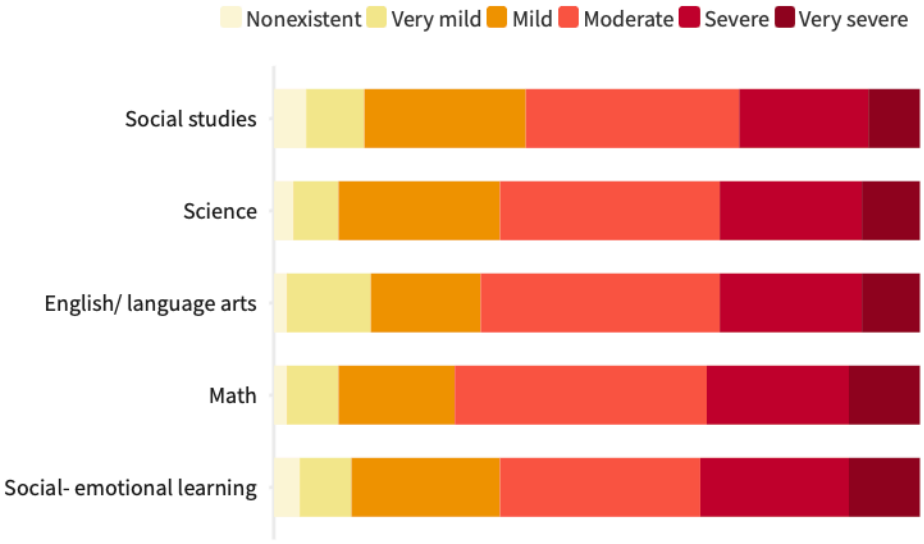
In middle and high school, educators reported a slightly wider gap between levels of unfinished learning in math and reading. Forty-six percent of respondents said their secondary students fell in the "moderate" category when it comes to learning loss in English/language arts; 40 percent said the same about math.

Thirty-seven percent of educators said the level of unfinished learning in secondary math was "severe" or "very severe," while 26 percent of educators said the same about unfinished learning in English/language arts.

"Even moderate learning gaps show that there's much more ground to be covered,"

Learning recovery has been slow in elementary grades

How would you rate the level of unfinished learning or "learning loss" in the following areas for elementary school students in your district/school/classroom?



NOTE: Results show responses from teachers, school leaders, and district leaders.

DATA SOURCE: EdWeek Research Center December 2024

said Ayesha Hashim, a senior research scientist with NWEA.

To make the most of interventions, schools have to rely on parents

Schools should continue with efforts like high-dosage tutoring and summer school, Hashim said—but they will have to face this challenge even as pandemic recovery dollars ebb.

"We have seen these interventions have modest impacts," she said. "They are starting to work. But now that schools have built the capacity and willingness [to implement], the funding is gone."

Anecdotally, Hashim said, district leaders are now focused on improving core instruction, too. Getting more effective teachers into the classroom has led to some early gains in learning, she said.

The other strategy that schools should focus on is getting parents involved by keeping them abreast of how their children are doing, said Kane.

Parents don't have access to the kind of grade-level data that teachers do, which tells them how students are doing now compared to before the pandemic.

"Parents don't see that students are behind what grade they're in, or how engaged they are in school," he said. "It's easy to see how they might be under the impression that that everything's fine."

If parents don't see the urgency of repairing students' grades, they might not push too hard to get their kids into summer school or make sure students are regularly attending school, Kane said.

Helping parents understand their child's academic position, and getting their buy-in to reduce chronic absenteeism, can be a low-cost option for schools to continue on the path to academic recovery, Kane said. ■

Additional Resource
View this article's charts

Ziga Plahutar/E+

Published March 14, 2025

4 Ways Teachers Identify and Support Struggling Older Readers

By Sarah Schwartz

For most students, instruction in how to read ends sometime in elementary school. But some kids still struggle with foundational reading skills well beyond that point.

Nearly half of upper elementary teachers, and almost 1 in 5 middle school teachers, say they teach phonics or other word-reading skills three or more times a week, according to a nationally representative study. Meeting these needs can be challenging for middle and high school teachers, who aren't usually trained in how to teach reading, and whose days are oriented around teaching content.

"At the middle school level, it changes," said Jenny Flieder, a reading interventionist at Roosevelt Creative Corridor Business Academy in Cedar Rapids, Iowa. "You move from all of that diagnostic, all of that skill building, to reading comprehension and literary analysis.

"No teacher sits around and figures out why that kid can't read on grade level. They don't. It's not the fault of the teacher—the system isn't set up like that," Flieder said.

Instead, she said, students "just start coping," turning to audiobooks or relying on their classmates for help.

On March 13, Education Week hosted a panel of middle and high school educators who are focused on supporting students who struggle:

- Julie Burtscher Brown, a literacy facilitator in the Mountain Views Supervisory Union in Woodstock, Vt.;
- Rachel Manandhar, an education specialist and literacy interventionist at Berkeley High School in Berkeley, Calif.; and
- Sue McCormack, a high school English teacher at Cheektowaga Central High School in Cheektowaga, N.Y.

They discussed how to find the students who need support, what works to catch them up, and how to make time for this instruction during the school day. Read on for four highlights from the conversation, and insights from other upper elementary and middle school educators who spoke with Education Week.

1. How teachers identify students who need more help

In middle and high school, most assessments of students' reading ability examine general comprehension—they don't tease out specific skills.

"Those are hard to pull out of a [state test], or an iReady test," said Flieder, referring to a popular reading exam given every few months. "You have to figure out what's going on with them."

These kinds of broader tests of reading comprehension ability can flag students who need help, and then teachers can drill down deeper, said Manandhar.

"Is it a word-level issue? Is it a syllable-level issue? Is it more of an automaticity, confidence, speed issue? And then from there, where are we at with the vocabulary and comprehension?"

Manandhar sees "the whole nine years" with her students, including decoding difficulties. "I think that people don't expect to see the world-level challenge at the high school level," she said.

In older students, especially, these word-reading difficulties are often greatest with multisyllabic academic language—the content-area words that students need to be able to read to understand advanced social studies or science text, for example. Inability to decode these words means students can't unlock the meaning of text, compounding comprehension difficulties.

"They get to the end of a sentence, and they can't tell you what it's about," Manandhar said.

2. What materials and methods teachers use

Interventions for older struggling readers aren't as plentiful as those for young children, but they do exist. McCormack, the New York teacher, uses a researcher-created program called Read STOP Write, a semi-scripted approach which she said involves regular choral reading and study of root words.

McCormack said she was nervous about following a script at first, but found that her students "really did like the routine."

In Woodstock, Vt., teachers at Woodstock Union High School use materials from Wilson Language Training for students who have the greatest foundational skills gaps. But Burtscher Brown, the founding teacher of the school's structured-literacy program and now a literacy facilitator in the district, said there are many tools that could work well in different contexts; no one program is perfect.

In general, it's important to have some curriculum to use as a starting point, said Jodi

Kosek, an instructional content specialist for K-5 English/language arts and social studies in the Youngstown schools in Ohio.

"The cognitive load, because of the lesson design, comes off of the teacher a little bit," said Kosek, whose district uses phonics resources from 95 Percent Group for upper elementary grades students with foundational skills gaps.

This support for teachers is especially important in upper elementary, middle, and high schools. "In older grades, the phonics piece isn't in their wheelhouse," said Kosek. Teachers at these grade levels are trained as content specialists, she said—not reading specialists.

3. Finding time for reading intervention in upper grades

It's common for elementary schools to set aside dedicated time for reading and math intervention—but not as common in higher grades. Getting these instructional minutes is crucial, though, teachers say.

In Youngstown, the district implemented an hour-long intervention block through grade 8, Kosek said.

And in the Woodstock district, administrators created credit-bearing high school classes for reading intervention, said Burtscher Brown. If students can get credit for Advanced Placement English Literature, they should get credit for structured literacy courses, she said: "Students are coming to structured literacy to learn to read and write well, and they should receive credit for their work as well."

But setting aside a full class period isn't always possible in high schools.

"We have so many competing interests at the high school level when it comes to graduation credits required, students' next steps for transition, the classwork that needs to be completed in order to pass classes and make progress," said Manandhar.

At Cheektowaga Central High School, McCormack integrated intensive reading instruction into her regular ELA class period. Adding time for this extra teaching has slowed the pace at which she can progress through course content, but growing students' skills has helped them engage more in the works they do read.

"Am I teaching Romeo and Juliet in March instead of February? Yeah," McCormack said. "But I'm also finding that, oh, my students are OK. ... They're starting to take a little risk with Shakespeare. Which, with 9th grade, is a struggle."

4. Building students' confidence

Helping students take risks, feel confident, and manage their emotions around reading is the most important part of the equation, said Manandhar.

"For so many of our high school students, as we all know, they're aware they're struggling," she said.

Manandhar is transparent with students—and their parents—about where their struggles lie, and helps them identify the strategies they use to compensate. She's also tried to create a physical space inside the school for literacy instruction where students feel comfortable, but also know that they will be held to high expectations. "It's warm and fuzzy—and we need skills," she said.

Making the room where literacy intervention takes place feel welcoming is a key—and often overlooked—piece of the puzzle, said Flieder, the Cedar Rapids reading interventionist.

The room that she worked in had been used as a special education room in the past. "I had a hard time getting the kids to come here, for WordFlight, because they thought that they were in a special ed. class," she said, referencing the reading intervention that the school uses.

She and her co-educator Myra Hall tried to make the room inviting, decorating it with bright colors and soft, cozy seating options. The principal helped them make the reading program feel exciting, organizing celebration days around it.

"No matter how glorious a program or a class or anything is, if you can't get the kids to engage in it, it is nothing," Flieder said. ■

Published February 3, 2025

Why Reading Support Classes Help High Schoolers Succeed

By Sarah Schwartz

Biology, literature, calculus, U.S. history—all high school courses, regardless of subject, require a strong grasp of one critical skill: reading.

By the time students are in high school, especially in advanced courses, it's taken for granted that they can learn new, complex ideas through text. However many still struggle with reading comprehension.

That's why Jennifer Norrell, the superintendent of East Aurora schools in Aurora, Ill., knew that she would have to boost students' reading abilities before she could expect them to take on college-level work.

As part of the district's push to enroll more students in Advanced Placement classes, East Aurora instituted mandatory reading classes for students who scored below a certain threshold on interim tests and end-of-year assessments.

The classes give students practice with constructing viable arguments, citing textual evidence, and notetaking.

"No one really teaches high school kids that, and they encounter some of their most difficult, challenging, technical, reading and writing in high school," Norrell said.

Education Week spoke with Norrell, a 2025 EdWeek Leaders To Learn From honoree, about how she implemented this extra reading support for students in East Aurora. This interview has been edited for length and clarity.

Jamie Kelter Davis for Education Week

Jennifer Norrell, superintendent of East Aurora School District 131, at the Resilience Education Center in Aurora, Ill.

Why dedicate an entire class period to reading instruction for high school students?

We have the third largest population in the state of Illinois of [English] language learners. It's us, it's [Elgin Area School District U46], it's Chicago Public Schools, where they have 350,000 kids. We have 13,000 kids, so we're a pretty densely populated group of [English] learners.

So for me to move kids, we had to do some other things. One of the first things that we did was to really look at our literacy in the district as a whole.

Were the reading classes designed specifically to support English learners, or were they designed to improve reading for everybody?

We implemented mandatory reading classes at all levels. They were designed based upon what your needs were.

We have three levels of reading classes. The first level was for kids who were struggling for whatever reason. We have programs that are in the reading classes where we could count that [as an ESL class]. ... That reading piece, for them, it looks different, but the time is still allotted.

And then for everyone else, we have general level reading, and then we even have honors reading for the kids who are scoring at the highest level to really push them—not just reading, but also, argumentative writing, rhetorical analysis.

There were levels so that every kid was really getting what they needed. It wasn't just checking a box. It was targeted toward kids' skill sets and [abilities]. And more importantly, it was targeted to how we could push them to exit this [reading class] with a whole new skill set.

How did you introduce the idea to the staff?

The first thing that I did was conversations with the leaders and the teachers, because they needed to understand the context of why. Because oftentimes that is a hurdle, right? You go in, you put things forward, and then you get pushback and resistance.

What kind of pushback and resistance did you experience?

[Educators] reaching out to board members, emails—not happy—[critics] showing up at the board meetings.

Then one of my strongest parent leaders [supported me], the president of my Bilingual Parent Advisory Council [a district-wide group to foster relationships between parents and school staff]. She is a powerhouse. She does work all over the state of Illinois, and now she's doing work nationally. And she's a language learner herself.

What [she] said to me is, 'My son graduated from this district. ... He got to college, and because he was a good kid, he was one of the kids that made it in AP. He said when he got to college, he struggled mightily, because he really wasn't reading at that level.'

She said, 'I'm going to tell the parents to stand down and not join forces with the staff. ... I hear you. I believe you.'

I would meet with [the Advisory Council], and other large parent groups, and they could understand it, and a lot of them had seen it. By

me really forming those relationships with the parents, it enabled me to be able to get them on my side.

What effect have the reading classes had on student achievement?

It really was a game changer—to allow us to not only increase the numbers of AP [students], but also to allow us to increase the numbers that were receiving 3s, 4s, and 5s [on AP exams].

I wanted to make sure that our [AP enrollment] numbers went up, but it didn't jeopardize our percentages. I think that removing the barrier of literacy being a challenge, or tracking literacy in a greater amount of time that we had built into the schedule, was allowing us to set the groundwork for the success of kids in AP later on in their high school career.

We haven't been perfect at everything we've tried.

We certainly didn't expect the pandemic, and we certainly didn't expect our SAT scores [declining during that time] to be such a setback. We've got to rebuild all that up again. It hasn't been perfect, but the reading continues to pay off. ■

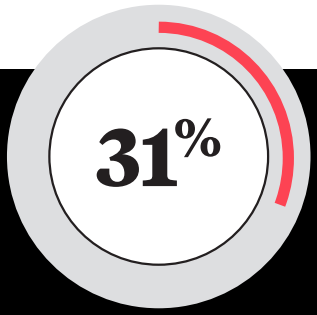
Meet Landon

He'll be a 5th grader in the fall, but some of his skills are stuck in 2020.

Landon and his peers missed direct instruction on critical foundational skills in elementary school due to the pandemic disruptions. Today, they're *still* feeling the impact.

In 2024, 4th graders were significantly behind:

Source: NAEP (2024)



are at or above proficiency in **reading**

are at or above proficiency in **math**

Close the gaps

Skill gaps create stress. Stress impacts students' relationships, attitudes, and behavior. This can lead to academic struggles across the curriculum.

The solution? A strong MTSS framework in middle and high school.

With whole child MTSS, you can better identify and address both **academic** and **non-academic** factors that impact student success. Renaissance has proven tools to support your MTSS framework—and to help you truly see every student districtwide.

Get started

Renaissance
See Every Student.

Vanessa Solis/Education Week + iStock/Getty Images

Published October 17, 2024

What Happened When A District Put Struggling Students in Regular Algebra?

By Sarah Schwartz

When students take Algebra 1 matters.

If high schoolers don't pass the course by 9th grade, they're unlikely to reach college-preparatory math in high school. There are too many courses to get through in four years. As a result, struggling students face two potential pitfalls: being pushed into algebra courses that they're not ready to tackle, or shunted onto a lower-level track that makes it unlikely they'll ever catch up to their peers.

But a new study shows that some students who would have otherwise been placed in remedial math can succeed in 9th grade algebra—if they have the right support structure.

The research, published in a working paper from Stanford University professor Thomas Dee and postdoctoral research fellow Elizabeth Huffaker, examined a de-tracking initiative in one California district that placed below-grade-level and on-grade-level students together in the same 9th grade algebra classes and gave their teachers intensive training on how to support students at different ability levels.

They found that struggling students in these mixed classes went on to pass more high school math courses. And they did better on 11th grade math tests than their peers who had been placed into a remedial track—without affecting the achievement of the on-level students in the class.

The findings demonstrate the importance of "attending to the instructional core," said Dee, referencing the professional development that teachers received on how to reach all students.

While praising the study's outcomes, other researchers noted that it paints a complicated picture of improvement.

"Everybody really wants there to be a path for kids to not get stuck in remedial 9th grade math, and to take Algebra 1 and succeed," said Heather Hill, a professor of teacher learning and practice at the Harvard Graduate School of Education who studies professional learning in math.

The school district pulled many different levers. It provided professional learning, but also encouraged teachers to use a new curriculum, and worked with teachers who volunteered specifically for this special class.

"Professional learning could well have been the glue that held this all together, but there were a lot of different components," she said.

And while more students who started off below grade level made it to higher-level math, many of them struggled and had to repeat Algebra 1—an outcome that might not be "politically palatable" for districts, Hill said.

Algebra intervention provided teachers with support for differentiation

When students should take Algebra 1 has long been a contentious question.

In the 1990s and 2000s, several states and large school systems began requiring students to take the subject in 8th or 9th grade, with the aim of ensuring that all students would be ready for college-level math upon graduation. But these policies often didn't raise student achievement, and in some cases, lowered it.

"Negative effects were really concentrated on students who weren't as developmentally prepared to take Algebra 1 early," said Huffaker. "There is a major academic challenge to those students who are being put in more rigorous courses, and there is a pedagogical challenge to teachers."

The intervention in this study aimed to lessen that challenge.

To test it, researchers randomly assigned incoming 9th graders in the district, Sequoia Union in Redwood City, Calif., to one of two groups.

One was business as usual—students with below-grade-level proficiency in math were placed in remedial pre-Algebra, while on-grade-level students were put into Algebra 1. Historically, this plan resulted in racially imbalanced classes in the district, with Black and Latino students more likely than their white and Asian peers to be placed in remedial classes.

Students in the other group all took algebra together, regardless of their past performance.

Finally, one group of students wasn't a part of the experiment: those who had already taken Algebra 1 in middle school, comprising about a third of the district. These students continued on to the next course in the high school sequence.

Teachers who taught these heterogeneous algebra courses received a suite of supports designed to help them reach learners at different levels: 15 days of professional development, an additional planning period, access to a district-wide professional learning community, coaches that visited four times a semester, and a partner teacher at their school site.

In part, the professional development focused on employing "math language routines" designed to give teachers a way to check for students' understanding in real time, and address any misunderstandings if necessary.

In one of these routines, for example, two students work together to solve a math problem. One has a card with the problem, but with crucial details left out. The other student

has another card with these relevant details. Teachers can evaluate how well students understand the underlying concepts involved by hearing what questions they ask of each other in their attempts to piece together an answer.

Could other districts replicate these results?

The de-tracked algebra class resulted in some positive outcomes for students who started 9th grade with below-grade-level performance in math.

On average, these students were more likely to pass Algebra 2 by the end of high school than their peers who had been placed in a 9th grade remedial course. They also outperformed the remedial group on 11th grade state tests. And these students were more engaged in school—they attended school more often, and they were more likely to stay in the district than their peers.

But placement into algebra came at a cost for some of this group.

About half of the students sorted into the de-tracked class had to retake the class, or enroll in a special pre-geometry bridge class as sophomores. After this setback, they were then on the same track as their peers in remedial courses.

It's also hard to know how an initiative like this one would scale in another district, said Hill.

The researchers credit students' success to the teachers' professional learning, but the initiative changed many factors at once, she said. Students were exposed to more algebra content, their teachers were encouraged to use specific curriculum materials, and they were in classes with higher-achieving peers, all of which could have played a part in the results.

Then, there's the influence of teacher interest.

Most of the teachers in the de-tracked classrooms volunteered for the job—they weren't randomly assigned. The researchers conducted statistical tests to ensure that there wasn't anything special, or especially effective, about these teachers that drove the results.

Still, the volunteer model used in this study means that results might look different if the same program were implemented in a district where teachers were required to participate, said Hill.

It's important to be "clear-eyed" about how this kind of intervention might play out in different contexts, said Dee. Still, he sees the research as a "compelling proof point."

"You're taking some of the most educationally vulnerable kids, accelerating them into a canonically difficult class, and they're achieving more—not less." ■

More Like This

Attend to the Whole Child: Non-Academic Factors within MTSS

The Essential Components Of MTSS: A Downloadable Guide

MTSS: What Is A Multi-Tiered System of Supports?

Published November 13, 2024

How Motivated Are Students to Drive Their Own Learning?

By Sarah Schwartz

Doing well in school isn't just about being able to read dense books and solve complex math problems.

There are other, less tangible qualities that help students succeed, like having the courage to ask a question in front of the class, trying to make connections between new information and prior knowledge, or explaining the thought process used to solve a problem.

Among students across the globe, self-reports of practicing these educational soft skills are correlated with higher academic performance, according to results from the Organization for Economic Cooperation and Development's 2022 Program for International Student Assessment.

But many students struggle with anxiety and motivation, and countries vary widely in how much their students say they're able to think metacognitively about their work.

The test, known as PISA, assesses 15-year-olds across 81 countries and education systems.

A sample of about 690,000 students took the assessment in 2022. This set of results focuses on students' academic motivation and ability to drive their own learning, particularly in math. (Achievement results in math and reading were released in December of 2023.)

The report demonstrates that lower-performing students "face a double challenge," wrote Andreas Schleicher, OECD's director for education and skills, in the report. "They struggle with both academic achievement and a lack of confidence in their ability to learn.

"Meanwhile, even high-performing students are not always well-prepared for lifelong learning. Identifying and building on students' strengths—whether in terms of learning strategies, motivation, or self-belief—can create multiple pathways to success."

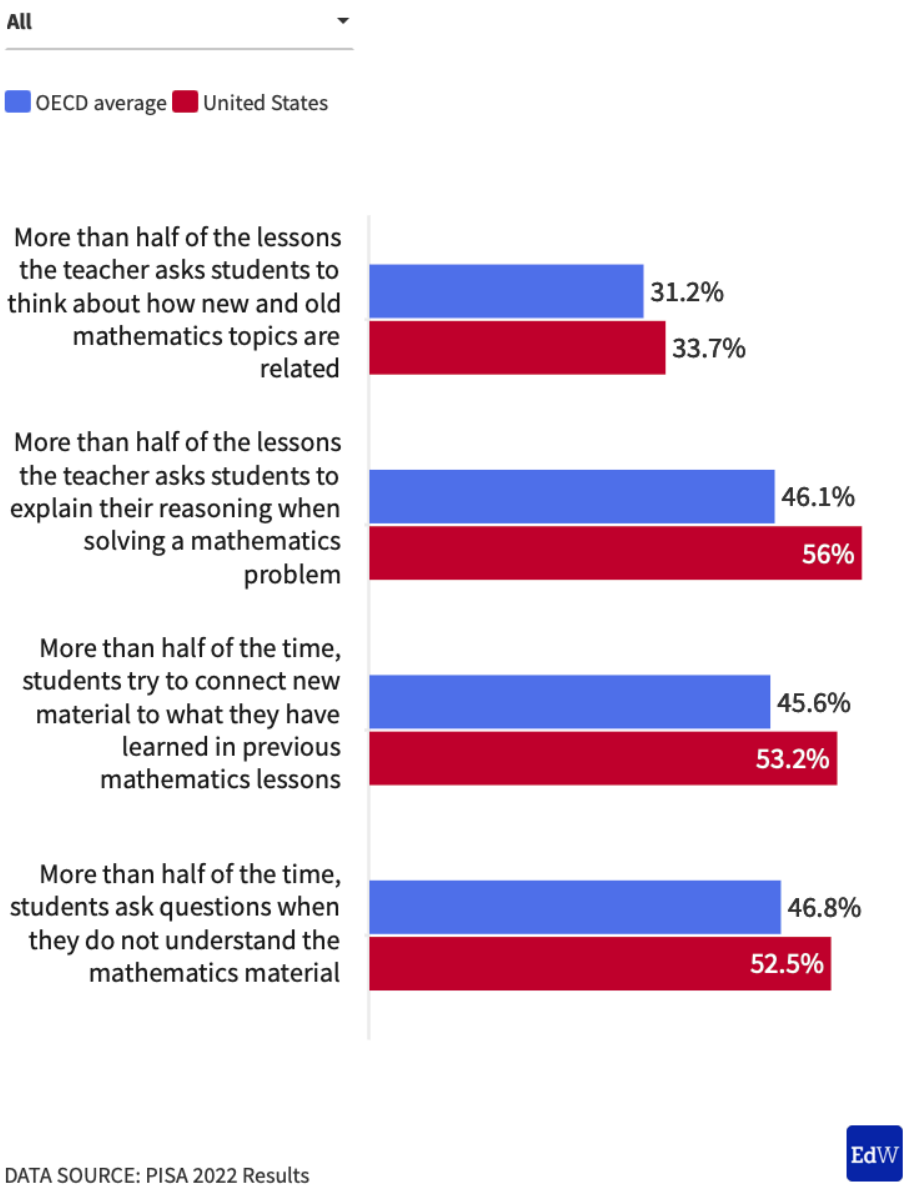
Compared to teenagers in other countries, students in the United States are more likely, on average, to say they apply these skills. But economically disadvantaged students don't use them as much as students from higher-income families—a gap that's particularly acute in the United States, compared to other countries.

"I'm excited about the fact that PISA is bringing this conversation forward for us," said Temple Lovelace, the executive director of Assessment for Good at the Advanced Education Research and Development Fund, or AERDF, a national nonprofit dedicated to research and development in pre-K-12 education.

There are a host of skills that power learning in math, outside of students' content

How students say they practice self-directed learning

Nearly 700,000 students from 81 countries and economies were asked how they drive their own learning in the 2022 PISA. See how the United States compares to the average.



knowledge, she said. "Math is as much about a process as it is about the final answer."

How can schools grow student motivation?

Disparities in American students' reports of self-directed learning could stem from the opportunities afforded to them, Lovelace said.

In classrooms where students are working on basic-skill development, teachers might focus more on memorization and rote learning, and not introduce activities that engage critical thinking. "That type of rich math learning generally only exists in certain types of classrooms," she said.

The PISA report suggests that getting all students to practice these skills—asking questions when they don't understand, for instance, and explaining their thinking in solving problems—could have long-term effects.

Teenagers who engage in more self-directed learning behaviors feel more confident that they can apply their math knowledge to real-world tasks, the authors found.

There's not widespread agreement about the bundle of self-learning approaches that matters most, but cognitive scientists have pointed to some techniques that seem especially promising, like distributing practice tasks over time, and testing oneself on new knowledge.

Assessment for Good, the AERDF program, has identified 30 key academic skills that "sit outside of subject mastery," Lovelace said. Students' executive functioning abilities, for example, or their belief that they can succeed in a subject, also play into their outcomes. Content mastery is crucial, but it's "probably about half the story," Lovelace said.

The PISA report also examined students' motivations and attitudes toward math—perspectives that influenced how likely students were to engage in self-directed learning.

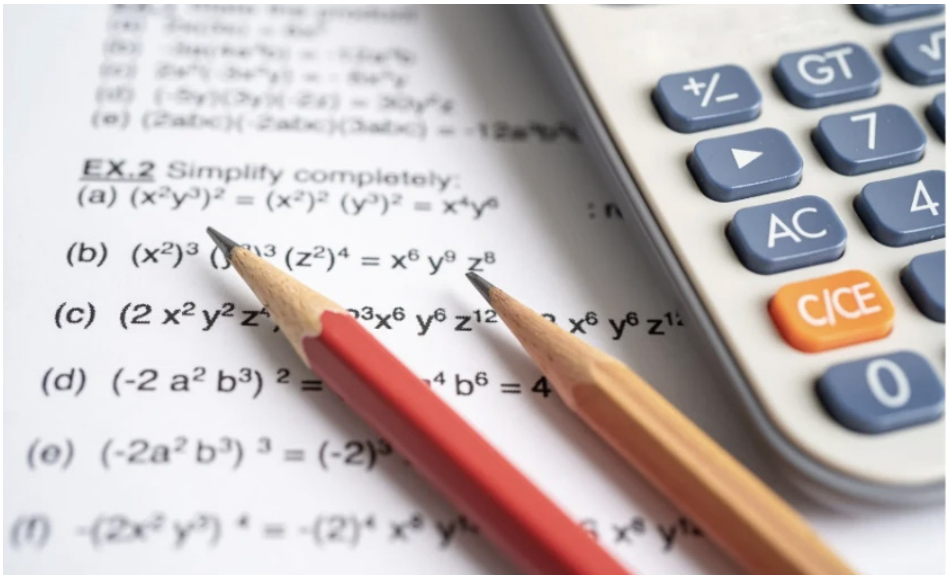
On average across countries, students' math anxiety rose over the past decade. In 2012, about 31 percent of students globally said that they get very nervous when doing math problems, compared to 39 percent in 2022.

Trends in the United States are similar, with 29 percent of students agreeing with the statement in 2012 compared to 38 percent in 2022.

Other research has shown that math anxiety doesn't just affect how students react to high-stakes situations, like math tests. It can also shape their approach to learning—one 2022 study found that math-anxious students choose less effective methods to prepare for exams, for example.

The findings on motivation and metacognition pose a chicken or the egg problem for educators: Would shoring up students' content knowledge help them feel more interested and engaged in school? Or should teachers explicitly foster certain learning strategies, under the assumption that they will support students in mastering content?

Both, suggests Schleicher in the report. "Creating education systems that foster lifelong learning requires a holistic approach," he writes, "one that recognizes the interplay between academic performance, learning strategies, and socio-emotional development." ■



Canva

OPINION

Published January 2, 2024

Students' Math Outcomes Have Plummeted. Here's What to Do

3 proven strategies bridge the gap between theory and practice

By Tracy Fray-Oliver

Math education across the country is in urgent need of redesign, and recent NAEP scores confirm there is no time to waste, with students showing the largest decline in math scores for 4th and 8th graders since 1990.

Recent findings from the EdWeek Research Center offer school leaders a good place to start. They note the deep tension between theory and practice in math education. This persistent disconnect leads too many teachers to grapple with translating complex pedagogical approaches into tangible classroom outcomes, often impacting student learning.

As leader of the Bank Street Education Center, a key focus of my work is improving math education for students in schools across New York City. Through partnerships with school leaders and educators in pre-K through high school settings, our work has uncovered three crucial strategies essential to improving math learning: increased instructional time, investments in teachers' continuous improvement, and centering student voices.

These interconnected strategies reinforce and complement each other. They are curriculum-agnostic and provide school leaders with specific structures and processes that build off the existing strengths of teachers and students to help drive deeper levels of student learning.

1. Increased Instructional Time for Students

At the heart of the theory-practice gap is the simple truth that time is paramount in learning. Mastering mathematical concepts requires time for immersion, thoughtful exploration, and the practicing of the concepts. Research consistently demonstrates that increased time spent on learning activities correlates with improved academic outcomes.

In math, increased instructional time for students provides educators with the breathing space necessary to reinforce concepts, where they have the time to use a variety of teaching methods. Strategies include restructuring the school day, strategic scheduling, leveraging technology for personalized learning, and offering targeted support for students needing interventions.

We've seen firsthand results: an MDRC study found that children in New York City who received two years of early math interventions implemented by Bank Street in pre-K and kindergarten had improved 3rd grade math-test scores. By implementing the supplemental math program High 5s, students were able to meet in small groups for 30 minutes three times a week for playlike activities tailored to their developmental level. We've estimated an effect equivalent to closing about 40 percent of the achievement gap between children from families with low incomes and their peers from higher-income families.

2. Continuous Improvement Processes for Teacher Teams

Teachers are the linchpin between theory and practice. Educational theories are only as effective as real-time implementation across diverse math contexts and settings. Continuous improvement processes empower educators with the tools and collaborative structures needed to bridge this gap.

This work includes creating spaces for teachers to identify instructional barriers and their root causes, test out research-based theories, analyze students' data, share implementation strategies, and collectively decide what actions can lead to improved student outcomes and benefits. This investment also fosters teachers' efficacy and creates a culture of learning and adaptability required to meet the new teaching and learning demands.

In Brooklyn, we are working with a network of middle schools to increase the percentage of Black, Latinx, and students experiencing poverty who are prepared for upper-grades mathematics and on track for success in high school by the end of 8th grade. By bringing together vertical teams of teachers and their school and district leaders to receive math professional development and coaching focused on their improvement theories, we've seen promising growth. Early research shows positive feedback from teachers regarding implementation and its impact on practice, with many reporting that they now have more insight into how to decrease student fears and anxieties around math and a deeper understanding of how to meaningfully improve discussions in math class by helping students build foundational skills and math vocabulary.

3. Centering Student Voices

As we work to balance education theory and practice in math, too often, student voice is left out of the equation. The practical application of any pedagogical approach requires a deep understanding of who students are and how they make sense of and interact with the content. Centering students' lived experiences and perspectives allows educators to understand how students learn best and apply that knowledge in dynamic and complex classroom settings.

In partnership with the Yonkers public schools, we have integrated student-empathy interviews and a student-voice survey across 22 schools to help improve how teachers approach feedback for students. Students offer their experiences and needs as math learners, and teachers leverage that information to determine which research-based theories to implement and how to adapt them for their students. A recent case study from PERTS showed an increase in student engagement and an improvement across other learning conditions, including learning goals and classroom community.

As we look ahead, it is clear that a more nuanced approach to math education is required. With the right leadership, these three strategies—increased instructional time, continuous improvement for teachers, and centering student voice—bridge the gap between theory and practice for math educators and are quickly scalable in schools across the country. Through this work, we can create more effective learning environments for students and build the future of math education we hope to see. ■

Tracy Fray-Oliver is the vice president of Bank Street Education Center.

OPINION

Published April 4, 2025

Educators Share Their Best Ideas For Unlocking Student Learning

By Larry Ferlazzo

As the saying goes, none of our students is bad—they just might be having a bad day (or a series of them).

'Teachers' Perceived Biases'

Sonya Murray-Darden is a leadership coach and former administrator. She is currently a leadership coach with the Missouri Leadership Development System and the CEO and founder of Equity Matters Consultants.

Gwen Turner is an emeritus professor of teacher education. Their latest book is Serving Educational Equity: A Five-Course Framework for Accelerated Learning*:*

The Event

As executive leadership coaches, staff and students often ask us for support to provide students with behavioral interventions. There are no quick fixes; instead, relationships are key.

Building rapport with staff, students, and colleagues is crucial for a new administrator. My staff and I set the stage for student success by getting to know students beyond the school walls and labels that many people had ascribed to them. It was critical to get to know students holistically.

At my (Sonya's) school, the mission was to focus on building positive developmental relationships, environments filled with safety and belonging and rich learning experiences, knowledge development, and the development of skills, habits, and mindsets as proposed in the Essential Guiding Principles for Equitable Whole Child Design (Learning Policy Institute, 2021).

One of the issues that we faced at our new school was behavior bias, in which teachers focused solely on students' disciplinary incidents rather than academic potential. Our story is about Mark Doe (a pseudonym), a 7th grader. He was the subject of many staff comments because of his disciplinary record. All descriptions of him addressed his incomplete assignments and inappropriate behavior. Mark was accustomed to the negative interactions and experiences with the school team.

During our first encounter, Mark informed me that he was failing, had a discipline record, and hated school. His entire demeanor was one of defeat. Because I knew the importance of establishing trust and a positive working relationship with every child, I informed him that I was excited to meet him and looked forward to a great working relationship.

However, he was skeptical and disclosed tremendous personal and home struggles. He informed me that no one cared for him except an aunt, who he knew loved him, but she, too, had grown weary of his constant school issues. Mark's behavior was part of a self-fulfilling prophecy: "Adults expect inappropriate behavior; therefore, the child misbehaves." Children will become what you say they are. (Blease, 1983; Palardy, 1969).

The Solution

Our first effort was to engage Mark in meaningful and supportive experiences. As a staff, we had to establish a community of trust to work with our students and each other. His teachers were asked to examine how they provided guidance, communicated with him, and engaged him in learning activities. We helped him create a joint action plan and schedule to work on assignments.

Mark played an integral part in his education, but he also needed to improve his learning (metacognition). Breaking this cycle of failure was not always easy. Changes in mindset for teachers and students have to occur if students are to overcome challenges and improve academically and socially.

A significant turning point was Mark's participation in an essay contest. When I first introduced the idea of writing an essay, Mark responded, "I cannot write, and besides, my discipline record is too bad. Nobody will read it." I replied, "I will read it and believe in you." He initially told me he was not interested and stated his inability, but later, he asked me about the essay and began crafting a draft. We established a plan, and working on the paper became his center of focus each day.

Mark did not struggle in isolation; he had mentors and tutors who helped him improve his writing. There were challenges and setbacks, but Mark had begun to trust the adults and himself. He became a better writer and student because of the positive relationships with the small cadre of adults who demonstrated commitment to his success. Mark completed his essay and was selected as one of the finalists. He was asked to wear a yellow scarf as a finalist, signifying his status as a winner. Yellow symbolizes optimism, confidence, creativity, and emotional strength (Wright, 1995).

Indeed, Mark shared a newfound sense of trust, commitment, and determination that had not previously existed. His teachers connected the essay celebration to his ability to make better choices, and he did. Teachers started seeing his potential, not his past failures. His aunt shared her gratitude and appreciation for changing his trajectory. Mark's story and many others solidify how underlying messages relating to expectations, perceptions, and subsequent actions could allow or deny students access to future success.

Teachers' perceived biases and low expectations can deny students the tools for academic success. One way to address this is to engage in honest self-reflection. We suggest starting with simple questions:

1. How am I building solid and lasting relationships with the students I serve?
2. Have I considered their trauma and the impact their experiences have on learning?
3. Do my students have the capacity for academic excellence?

Answering these questions offers a starting place for educators to address equity and build relationships in the classroom.

'I Leaned Into Her Interests'

Renee Jones was the 2023 Nebraska Teacher of the Year. She teaches AVID and 9th grade English at Lincoln High School. Follow her on Twitter @ReneeJonesTeach:

Last year, I had a student who was struggling, not only in my class, but with the transition to high school in general. I respectfully

double-downed on my expectations. I expected her to be in class on time, to turn in her assignments, and to handle her business in class. I spoke with her parents, and together we made a plan of how I would support in her class and how they would do the same at home.

Every day, I'd make a point to tell her I was happy to see her and then continue holding high expectations. I'd call home to check in about how she was doing in class. I was honest about what the student needed to work on and also intentional about letting her parents know something their child was doing well.

I leaned into her interests and made sure to talk to her about that—to play a song she might like—all while holding the line of tardy is tardy, etc. It took us nearly the entirety of two semesters; yet, when she left for summer at the end of the school year, she made sure to come and find me, to give me a hug and tell me to have a good summer.

Project-Based Learning

Jodi Asbell-Clarke is a senior leader at TERC, an innovative not-for-profit STEM education R&D organization where she focuses on game-based learning, computational thinking, and neurodiversity in K-12 education. Her latest book is Reaching and Teaching Neurodivergent Learners in STEM: Strategies for Embracing Uniquely Talented Problem Solvers*:*

I met Joey and his educational assistant when I was recently co-teaching in a 7th grade class doing project-based learning. Joey immediately showed a passion for geography. In fact, that was all Joey wanted to talk about, so I brought him an atlas. He was very engaged, but even after a few weeks, he was only drawing the same maps—Canada, U.S., Mexico—and had no interest in moving on to other regions. He is very rigid and simply will not do what he doesn't want to do.

So his teacher, assistant, and I let him continue with maps of North America. He was very particular about which countries were filled with which colors and where the state or province boundaries went.

A few weeks later, I had an idea. I told Joey that sometimes maps have capitals denoted with a black dot, and that he might consider adding this feature to his maps. He replied in complete clarity. He was NOT going to put black dots on his color-coded map.

So I left him to his maps and went to talk with other students. About 20 minutes later when I circled back around to Joey, he had created a list on a separate sheet of paper—still no black dots on his color-coded map—but on the paper, he was listing the U.S. states and their capitals—in alphabetical order and from memory.

His teacher and his assistant were astonished. They had no idea of his prowess in this area. I soon began a conversation with Joey that started with the capital of Illinois, led to a discussion about Abraham Lincoln, and ended up with his telling me how the Electoral College works and the current polling numbers for candidates running in upcoming elections in the U.S. and in Canada. When I asked Joey how he gets his information, he said he sees headlines on his phone, but he finds reading the full articles on The New York Times website much more informative. Again, his teachers were dumbfounded at Joey's encyclopedic knowledge, which went masked until he started talking about what he personally cared about.

So, in the example above, a student who was given all kinds of remediation for academic and social skills was able to suddenly thrive in a project-based learning class. By giving him an atlas, a window into his universe, we empowered him to demonstrate his knowledge in his own way. Joey creates and understands sophisticated arguments using probabilities and math skills far beyond grade-level outcomes.

He excels at meeting many of the outcomes for social studies and civics and he's becoming media literate in a way that analyzes information and data and then makes sense of it. These are precisely the problem-solving skills that kids need for the future, and Joey is a rock star in these areas when he cares. It is through the context of his passion that he learns everything else.

PBL is not new, and PBL is not a magic bullet, but it allows differentiation so that each student comes to the learning outcomes in their own way.

It's a different philosophy. That doesn't mean that the lesson or class is not structured or that the teacher needs to create new structures for every learner. The teacher should be equipped with a set of good executive-function supports and differentiation strategies so that no matter what lesson the teacher has, they have a perspective on how to help each child see their own path through the same lesson.

Thanks to Sony, Gwen, Renee, and Jodi for contributing their thoughts! ■

Larry Ferlazzo is an English and social studies teacher at Luther Burbank High School in Sacramento, Calif.

Published by Editorial Projects in Education, Inc.
6935 Arlington Road, Suite 100
Bethesda, MD, 20814
Phone: (301) 280-3100
www.edweek.org