Behind the Results: Doubling Test Scores at AECI II

October 02, 2025

By Teach to One

For five years prior to the 2024-25 school year, AECI II students struggled with Algebra. Despite trying multiple programs and interventions, fewer than one in four passed New York State's Regents exam. School leaders knew a change was needed and made the decision to implement T*each to One Roadmaps.*

Instead of assuming all students are ready for the same grade-level content, *Roadmaps* provides each student with a personalized path to proficiency. Beginning with a diagnostic assessment that identifies the specific skills with which each student has demonstrated proficiency and a clear outline of the critical predecessor skills they still need, each student gets a personalized "roadmap" of skills to work through, ensuring they're always learning in the right order—not skipping essentials or spinning wheels on irrelevant material.

Assistant Principal Chris Mastrocola highlights this powerful shift:

- "We ended the year with our scores not only doubling, but more than doubling to where we had a 51% pass rate on the state exams."
- "When students started completing [two skills per week], it built their self-esteem in a way in which they felt more confident — and that also translated to teachers feeling more confident."
- "The light bulb went off… all you have to do is click on the suggested skill, and based on their diagnostic, it will put them exactly where they need to be."

The impact went beyond test scores. Teachers gained time back from lesson planning, culture-building activities like the "Tuesday Skills Bracket" boosted engagement, and students, including English learners and those with IEPs, grew more confident in math.

AECI II By the Details

School: **AECI II: NYC Charter High School for Computer Engineering and Innovation**

District: AECI Charter Schools Network [on LinkedIn]

School Type: **Charter**

Roadmaps Usage: **Algebra I is double periods 5 days a week. 90 minutes of instruction each day. *Roadmaps* is used for 20 minutes minimum per day for intervention.** The goal is that when they break out into any type of group work, they're utilizing *Roadmaps* in that intervention period, so students complete their predecessor skills.

Number of Students in School: **414**

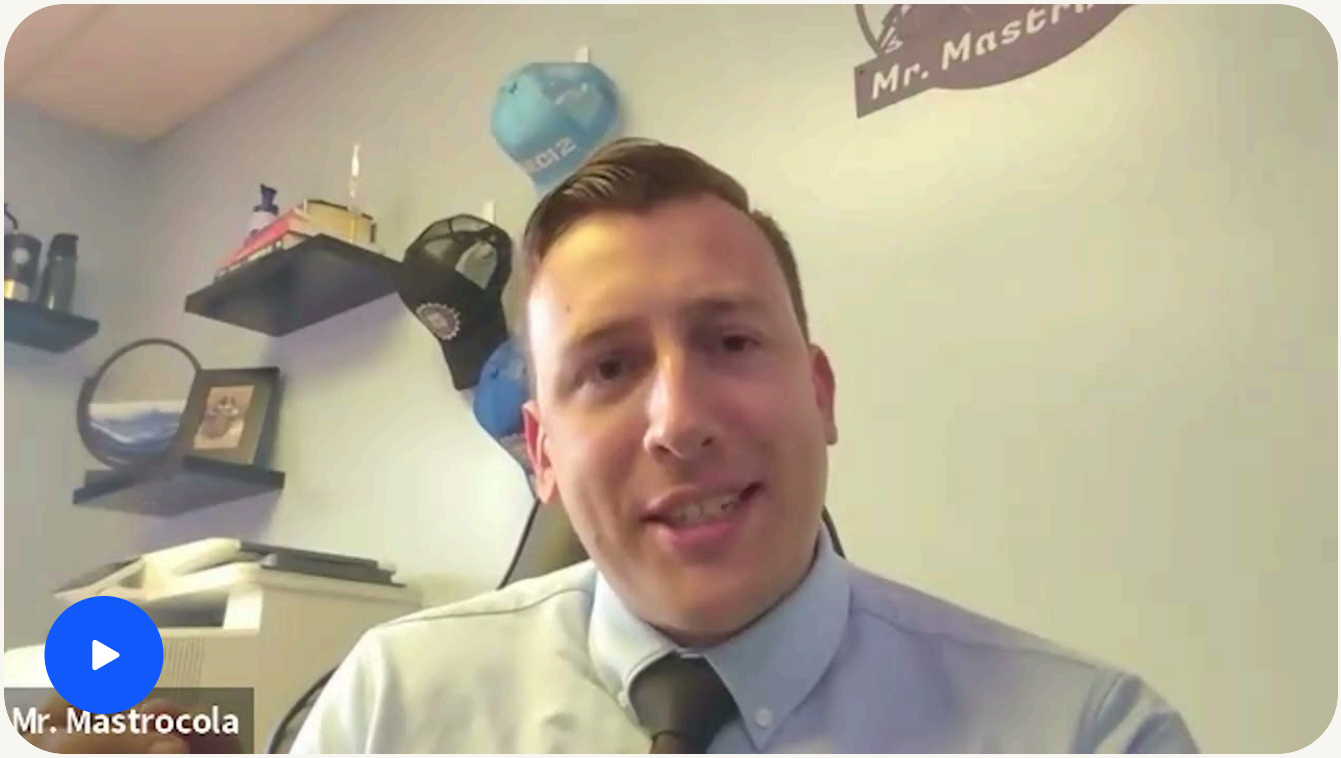
Number of Students Using Roadmaps: **120**

Principal: **Santiago Taveras**

Assistant Principal: Christopher Mastrocola

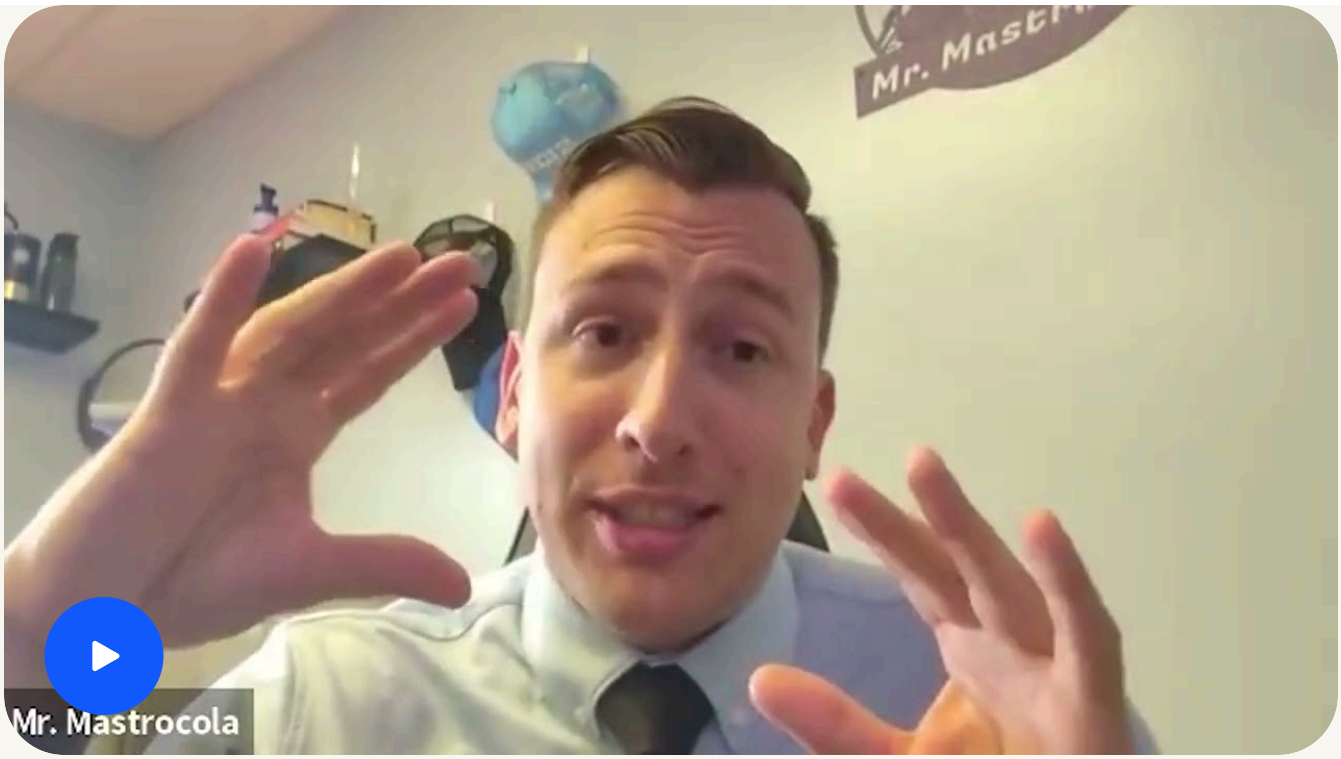
Grade(s): **9-12**

A few aha moments:



Chris Mastrocola

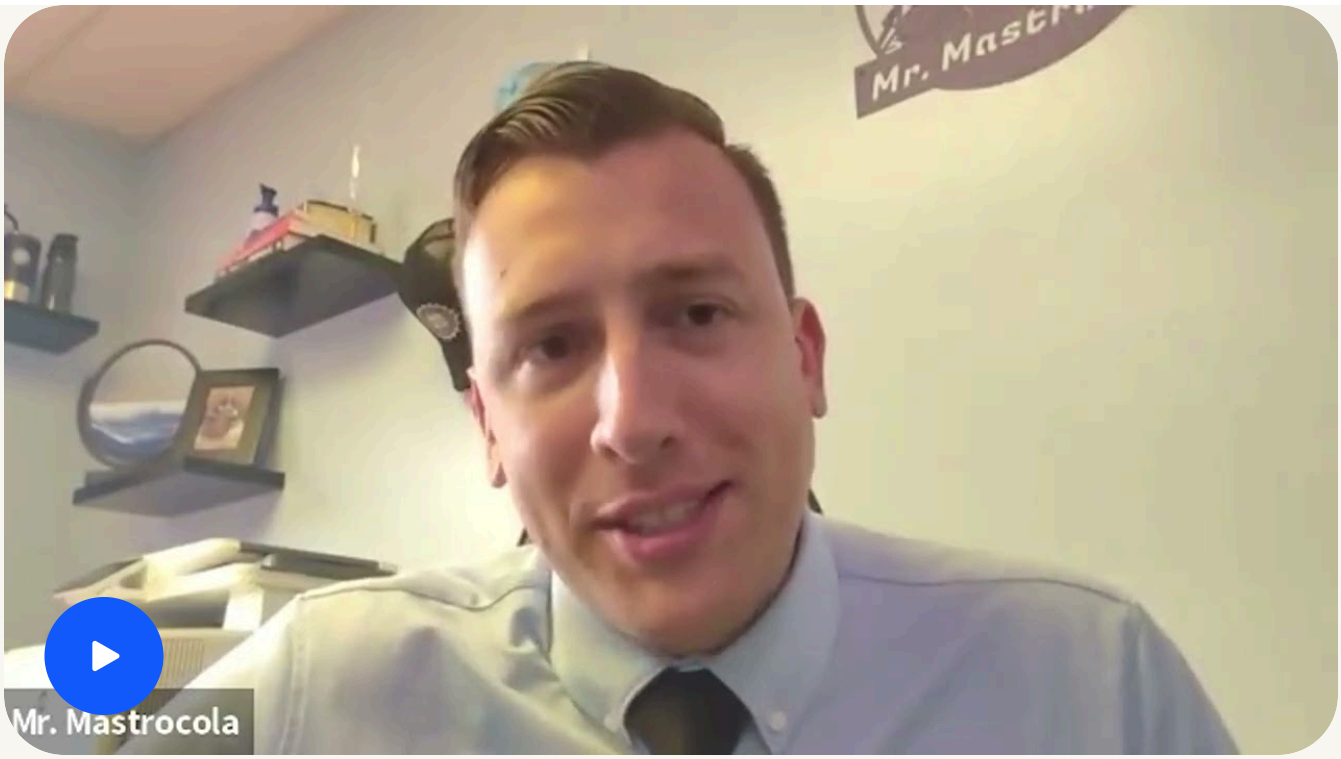
"...and basically just did a quick PD, and then that's when it was like, oh! This is very specific based on the diagnostic. Once you do the diagnostic, if they just do 2 skills a week, the data shows, basically, they're going to pass or your money back, and that's when we were like—oh, and you just have to click this button, and it says Suggested Skills, and if students do those it's going to bring them back."



Chris Mastrocola

Chris Mastrocola

“So they can see why grade-level skills aren’t being assigned, because teachers are always caught up in, they have to keep teaching grade level, but if they can visually see—well, maybe you shouldn’t, because Johnny is actually missing 10 skills from 4th grade, 5 skills from 5th grade, and then 7 skills from 7 and 8th. That’s going to hinder his comprehension when it comes to understanding Algebra I skills in 9th grade.”



Chris Mastrocola

“That’s basically January when we realized, oh, this is more than just another ed tech program. This is **the** program to help students master Algebra I, which we know in 9th grade, if students are not only attending school, but they do very very well during 9th grade, that success trickles up throughout high school.”

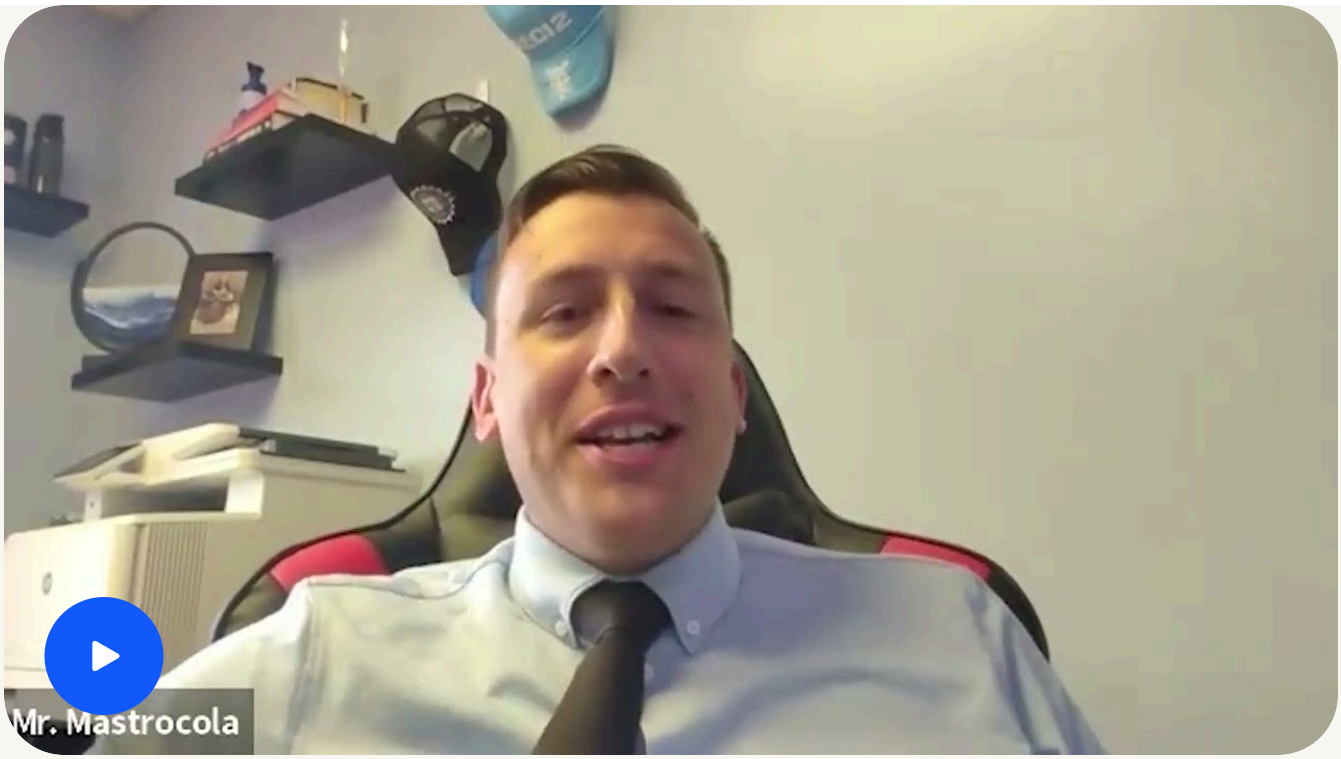
Full Interview

David Esselman

Just for the record, can you share your name, your title, and what school you're with?

Chris Mastrocola

My name's Chris Mastricola, I'm the assistant principal for AECI II Charter High School. We're entering our 7th year as a school, and I've been here day 1 as a 9th grade writing teacher, an 11th grade writing teacher, and now the assistant principal.



David Esselman

So tell me about what led your school to *Teach to One Roadmaps*.

Chris Mastrocola

We have been with, before *Roadmaps*, we've been with... I think it was 3 or 4 different consultant agencies, schools, companies that have told us we can change and implement a math program that will bring student success. Unfortunately, we were not successful in all of those ventures. Our passing rates on the state exams have stayed below 25%, for the first 5 years of our school. In Algebra I, we did not go over 25%, and our principal, who knew Joel Rose, who did the Teach to One program in school, was recommended to try *Roadmaps*, so we said, you know what? This is our fourth shot at a different program, why not? Let's go for it.

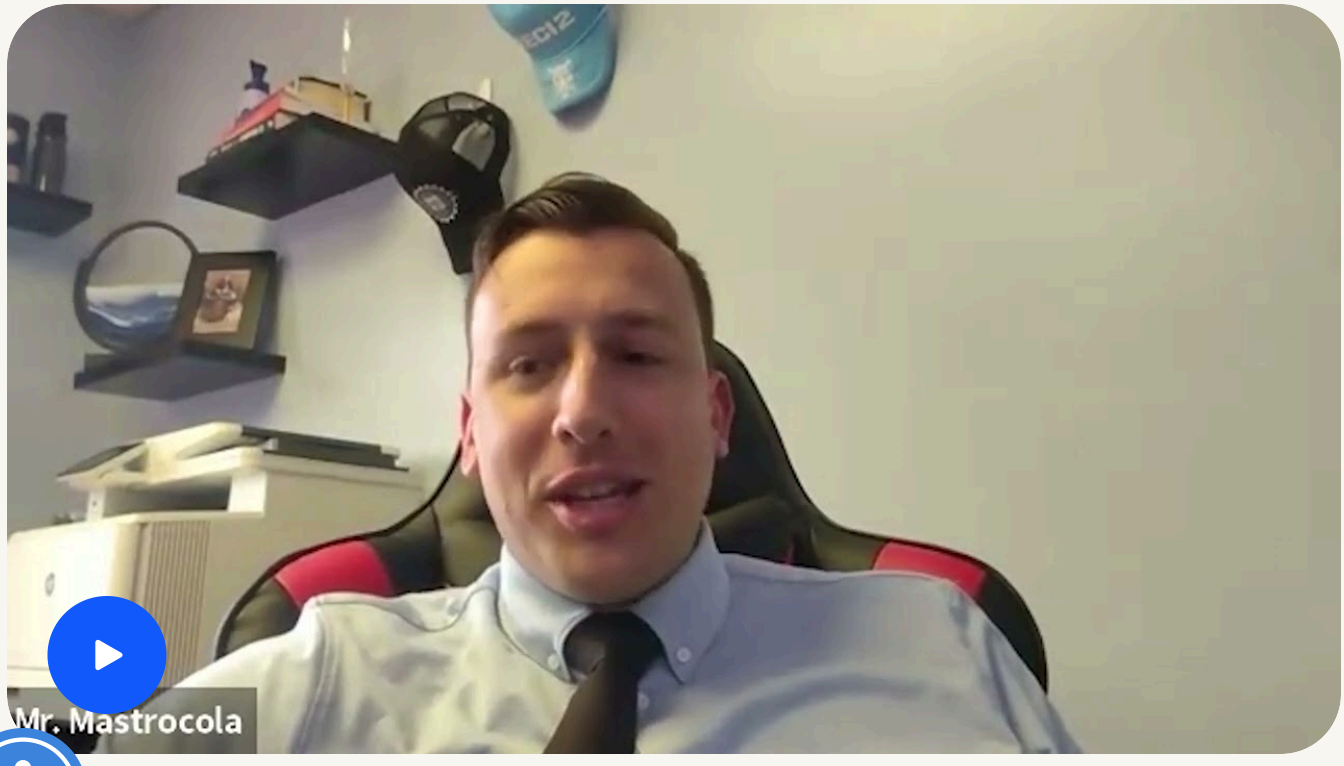
didn't know too much about it, but it sounded promising. So, when mplemented it, we then learned the philosophy behind it, how it

worked, and how it was very strategic at minimizing teacher time and efficiency to figure out what skills they needed to work on.

We ended the year with our scores not only doubling, but more than doubling to where we had a 51*% pass rate on the state exams. So, with that being said, we went, check, and we're using *Roadmaps* again.

We are now planning on how we can implement that structure from the day-to-day lesson so that teachers understand—this is how the program works at large, this is why it works, and how do we implement that so there is success at the teacher and student level.

> Our passing rates on the state exams have stayed below 25%, for the first 5 years of our school. [After implementing *Roadmaps*] We ended the year with our scores not only doubling, but more than doubling to where we had a 51% pass rate on the state exams.



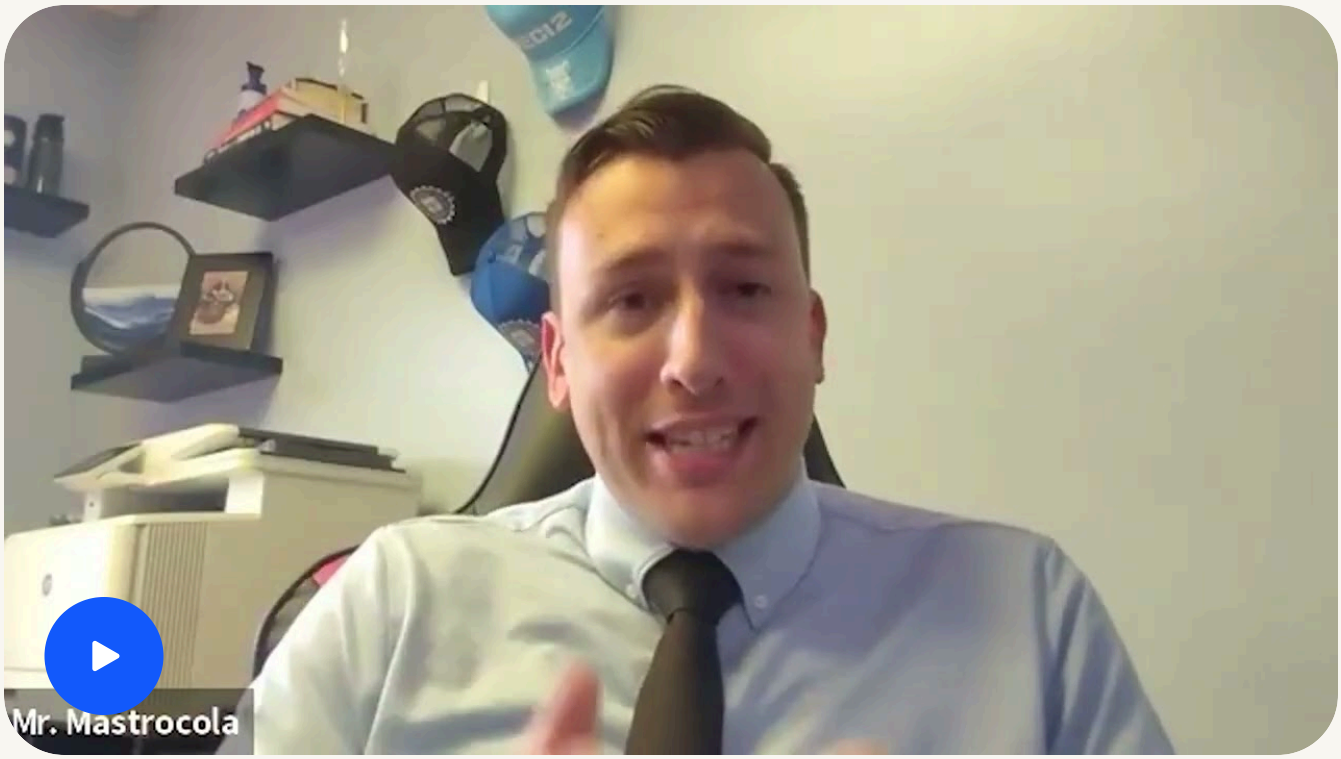
David Esselman

You had very impressive results this past year on the state exam. What do you think contributed most to the success overall, and what component or role did *Roadmaps* play in that?

Chris Mastrocola

I think teachers always play a role in the success of any student's life in the classroom, but I also think the programs that they're utilizing, how they're rolling it out and implementing, also play a role in that.

But I think in this case, more importantly, it was the program itself. *Roadmaps* works specifically where if students complete two skills a week, master those skills each week by using these suggested skills, they are basically guaranteed**.



David Esselman

Were there any shifts in thinking necessary by either the administration or faculty to be successful with *Roadmaps* at your

school?

Chris Mastrocola

Yeah, we had to understand, kind of, the larger vision of how *Roadmaps* works, and, originally we thought, okay, this is a great math program where you're going to sign on, click a bunch of buttons, it's going to give you questions and problems, it will give you feedback, and you'll just be successful. What we didn't realize until January was pretty much exactly how does it actually work?

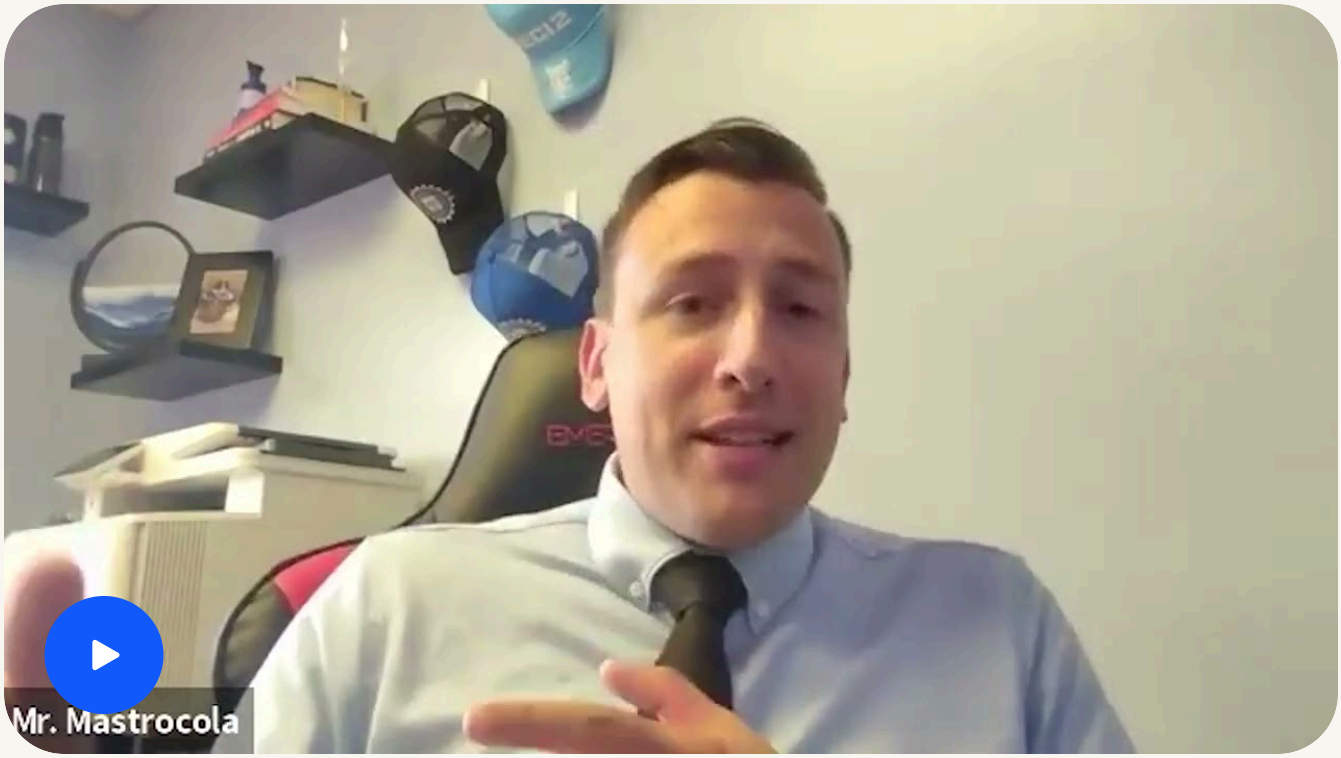
And it works in a few ways, as far as I understand. After you take your diagnostic, it basically categorizes all the math skills that are necessary to be proficient on the Regents [New York end of year state exam] into certain sections to where a student has not mastered the skill, is almost there, or mastered the skill. And basically, it creates literally a roadmap for each individual student, so that when they're on their roadmap, they are completing all of the necessary predecessor skills to master competency based on whatever grade level that exam is. So for us, it was 9th grade, it was Algebra I, so students were taking the Algebra I diagnostic, therefore their roadmap was planned out to the Algebra I diagnostic.

That also helps teachers as well, because when students took that, they were able to group students in certain sections throughout the class, so if they were on similar predecessor skills, or even grade-level skills they could work specifically with those students on their roadmap in Tier 2 intervention, and didn't have to individually pick students and figure out which skills to use. And I think that was the biggest win for us to realize, as administrators, and then once teachers realized that the light bulb went off, and they said—oh, I don't have to [illegible] the skill or skills that students need to get to grade level. It already [illegible]es it for you? It was like, yeah, all you have to do is click on the

suggested skill, and based on their diagnostic, it will put them exactly where they need to be.

> "All you have to do is click on the suggested skill, and based on their diagnostic, it will put them exactly where they need to be."

And I think…you know, the name says it in and of itself. When students are on their roadmap, there's no way in which they can essentially veer off in a different direction. Because the end goal has been placed for them, they can see their trajectory, they know what percentage they're on, and how far they have to go, and that was the biggest win, I think, for us as a staff, was finally when we understood the why and how the program operates.



David Esselman

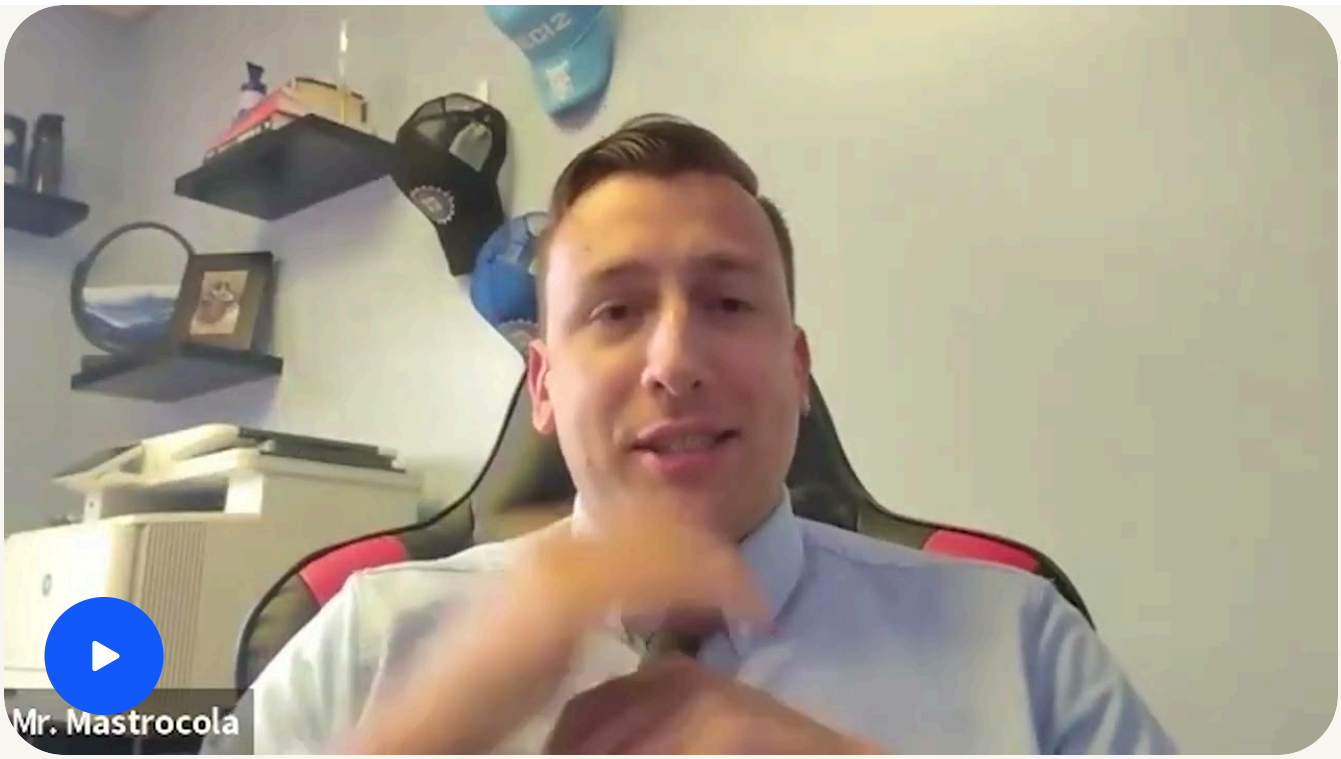
ng into your second year, what are teachers in your school, what are they saying about *Roadmaps*? What are they excited about? You

know, how is it helping them in their practice?

Chris Mastrocola

Overall, they're excited that they're now part of a math team that has now set the bar as high as it's ever been for our school when it comes to state performance assessments, specifically in Algebra I. So, the energy is high. We do have two additional math teachers joining the team, so bringing them on board is something that we're looking forward to.

But the focus this year, and Roadmaps has been great about implementing any feedback and suggestions from us, which has been really awesome, it's now seeing how the program has improved, in which students are signing on, completing those skills right away, and basically utilizing a lot of the features in terms of grouping students, in terms of creating the culture, in building that, throughout the class. Just an example of that would be, like, a "Tuesday Skills Bracket", so similar to, like, a March Madness college bracket, you have that for *Roadmaps*, along with a few others. Our main focus is, what does culture building look like in a math class around *Roadmaps*, so it's more than just, we're doing this thing for 20 minutes. Students are working throughout their day, and maybe even for homework on this program to feel the success that they should, because it is attainable, you just have to have the self-esteem, and I think in addition to the teacher building that, this program also doubles down in helping to build that self-esteem for students to feel successful.



David Esselman

What do you feel like has changed, or how are you implementing this in a way that really allows the teacher to, like, walk me through how it functions in your school with your intervention period, so that I can get a sense of what it is that the teacher is planning for over the course of the week, and what a student is experiencing.

Chris Mastrocola

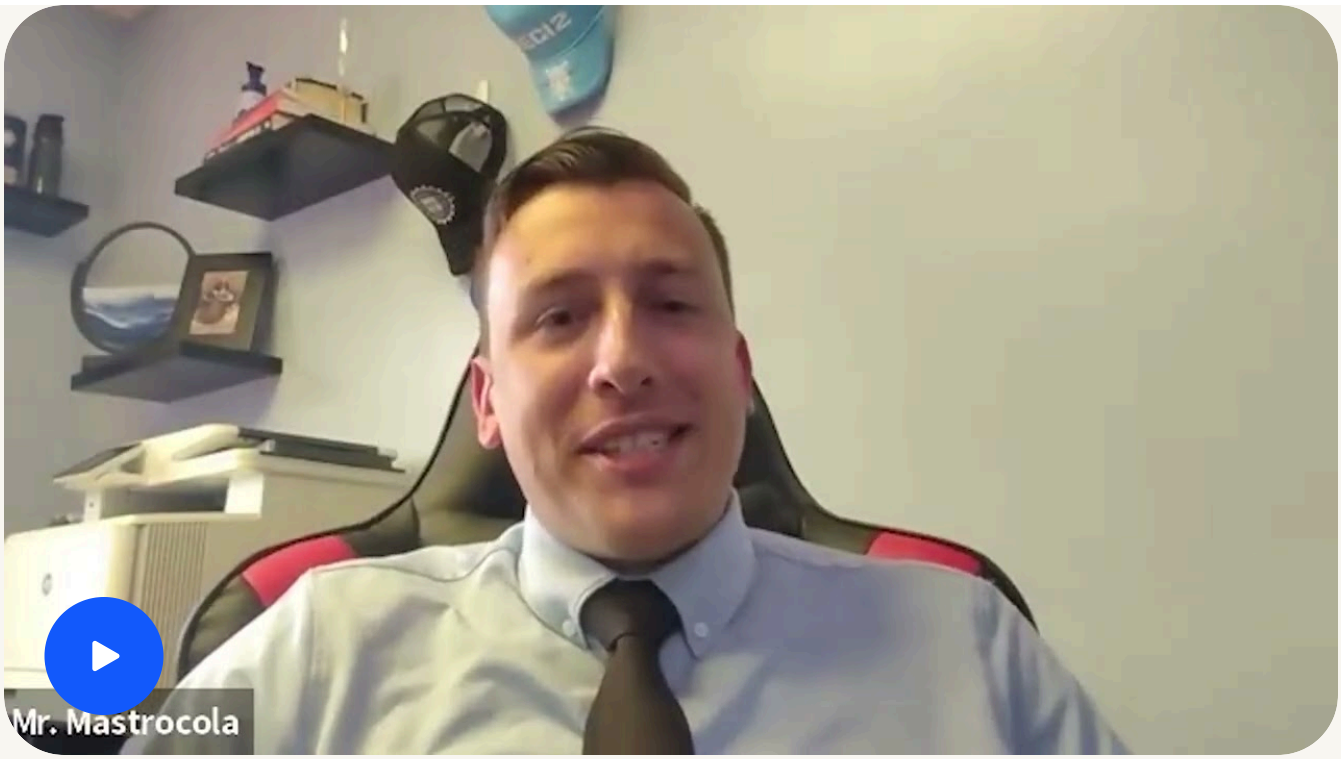
Teachers know that, yes, we would like to have 80 to 90 minutes of roadmaps a week. But teachers still understand the responsibilities of —these are the standards that have to be met, these are the standards that have to be taught, these are the assessments given by the state, as we're a SUNY charter school. So that's non-negotiable. You as a

t's very much the role of the teachers, to help students explore

math in a way in which it connects to them. When it comes to the Tier 2 intervention after the so-called grade-level skills have been taught, that's where I think a lot of the … I wouldn't even call it real learning, but it's very specific learning, because not every student comes in on grade level. They fluctuate, anywhere from 3 to 6 grade levels. And we have to catch students up if you will. So, the program allows teachers to modify and scaffold instruction to where students are performing in their zone of proximal development, if you will, using very educational language there. And they can do this individually, holistically, or in pairs, and I think that's one of the big wins, because then, if students didn't get the lesson in Tier I during direct instruction, or even whole group share-outs, they get to work on whatever predecessor skills they need to work on in order to get there.

In addition to that, *Roadmaps* also … what I think is really cool, it does the text-to-self connection in the sense where it will have a button that says, you know, why do I need to know this? How is this going to happen? You know, how's this going to help me in my life? You can actually click on it. It'll give you a couple of reasons as to why you need it, what professions it's used in. And I think for students, and when I just put on my student hat that was one of my challenges in math, when am I going to need this? Why am I going to need it? And I knew it was important, because, you know, every school is doing this, but, if students don't understand that, it's a little bit harder to engage and then ultimately build that self-esteem within their own learning, so I think that's one of the main factors that I think is also helpful in this program, and that's also something that is pushed, not only at every single grade level here, but specifically the Algebra I class, because we want, as a STEM school, to continue to push students into the STEM fields.

hat's part of the 90-minute instruction block, and how that works from beginning to end.



David Esselman

Were there any student or class stories that were particularly exciting that you'd like to share from last year?

Chris Mastrocola

There were a handful of students that were participating in the roadmap experience specifically, where we were checking in with them on a monthly basis to see how they were doing. They were brought into some meetings with other educators from other schools to answer some questions around roadmaps, and they named everything they really liked about the program, and then things that they maybe wish would be a little bit different.

And as the year progressed, you could track their data, and not only was it getting better and better, but by the time the state assessment came, it really was about, did the program work? The majority liked the program, and some of them thought, I'm not sure what's going to

come out of it. But, all of them scored proficient on the state exam, and I haven't seen them yet, I will see them September 3rd, they know their scores, but I'm excited to follow up with them to see what their thoughts are on the program, because when they enter Geometry or Algebra 2, they won't be using this program, so I'm curious to see how they feel about it, if they miss it, any last-minute thoughts around that, but I think it's so cool that the students that were surveyed for this program, and just being honest, actually were able to increase their scores to the point... and these are students anywhere from Gen Ed to ESL to students with IEPs, and to know that they all scored proficient on the state exam, I think, is a testament to *Roadmaps*. We went from, what was it, in 2023, we had a 19% pass rate on the state exam. In 2024, it was at 24%, and then in June 2025, it went to 51%*, so more than doubling. Again, we have a long way to grow. But, we're looking to increase the scores by another 15-20% in June, and our math department chair is on board, our math teachers that have used it prior to that are on board, admin's on board, so we're jumping headfirst in, and that cultural element this year, I think, is going to be a big thing to that success story for June of 2026.

David Esselman

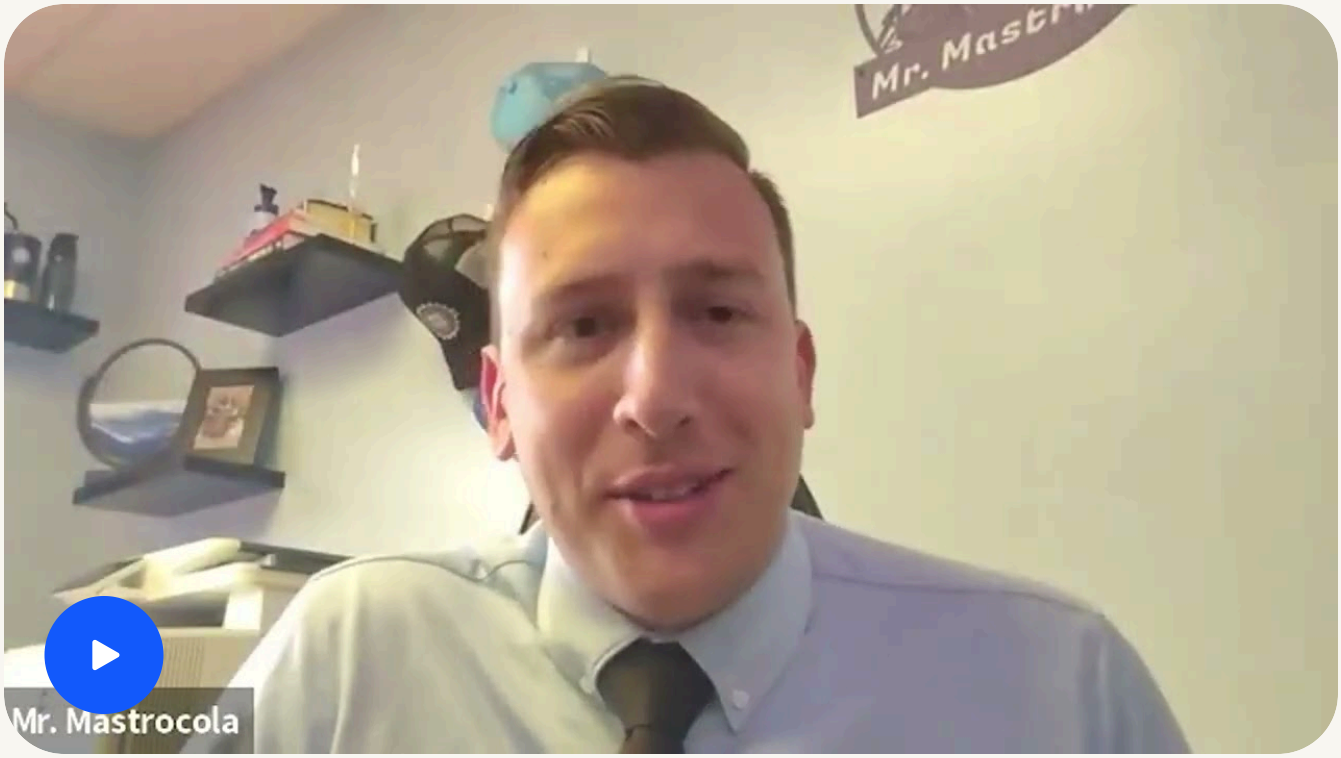
Clearly a fundamental aspect of the success this past year was the teachers. As you onboard new schools, what do you recommend to them as far as preparing for a successful launch and setting the culture to really use roadmaps in a way that supports Tier 1 instruction and also integrates it with Tier 2.

Chris Mastrocola

I always ask a few simple questions. I'm like, do you guys want all your students to be proficient on the state exam? And that's, you know, usually a yes. If it's... if it's a no, I'll be like, let's go to my office and just check in real quick. And if I said, well, if I told you if students complete 2 skills a week and do so every week until the end of the school year. If I told you that they're basically guaranteed to pass, would you want to implement a program like that? And it's like, yeah, of course. Why wouldn't I, right? It's like, great. This is the program. After they take the diagnostic, it literally figures out every single question and skill that needs to be mastered. It creates the roadmap for the student. You get to see it from the teacher portal, and you get to work with that student individually, or pair them up, so that not only are they going to pass the exam, but they're going to do even more than just pass the exam.

When we onboard teachers, it's reminding them that this is not just some other program they're clicking into, and *they* have to do the lift, and *they* figure everything out. No! *Roadmaps* does a lot of the lift for you, and I, as a writing teacher, when I found out and understood how this program worked, I was like, oh my gosh, if they had something like this for writing, where my students would be, where I would be as a teacher, I would have saved hours and hours of creating lesson plans, knowing *Roadmaps* is here to actually do a majority of the lift for you

based on the student performance. It gets you the data, it crunches the numbers, and then basically lays out a plan that, if implemented correctly, is going to get students to that end goal. And to me, that's the ultimate win, in terms of saving time and utilizing that time to work with students during that Tier 2 intervention block, so that if they do experience a question on *Roadmaps* so that maybe they don't get, you're right there to help them, versus figuring out, well, now I got to make a lesson scaffolded to 30 different students, and that is very time-consuming, and more often than not, does not work. So, *Roadmaps* is kind of the helping hand to keep you on track there.



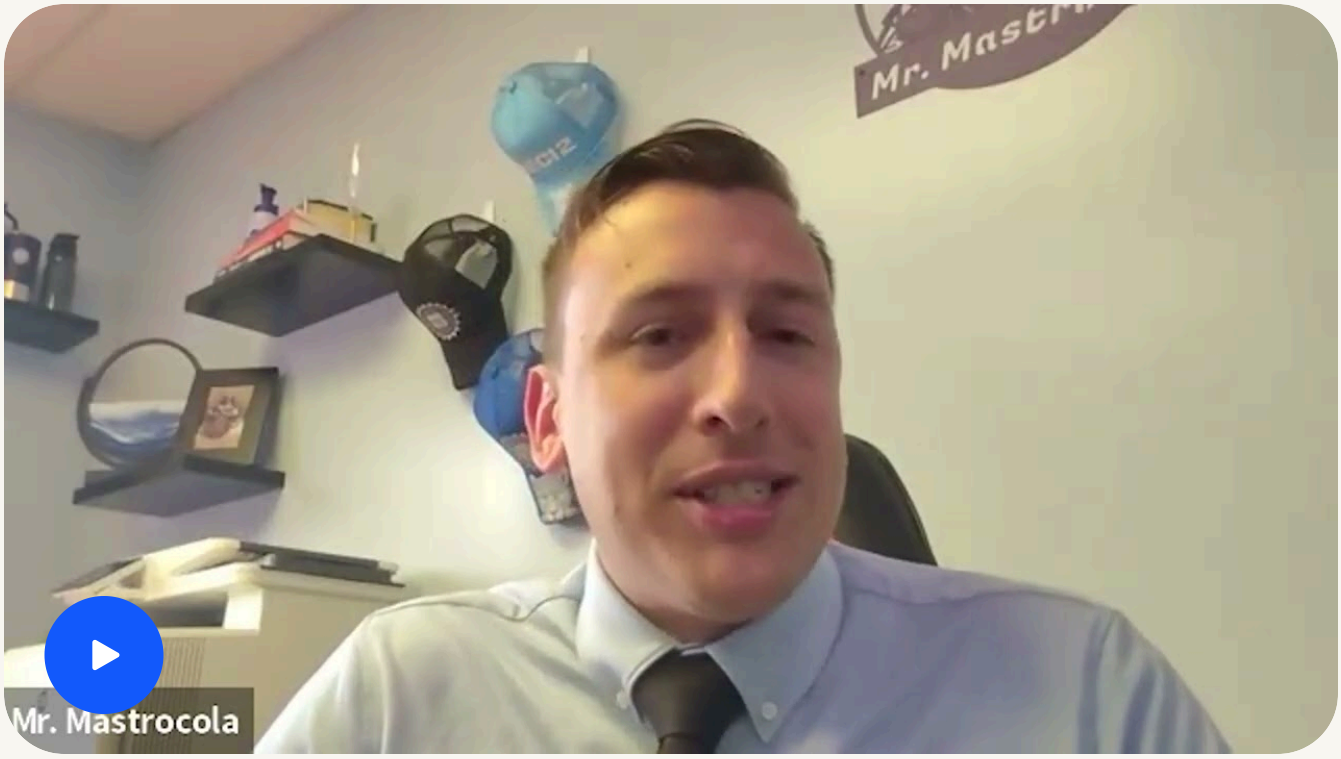
David Esselman

As an administrator, how did the leadership team, you know, set expectations for last year? What was sort of your internal team expectations about what could possibly happen? And how did you… when did you know that it was working?

is Mastrocola

Again, we worked with 3 or 4 other different agencies, consultant folks, and every year it was always, this is what we're doing, we're going to give it a shot, we're jumping headfirst in, and the team was on board with that. More often than not, you know, around maybe March or April, when the spring happened, that's when we would really see if team members enjoyed using this program, or working with these folks, or not. And this time with roadmaps right around that time, we weren't getting that pushback, we weren't getting the—I don't think this is working. It was more of—I think this is working. The data is slow to grow right now, but I think I'm starting to understand how this works. And that's when the conversations begin—oh my gosh, I finally get how this works, I can't wait until September so I can roll it out strong from day one. And that's something that once I finally understood how it worked, and the department chair as well, it was—this is what's going to change us. When we finally get to that Tier 2 intervention block, it's not going to be trying to get everybody to a grade-level skill, because I just taught that grade-level skill, and therefore it has to be mastered. When students are still missing maybe a couple of 6th, 7th, and 8th grade skills, but they're learning Algebra I in 9th grade, it's just not going to work. It's set up to fail if you don't have some type of T2 intervention, and *Roadmaps* is the way to go, in my opinion, because it has an individualized program, a roadmap built out for each student. So, that's when we figured that, well, the data doesn't lie. The data always tells a story. And the data is making our teachers happy, it's making the admins happy, and the teacher. And now it's—let's see what happens when the students started passing. When we had more than half the grade pass, and the scores more than doubled, well, now our remedial classes are small for next year. Now more students aren't going to be in summer school. They can enjoy their summer, or maybe get a paid internship, or whatever it is that they want to do. That takes a lot of pressure off of teachers and

students, knowing that there's actually something there that truly works, and is not just a false promise.



David Esselman

Great. Is there anything else that I should ask you about your experience that I didn't?

Chris Mastrocola

No, but you definitely got to follow up again in June 2026 and see where the state results are. It's been a blast to use, and I'm excited for day one, making sure all the students and staff are onboarded.

And again, creating that culture of *Roadmaps*, and really getting nerdy with it. Like, what does that look like in classrooms? How do we get 9th grade students super excited about doing well in math, but also making sure they understand the conceptual knowledge in making connection to their life, because math is important, STEM is

important, we can't ever forget that, even as an ELA person, and there's always connections between the humanities and STEM, so, yeah, I'm excited to see what this year holds for roadmaps of the AECI II.

Chris Mastrocola currently serves as the Assistant Principal of AECI II. After finishing his BA in English with a minor in Music Performance and his MAT from Sacred Heart University, Chris made his way back home to the Bronx to begin his educational career. He started his teaching career as a middle school writing teacher for four years at Democracy Prep's Flagship Middle School (DPCMS). He then moved to AECI II as a founding Writing 9 teacher for two years and soon after became AECI II's founding SUPA writing teacher. With a passion for education, Chirs pursued his MSEd degree in Educational Leadership from Hunter College. In 2022, Chris transitioned to AECI II administration, serving as the Assistant Principal. He also is on the Advisory Council for *Teach to One*, and is excited to continuously help improve instruction and systems within schools.
"*Education is your ticket out of any situation. I am a firm believer in helping students realize their education is the foundation to the career path of their choice.*"

*The original interview stated a 54% increase, however that number was revised to 51% to include students who took the test in January and August.

***Teach to One Roadmaps* offers a full refund of student license fees for any student who has completed all their grade-level skills from their individualized Roadmap prior to taking their end of year state assessment and then does not demonstrate proficiency on the state assessment.

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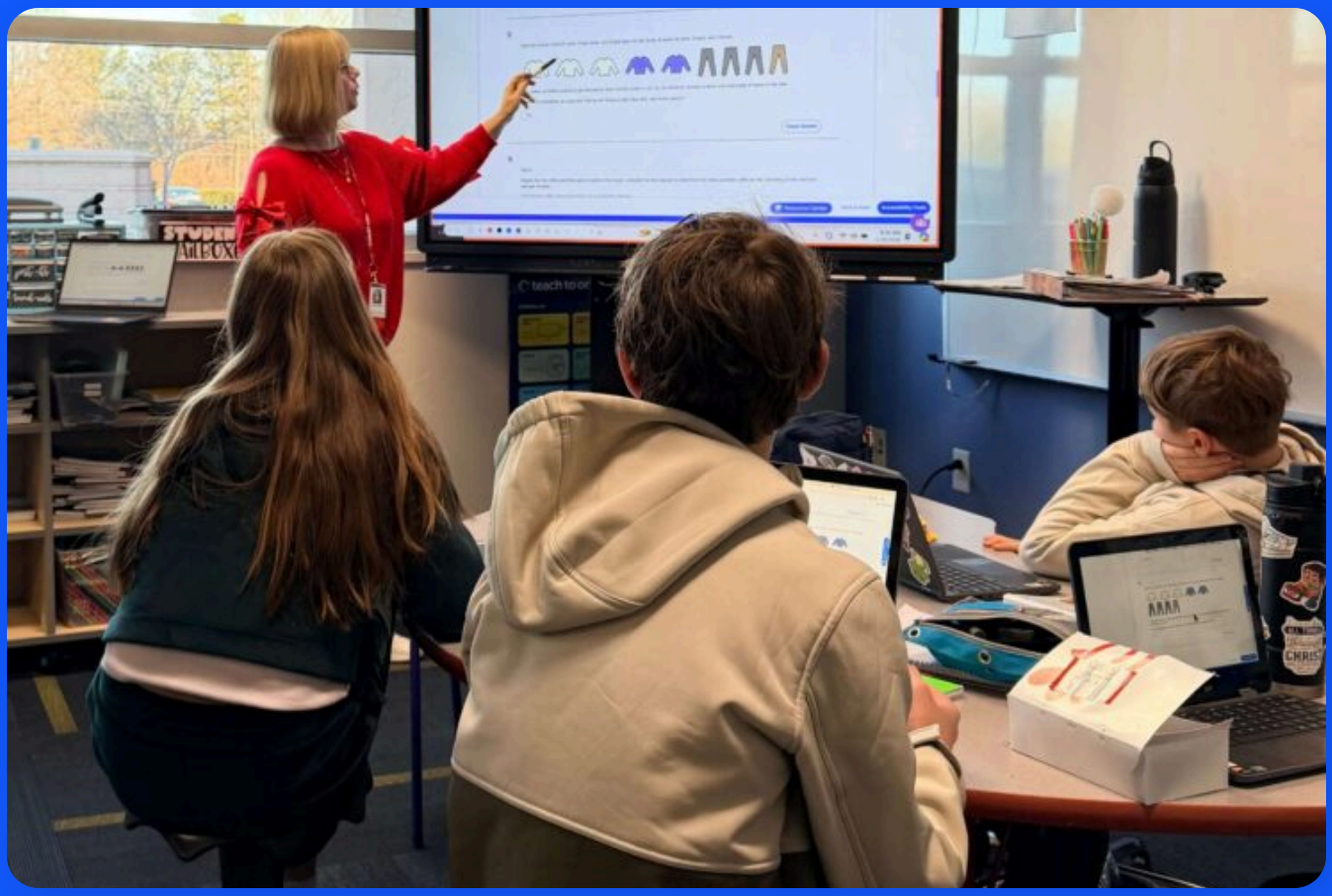

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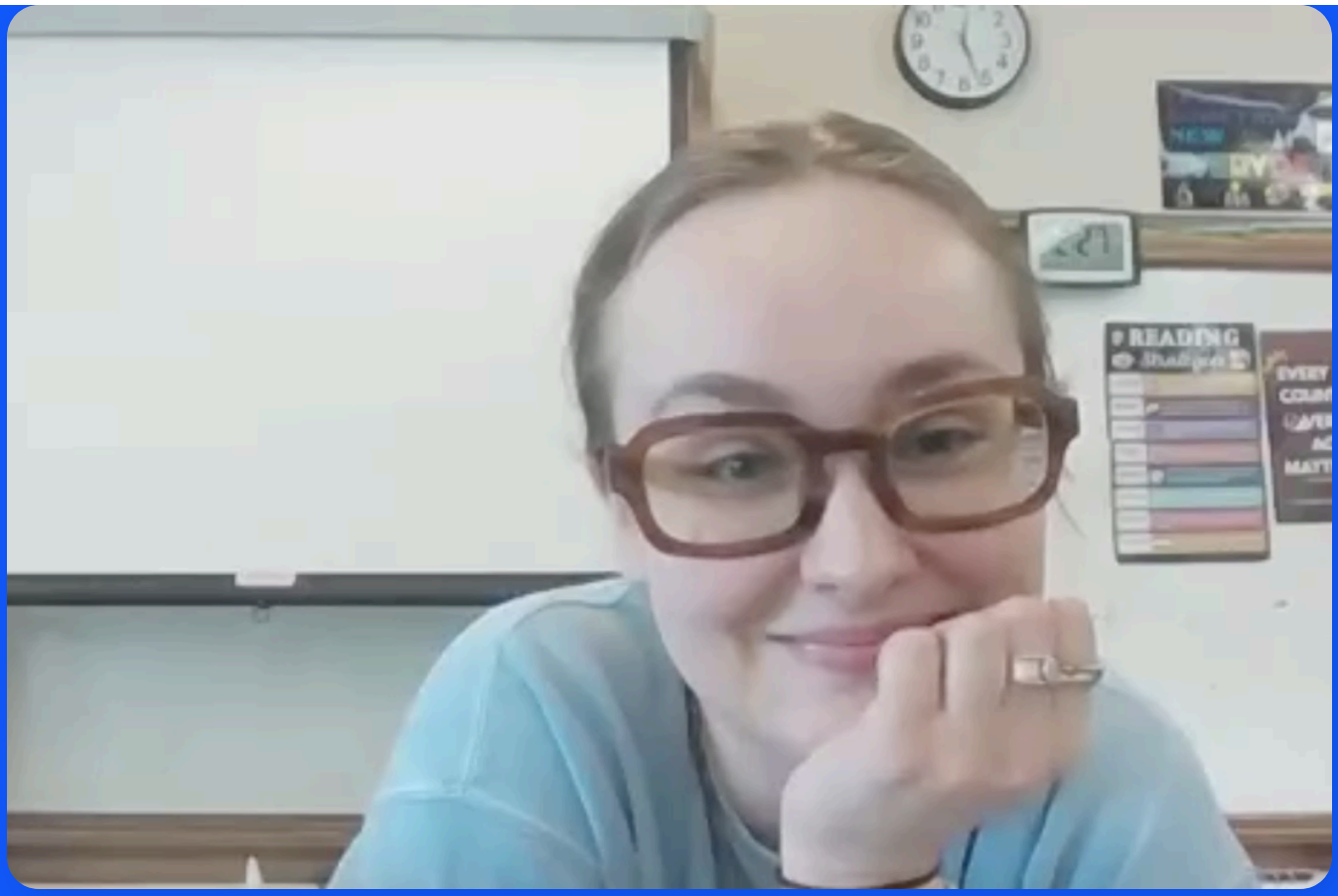

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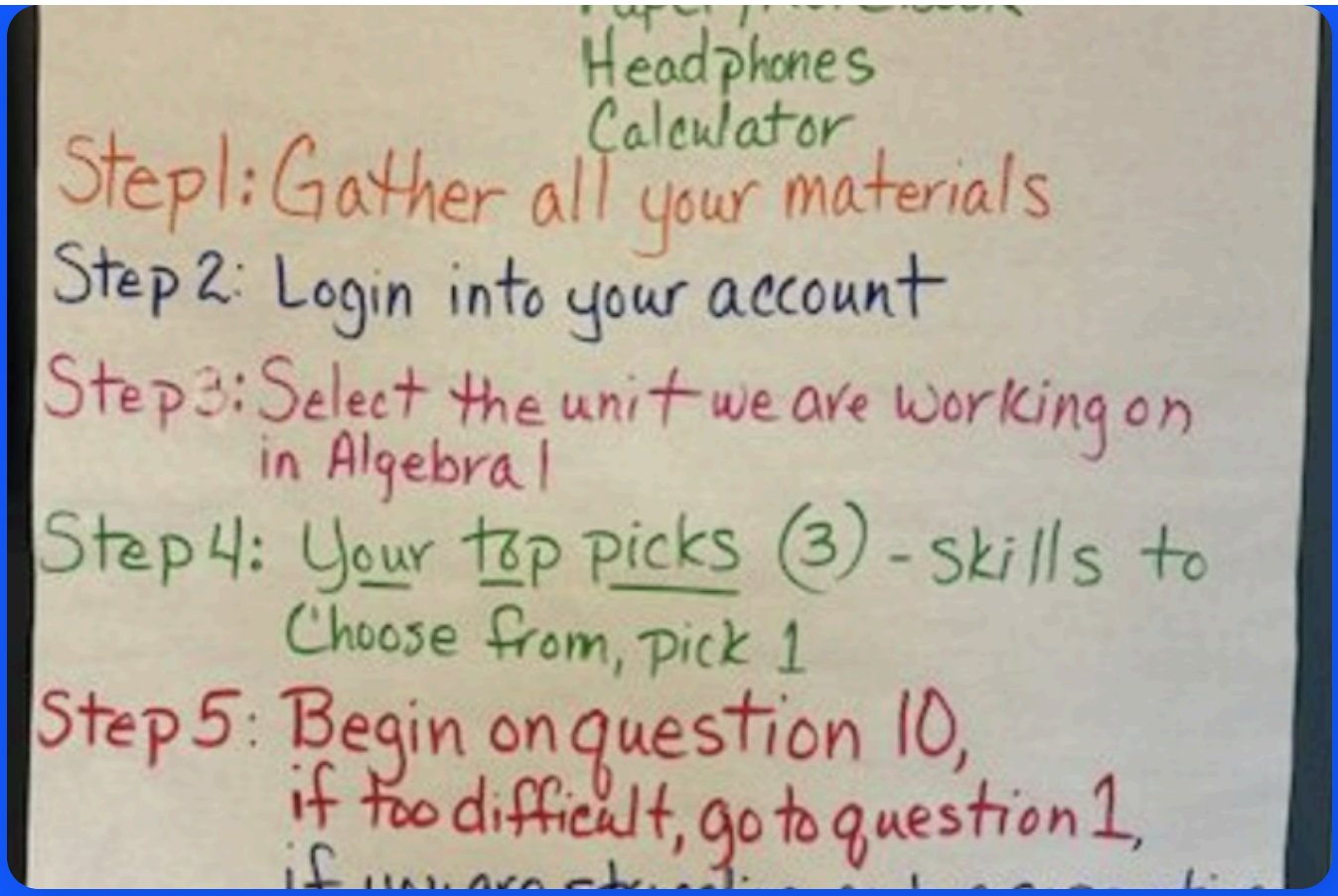

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