TRANSCRIPT

High-Quality Tutoring to Accelerate Learning: Research Evidence and Best Practices

KATIE DRUMMOND

Hello, and welcome to our webinar on High-Quality Tutoring to Accelerate Learning: Research Evidence and Best Practices. Today, we're using the Zoom platform, which many people are familiar with. But if you're having any audio problems, you can use the direct dial phone number that you see on the screen. We ask you to please submit questions for our speakers using the Q&A feature. We'll also leave the chat open, and if you post something there, please direct your comment to everyone rather than any specific panelist. We're letting you know upfront that we'll be sending you a couple follow-up emails. We'll send the slides and also a survey link for your brief feedback, which is very important to us. We will also have a webinar recording that will be available in a few weeks.

I'll share a bit about the Regional Education Laboratory West, or REL West. We're one of ten regional education laboratories funded by the Institute of Educational Sciences. Our goal is to promote the use of data and research evidence to inform policy and practice. We work with stakeholders to support evidence-based education systems. REL West focuses on California, Nevada, Utah, and Arizona, but you'll see by the map on your screen that all states and outlying areas are covered by a lab.

Today's session is part of a series on high-quality tutoring. Today we'll focus on research evidence and best practices. On October 14, we'll hone in on implementing and improving your tutoring program. And on November 17, we'll take a deeper dive into literacy and math tutoring. There's also a related webinar being hosted by REL Northeast & Islands, and that will delve into data use on tutoring and takes place on October 4.

Today, we have a strong cadre of presenters. We'll be in a little bit of a two-by-two mode, with two presenters for each section, before we then open it up to all the speakers for a Q&A panel at the end. I'll introduce the speakers in a little bit more depth as we get to each of the sections. Here, you see an overview of the sections for today's presentation, and just a reminder, we'll have time for audience questions. And as far as the goals for the webinar, we hope that participants will learn about the research on tutoring, explore critical questions for planning and implementing tutoring, hear examples of best practice through one specific program and a specific district, and then also have an opportunity to ask those questions and receive some additional resources.

With that, I'm going to transition over to my colleagues at J-PAL North America. You'll hear from both Vincent Quan and Kim Dadisman. Vincent is the Associate Director of Policy at J-PAL North America. He oversees work to support evidence-based policymaking by establishing research partnerships and disseminating policy lessons. He was coauthor of a meta-analysis on

high-intensity tutoring that was cited by the Department of Education in the COVID-19 reopening guide. He'll hand the presentation over to Kim, who's a Senior Policy and Research Manager for J-PAL. She manages the education sector for the organization and works to generate and disseminate evidence on effective strategies to improve student outcomes. Vincent?

VINCENT QUAN

So thanks so much for having us here today. We're incredible excited to share some of the key research insights about how evidence-based, high-impact tutoring can be a strategy to address some of the unfinished learning that we've seen due to the COVID-19 pandemic. Once again, my name is Vincent Quan, and I'm the Associate Director of Policy for J-PAL North America, and as Katie mentioned, I'm also a coauthor of a tutoring meta-analysis of 96 randomized controlled trials that you'll hear being referenced during our portion today. And, Kim, did you want to briefly introduce yourself before I dive into the specifics of our session?

KIM DADISMAN

Thank you for having us here. I'm Kim Dadisman, I lead the education work at J-PAL North America.

VINCENT QUAN

Great. Thanks so much, Kim. So for those of you who don't know J-PAL as an organization, J-PAL stands for the Abdul Latif Jameel Poverty Action Lab. And we are a research and public policy center that's based within MIT with the primary focus to reduce poverty and improve the lives of people experiencing poverty by utilizing high-quality, rigorous scientific research to figure out which programs truly work, which programs measurably move the needle on outcomes related to poverty. And at J-PAL, we approach poverty from a wide range of perspectives. We do a lot of work in education, which is a big focus area of Kim and myself, but we also do work focused on healthcare, criminal justice, workforce development, a wide range of policy areas related to poverty reduction. And at J-PAL, we also specialize in a form of impact evaluation known as randomized controlled trials.

All of you may be familiar with the concept of randomized controlled trials, given how often they've been discussed in the debate around whether or not the COVID-19 vaccines are efficacious. And we utilize this approach to ultimately determine which social programs and policies are effective. And it's in this context that we've also done a lot of research on tutoring in particular, having supported individual RCTs of different tutoring programs, including of Saga Education that you will hear about later on today, and also having conducted a comprehensive meta-analysis of different tutoring randomized controlled trials to understand whether or not tutoring is effective, and ultimately, if it is effective, what characteristics are behind the most effective tutoring programs?

And so, why are we interested in tutoring today? So if you're joining us for this call, you are all intimately familiar with the incredible challenges facing students all around the United States, and quite frankly, all around the world. Even prior to the pandemic, we know that millions of students were behind grade level. And this generally was the case, especially for low-income students and students of color. The pandemic over the last year and a half has really exacerbated many of the educational inequities that we see. And the quality of education and the quantity of education during the pandemic has really suffered, which has put many

students who were already behind even further behind. We care about this ultimately because we want our kids to succeed in school, and also so they can be productive contributors to society. Also, to be able to contribute successfully to the workforce. And we know how important education is at the end of the day and how difficult it is for students to catch up when they are already several grade levels behind. So it's in this very urgent policy context that we're also incredibly excited and optimistic to share the evidence behind tutoring as a potential solution to help students accelerate their learning and catch up.

So as I've alluded to, our team released a meta-analysis last year in partnership with Professor Phil Oreopoulos at the University of Toronto, who is also J-PAL's education sector cochair, and Dr. Andre Nickow at Northwestern University to examine 96 randomized controlled trials of different tutoring programs. These were tutoring programs that were delivered in a lot of different geographies across many different contexts, and we focused on studies specifically if they had a non-tutoring control group, in other words, the control group does not receive tutoring; if it evaluated tutoring programs that were implemented from preschool through the secondary school level, which meant that we did not look at college tutoring; also if the researchers in the original study included academic learning as an outcome variable.

And then, finally, we looked at studies that were published after 1980 and presented necessary data to compute effect sizes. And the reason why we decided to do this meta-analysis was because we wanted to know the answer to the primary question: is tutoring effective at helping students catch up? What does the existing body of high-quality RCT evidence have to say in response to that question? And if tutoring is effective, what are some of the underlying characteristics of the most effective tutoring programs so that policymakers, if they were interested in bringing tutoring to their context, can follow high-quality evidence-based principles to develop the most effective tutoring programs to help students in their community?

And so, what we found from our tutoring meta-analysis was quite remarkable and astounding. I'm sure many of you on this call have followed education debates throughout the years, and there's a lot of debate over what works, a lot of contention over whether or not charter schools are the way to go, or education technology, or additional principals training or teacher training. And what we found from our tutoring meta-analysis is something that we think is quite rare among high-quality education research, and it's a great degree of consensus behind tutoring as an effective approach to improve student learning outcomes. So we saw in our 96 studies that 80% of the included studies reported statistically significant positive impacts on student learning. And beyond the consistency, we were also remarkably impressed by the magnitude of the impacts of tutoring.

What I mean by this is that not only does tutoring consistently lead to improvements in learning outcomes for students, but these improvements are large improvements. And we actually found that for students who participated in these programs, they gained nearly a year on average of additional learning. So this is something that we really want to emphasize and we're really excited to share because this quality evidence behind a given intervention in education is quite rare. And it's something to write home about when we do find a body of evidence pointing at the efficacy of one type of intervention.

But at the same time, we know that not all tutoring programs are created equal. Yes, I did share that generally speaking, tutoring consistently leads to improvements in student learning outcomes, but there are characteristics behind the most effective tutoring programs. And we do know that some tutoring programs are more effective than other tutoring programs for

specific reasons. The evidence points to a few key dimensions along which tutoring programs can vary that contribute to the overall efficacy of the program. The first is tutor type. What I mean by that is, who does the tutoring? What kinds of training does the tutor receive? Is the tutor paid or not? The tutor type seems to affect efficacy. The second category is program delivery. What I mean by this is the frequency of how often kids get tutoring. Where are kids actually getting tutoring? Is it during the school day, or before or after the school day? What's the tutor to student ratio?

These types of program delivery characteristics contribute to the overall effectiveness of different tutoring programs. And I'll share more on the next couple of slides. And then, finally, the grade level and subject combinations also matter. So tutoring could be more effective for certain age groups within a given subject than it would be for another subject at a different age group. So this is another dimension along which tutoring programs can vary. So I'll share more now about tutor types specifically.

On the first point related to tutor type, we broke down tutor types into four distinct categories in our meta-analysis. The first are teacher tutors, the second are professional tutors, the third is parent tutors, and the fourth are volunteer tutors. And we actually found from this body of evidence that tutoring programs that were delivered either by teachers or trained professionals—so in other words, professionals who receive training preservice, ongoing support, and payment—tended to be more effective than tutors who were volunteer tutors or parent tutors. This doesn't mean that volunteer tutors and parent tutors were ineffective. It just means that relatively speaking, teacher-led tutoring and professional-led tutoring were more effective. And we have a couple of theories as to why this is probably the case. And the Saga team, in their case study about Saga, will share more about some of the underlying elements of their high-quality, evidence-based program.

One is that these types of tutoring programs that employ professionals or teachers often train their tutors much more than a volunteer program or a parent-led program. This type of preservice training seems to be really essential to equip tutors with the skills for how to deliver information and instruction effectively, but also how to connect well with different students, especially students that are coming from more marginalized communities.

The next category I mentioned was related to the program delivery characteristics. We do know from the rigorous evidence that there are some underlying characteristics of how the program is delivered, how frequently the program is delivered, and where the program is delivered. So one core component to keep in mind is that tutoring tends to be more effective when it's delivered in an in-school context rather than before school or after school. One of the theories behind this is that it is much easier to ensure that tutors deliver tutoring to students who need the tutoring if it's embedded as part of the school day. You could imagine that if a tutoring program were run after school or before school, a lot of kids who need the tutoring, a lot end up not showing up to tutoring, for a whole wide range of reasons. Maybe they have alternative activities at that point, maybe their parents have trouble bringing them to school after school to be able to provide tutoring services.

And we also know that the frequency of tutoring also matters. We've found that, generally speaking, three times a week seems to be a sweet spot, although for younger students such as preschool students and 1st grade students, increasing the frequency more, so it can even be five times a week, can be effective. And then, the student-tutor ratio also seems to make a difference. We found that for younger students, they benefit from one-on-one sessions

relatively more than older students, and that older students benefit more relatively from small group instruction. This could be a student-tutor ratio of, say, two students to one tutor, and I believe the Saga team will actually share more about how they structure their tutoring sessions. So keep in mind these key characteristics behind what makes an effective tutoring program. One other thing that I'll emphasize is that reading tutoring tends to be relatively more effective for youngest students, while math tutoring tends to be relatively more effective later in elementary school, and I'll also add, in the high school context.

So you'll hear Alan and the Saga team share more about how their program has been able to successfully move the needle on high school math outcomes. This doesn't mean, however, that you should not do math tutoring for young students, and you should not do reading tutoring for older students. Keep in mind this is all just relatively speaking. So if you are a school district that has limited resources, and you need to figure out how best to target your limited resources to the students who need the most support or would benefit from specific kinds of support, keep these types of characteristics in mind. So with that, I think I will hand it over to Kim, who will talk about a couple of model programs and our generalized ability framework.

KIM DADISMAN

Thank you, Vincent. So we've gone through the key elements of effective tutoring programs as identified through our meta-analysis. So we wanted to look at three real-world examples, these are programs that were included in the analyses, and see how different tutoring programs combined these elements to make an effective program. And what you'll notice is that not all of them include all the elements in the same way. So we start with the Minnesota Reading Corps. They hire professional tutors that have extensive training. They do one-on-one with grades K–12. The focus, as it sounds, is on reading. They do offer this during the school day and they're looking at addressing reading as the foundational skill. The evaluations that examined the Minnesota Reading Corps found that there was improved and significantly higher scores on literacy assessments for students that were participating in MRC compared to students who were not.

So they've ticked all the boxes. They've got professionally trained tutors, it's happening during the school day, they've coordinated that grade and subject matter combination, knowing that reading as a foundational skill is critical to get kids to proficient by the time they're in 3rd grade. They're doing daily sessions. So we've got all of these key elements put together in a single and effective program. Now, another elementary school program is Number Rockets. The focus here, as it sounds, is on math. They also have professional paid tutors that have extensive training, they offer it during the school days, they don't do one-on-one, they're doing two to four kids in their group, which fits in with what is recommended based on the evidence. They offer the programs three or more days a week and are focusing on math in the 1st grade. And as you can see by the final column there, they also had significant impacts on specific tests of early mathematics ability for kids who participated in Number Rockets versus kids who didn't.

So again, they're ticking pretty much all the boxes. Now, we get to a very different kind of program that's called Experience Corps. And this is also a program that focuses on reading at the elementary school level, but these are volunteers. Now, as Vincent said, volunteers were not ineffective in their tutoring, but they were less effective than paid, trained professional tutors. But what we see with Experience Corps is, their volunteers receive extensive training. They also do one-on-one tutoring. They have sessions between two and four times a week, and

they're doing those during lunch. So it's during the school day. And one of the reasons we think that during the school day is important is that it's easier for kids to get to and doesn't present barriers for families.

So again, they had significant impacts on reading, particularly, reading passages and specific reading skills for that grade level. So the idea here is that a successful program and a program that demonstrates an impact on student learning doesn't have to have all of the characteristics, but they mix those characteristics in such a way that they're taking the best of everything, and they're also seeing results.

I'm sure everyone here has looked at or read about or heard about a particular intervention that might've been created in Miami-Dade. And you say, "Well, how could an intervention that was successful in Miami-Dade, Florida be successful for my small rural school in Utah? How is that going to work?" And we think about that a lot at J-PAL, and we've developed what we call the Generalizability Framework to help implementing partners like school districts or schools themselves think about, "How do we take evidence that was found to be effective in one context and bring it into our context?" And we've kind of broken up the framework into two sections, so you'll see the box around the first section, it's really assessing the local conditions, determining, "What's the issue? What's the problem? What's the underlying issue that's causing that problem? And how is it that other interventions that are addressing that problem, what's the mechanism that causes those to work?"

So if you go to the next slide, we're thinking for this particular context, we really believe that the underlying cause of kids being behind in school right now, for a majority of those students, is COVID. And so, that underlying condition is the same. And what we've found through the tutoring literature review is that tutoring is really effective across the board. And so, we feel like what schools should do first in this context isn't deciding whether or not to use tutoring, but really thinking about, "How can we use data that we have at our school to understand who is most at risk for our tutoring?" And so, using data to understand who's most at risk, how do we understand which students are in need of tutoring, at what grade levels and in what subject matters? Being able to use your data to really effectively target the funds and resources that you have will help you to implement tutoring effectively.

Then, we look at the other half of the framework, and that's really about implementation at the local level as well as whether an intervention needs to be adapted to fit your context. We've put this, now, in the context of the evidence that Vincent just presented, and we'll go through a series of questions that districts and schools can ask themselves to understand whether or not they're in a position to implement with efficacy towards the evidence. So remember when we talked about tutors being paid, professional tutors were the most effective kinds of tutors? If you're thinking about implementing an evidence-based tutoring program in your district, you want to be talking about, "Do we have the capacity to hire and train tutors? Do we have a potential pool of tutors? If we don't think there's a potential pool of tutors, do we have mechanisms within our school or district to contract with a vendor that can provide tutoring services to our school, and will that vendor have the flexibility to implement the evidence-based elements of tutoring that we know are most effective?" So these are some of the questions you might ask as you're thinking about, "Who are we going to tutor?"

Program delivery. So again, we talked about the importance of having it during the school day if at all possible, thinking about group size, and also thinking about frequency. Again, these are questions that schools and districts need to ask themselves. "How do we implement tutoring

during the school day? Do we have space to do that? How do we get that into our students' schedules? How do we get tutors into the building? How do we vet them to make sure that they're allowed to be there? Are there enough tutors to meet the demand while also keeping those group sizes what they need to be in order to be effective?" I'm sure you can think of many, many more questions that you need to think through in order to deliver that program in an evidence-based way.

And then, thinking about grades and subject matters. This goes back a little bit to looking at data, but also thinking about, "How can tutoring programs that are being contracted with outside, how can they coordinate with the teachers and the staff in the building to make sure that the right kinds of tutoring are happening and are in place?" Do you have state tests that are going to identify what students need the most support in what grade level? Are there other kinds of assessments that can be administered to students to make sure that you're identifying the appropriate content for each student that might be behind? Do you have mechanisms in place for communicating with the tutors that are coming into your building to provide support to students? And how is that going to work? How are they going to share back the information with you so that you understand that the tutoring is happening, and you have a way to track whether students are progressing or not?

And finally, we're back to using data again. We think it's really, really important that schools and districts that are implementing an evidence-based tutoring program put in place mechanisms to monitor progress of that program to ensure that students are getting tutoring, that the tutoring's happening, and that, ultimately, students are learning, they're improving in their learning. And so, as a school or a district, you need to think about what are the systems that you can put in place, what kinds of outcomes do you care about, and how are you going to collect data on those outcomes? And do you have staff in the building as well as district support, or maybe at the county level you get support, to really be able to collect those data and analyze them so that you have a good understanding of what's happening with the tutoring and whether or not that tutoring is helping students to progress.

So just a quick summary, the key takeaways here: the most effective tutors are consistent, they're paid, and they have good training. Tutoring happens during the school day. They have at least three sessions. We found in our evidence that for younger kids, you can do as much as four sessions. Older kids, it gets to be a little bit too much, although, I think Saga does five days a week, so again, each program is a little bit different. And that the tutoring sessions and the materials that they use are really informed by data, so you understand that you're targeting the right students, and that you're also able to monitor, and understand, and evaluate the program to know that it's actually working. Thank you, Katie.

KATIE DRUMMOND

Next, we're going to move to a case study of a tutoring program, Saga Education, that reflects many of the best practices you just heard. And we're going to hear from both Alan Safran and Maryellen Leneghan. And I'll tell you just a little bit more about each of them. Alan is cofounder and CEO of Saga Education. He has 30 years of experience in public education, including serving as a leader in the Massachusetts Department of Education. Previously, he worked for Match Education, and some of his time there was spent in a role leading their tutor dissemination work. He'll hand things off to Maryellen, who is the Director of Business Development and Consulting at Saga. She began her career as an algebra teacher, and then shifted to a variety of roles at Saga, including being a School Site Director, and then a Saga

Director of Program in Chicago, and later, a Saga Senior Director for Washington DC and Broward County, Florida. With that, I will hand it off to Alan.

ALAN SAFRAN

Hi, thanks, Katie. So I'll speak for a few minutes about the data that we generated at Saga. But before I get into the data slides, I just would like to tell you a little bit about how this all began. People talk about high-dosage tutoring, high-quality tutoring, high-impact tutoring. The phrase high-dosage tutoring was created by me and Mike Goldstein in Boston, Massachusetts in 2004, when our little school on Commonwealth Avenue by Boston University became, to our knowledge, the first public school in this country to embed tutoring as a class period in the regular school day for all the kids in that school. It's a very small high school of about 200 kids. This was 2004. One of the kids in that first cohort who received tutoring was a young man named A. J. Gutierrez, and he subsequently graduated, got a Posse Scholarship to Union College, came back to Boston, and with me, cofounded Saga Education. So every educator's dream is to work alongside with a student when you're helping to provide their education, and now, I'm working alongside A. J. to provide this high-dosage tutoring information to the country and to the world.

We created this idea of high-dosage tutoring because we had an open-admission school where kids were coming to 9th grade, we realized, coming three years behind grade level in every subject. But this is true across America. At public schools in America, typically in the big cities, kids arrive at school in 9th grade, on average, three years behind grade level. There are exceptions. But the kids who were on average that far behind are disproportionately kids experiencing poverty, which is unfortunately Black and Brown. And we decided to do something about it, which was to build personalization as part of their regular day. So we did it at that school for a year, then we took it to Houston, Texas. Now, Saga as a nonprofit is in six jurisdictions: Chicago, New York, Washington DC, Broward County, Florida, Charleston, South Carolina, and Providence, Rhode Island. We consult in the Netherlands, have done that for six years, and in a growing number of states and districts in this country interested to know what 17 years of experience we've got and what can they learn from all this experience on how to set up programs to be successful.

So the data piece I'd like to present is on these next four slides. Our focus—although we've done 1st grade literacy, and we've done middle school math, our focus tends to be Algebra 1. It's a gatekeeper class to high school graduation. So we decided to focus there because in 9th grade, if kids fail it, they'll drop out of high school. We felt it's not too late to intervene. And the data supports that. We've shown, in very significantly large randomized controlled trials—randomized at the student level, not the school level, but the student level which is the platinum standard of the RCT world, gold standard of the evaluation world—randomized trial results that show kids can gain anywhere up to one to two extra years of math learning in a year in addition to what they'll be learning in a regular school program. An additional one to two years of extra learning. Again, in high school, particularly important in high-stakes testing with significant increase in state math assessment pass rates by kids who were tutored versus kids in the control group who did not receive tutoring.

Reducing math course failures by as much as 63%. Of course, failing courses in 9th grade is the number one reason cited by kids who drop out. Academic failure. The number one course they failed was Algebra 1. What's interesting is, even though we tutored in our most recent years just in Algebra 1, kids across their curriculum have reduced their failure rate. We weren't

tutoring for history, we weren't tutoring for science, we weren't tutoring for English. But their failures in other courses were reduced as compared to the control group. And the reason, we think, is that kids felt efficacy. They had an individual who knew them well, show them that efforts would pay off with success. Kids became better learners, more confident learners, more engaged in learning. That's one of the spillover benefits of tutoring at a specific grade level is that kids will feel confidence across the board, across the spectrum. We've had a school principal in Chicago who said, "The culture of the school has changed by tutoring. Kids coming into the hallway out of our tutoring classroom, feeling confident, joyful because tutoring creates an opportunity for joy factor, personalization." Kids know that they're known, that their moms know, because the tutors call the parents. They changed the culture of the hallway such that kids who weren't in tutoring would say to the principal, "Look, why aren't I in it?" Though you'd often think there might be a stigma if you're selecting a subset of kids, the truth is, all kids would enjoy it, all kids would benefit from it. When you make the choices, you say, "Look, these are the resources we have. We're focusing on this set of kids ultimately." My dream, and I hope the dream of educators who pursue successful high-dosage tutoring, is that they'll redesign schools. The three things that they need to redesign are their schedules, their budgets, and their approach to human capital. Based on the evidence, that would be the compelling case about putting tutoring into schools and districts across the country. And that's my piece. Maryellen has much more detailed information about our program. And I turn it over to her right now.

MARYELLEN LENEGHAN

Thanks, Alan. Before I dive into our program, our services, and information about Saga, I want to visualize what the program looks like in action in a school building. So imagine this. You walk into a school as the passing period is occurring. You are walking down the hall as students are entering their classrooms. Teachers are standing by the door, greeting the students, and inviting them into the space. The bell rings. The hall settles down. You walk past rooms with students sitting in rows, watching their teachers at the front of the room teaching new content to them. You walk past a Saga classroom. At a first glance, it looks and sounds chaotic. But on a second glance, you see students sitting in pods of three or four with the tutor in the middle. The tutor is sitting with the students, holding a whiteboard, and working with them. You see the students working, collaborating, and participating. You see the school-based site director walking around the room, monitoring what's happening, taking notes, and completing observations. Then, you glance around the space and see student successes from growth targets on our internal assessment, to student attendance trackers, to student recognition around the room. This space is not chaotic like you originally thought, and instead inviting, collaborative, and a space where student voices are heard.

What I just described is the typical experience of a student that will have a Saga math lab classroom throughout the school day. And the main components of our program are what I'm going to go through right now. So first, we provide daily tutoring support to students during the school day. It is a class that is on their schedule that they receive credit towards graduation for. And this can look different for different grade levels, given scheduling constraints and flexibility with course credits. So for high school students, this can be built in as an elective course, a double-blocked content area course, or an intervention period, or an additional core course for credit. For middle school students, scheduling the students that all travel together in different cohorts throughout the day allows flexibility to build tutoring into their schedule.

And for elementary students, splitting the core course period or using time like guided reading time for tutoring are big pluses. It gives the students time to spend with their teacher in a small group, while the tutors pull them out for targeted instruction. This all allows the space for the teachers to continue teaching their core class while the tutoring is acting as a supplement to the core material that's being taught. And it also enables easier alignment to the core classes to reinforce the content and eliminates students not being able to attend during other obligations. It also fosters a great relationship between the teachers and the tutors, which allows direct collaboration and allows the teacher to be able to go into the classroom to observe what's happening if they have time during a free period.

For us, we offer consistent pairings and supportive small group instruction, as you've heard through some of the research. So the students are paired with their pod mates and tutor for the entire school year in small groups of two or three students with one tutor. This fosters building positive relationships, collaboration, and a space for students to make mistakes and normalize errors. Rarely do student pairings change throughout the year. And as the year goes on, the tutor is able to anticipate student misconceptions or challenges to differentiate the material they are covering. And they're able to not only build relationships with the student, but also their families. As Alan had just hit on, our tutors also call home to their students' families.

In this space, the tutorial pods become close, and the students show respect and understanding to each other and to the tutor. As I had said before, we recognize a one-to-two or one-to-three small groups for high school tutoring, not one-to-one and rarely one-to-four. In a one-to-one tutoring it is not an optimal use of the tutor's time. In an excellent tutorial, a tutor should do no more than 30% of the cognitive lift, and the students should do no less than 70%. This means, nearly three-quarters of the time, the student is working silently or working with the classmate, and the tutor is just watching. In tutorials of one-to-two or one-to-three, the tutors can use their time to work actively with students while other students are working independently.

Our school-based site directors act as the teacher of record that collaborates with the teachers and the administration and department heads to provide programmatic updates and align our curriculum with the standards the core teacher is covering. The relationship between the teacher and the school-based site director is a key component to success of the program. When the student sees the material being covered in their teacher's class first and then comes to tutorial to review, they're able to ask questions, gain a deeper understanding, and feel confident returning back to class. When the teacher's school staff and school-based site director are aligned, you can feel it between the two classrooms.

Lastly, as we stated before, our tutors call home to update parents and guardians about the students' progress at least once a month. Saga is designed to be a teacher-friendly program to supplement and support the material they are teaching in their classroom. The teacher introduces and covers the standards first, then the Saga tutors trail behind them, tutoring the students on the same content standards. Students should experience this as an extension of their math class and not a separate math course they're enrolled in. This experience can also be replicated in a virtual setting given the right virtual tutoring platform. We have a virtual tutoring platform called Saga Connect where students and tutors are able to interact with each other in a shared collaborative workspace, upload content, there's math manipulatives, different function keys and expression keys that they're able to use. And this takes what you

would consider the horizontal experience of tutoring and makes it vertical on a computer screen.

Next, after you think about what your program design is and how you want it, is thinking about the selecting and hiring of the tutors. For Saga, we have a very rigorous selection process that we go to. We market our tutoring positions as a year of service for recent college graduates that are taking a gap year or might want to enter the education field but are not sure yet. Listed on the screen are going to be the steps that we go through. First is the application process, in which we assess their content knowledge, ability to receive feedback, and ability to address student misconceptions through a math talk. We have learned that it is easier to coach a tutor on the content than it is to coach them on connecting with the students.

When you're thinking about selecting the tutors or the application process that you want to go through, it is important to consider the qualities that are coachable throughout the year versus the equalities that you would not coach a tutor on. On the next few slides, I'm going to go over the key competencies that we evaluate each applicant on through the various stages of our application process. Listed here on this screen are six of the 11 competencies we are assessing throughout the application process. First is communicates effectively, then stakeholder focused, interpersonal savvy, nimble learning, being resistant, and demonstrating self-awareness. We call these six competencies our core competencies, and any hire within our organization should have these competencies to start.

The next five of the 11 that we assess are called our individual contributor competencies. These competencies are meant for anyone who is not a supervisor or managing a team. Throughout the application process, we're assessing the applicants on their action-orientedness, collaboration, courage, valuing differences, and instilling trust. Not every tutor will have all 11 skills. That is what the coaching and development from their supervisor is for throughout the year. We use these 11 competencies as a guide throughout the application process. It is not an end-all, be-all for our tutor selection.

Once you have the application process solidified, and your tutor is hired, one of the most important pieces is their preservice training followed by their in-service coaching. I'm briefly going to discuss what preservice training can look like. So first, we have our school-based site directors. Like I had stated, these are the people who are going to be inside of their school every single day, collaborating with the math teachers, coaching the tutors, and the ones that are really the liaison, and they connect as the teacher of record. Our school-based site directors received three to five weeks of preservice training, and then their in-service coaching consists of weekly coaching and feedback from their director of program and quarterly leadership training meetings.

Once our site directors have finished their three to five weeks of preservice training, we then move on to our tutor training, which consists of three weeks of preservice training. Our focus is on relationship building, academics between ratio and rigor, and high expectations. After their three weeks of preservice training, which I'm going to go a little bit further into on the next slide, our tutors also receive intensive in-service coaching in the form of weekly coaching and feedback from their site director, ongoing professional development at least once a month, and quarterly cohort-based trainings.

Here on the screen, you'll see a sample five-day training schedule of the three weeks that we offer. Our training, like I said before, is very intensive preservice and ongoing weekly coaching

throughout the year. We do our best to theme the days of training to keep them aligned and on a specific topic that our tutors are learning. So for example, the first day is geared towards them becoming tutors, high-quality tutorials, and materials to be successful, where the second day is geared towards behavior management and building relationships with students. The third and fourth days are geared towards academics and building strong tutorial skills to be used, such as checks for understanding and collaborative learning. And the fifth day of the week is geared at the tutors reflecting on themselves, and their own growth, mindset, bias, and communication.

Like I said, this is just a snapshot of the three weeks of training that our tutors receive. And in those three weeks, two of those weeks are spent in a cohort regional-based training where all of the tutors from that region are working together. And then, the last week of the training is meant to be site-specific, where just the tutors who are being assigned to a specific school are all working together. Within that one week, that brings time for them to be able to meet with school staff, attend specific school-based trainings, meet the teachers, and actually become integrated into the school building. It is in this role, this ten months that they work together, for them to receive as much coaching, and feedback, and at-bats that they can get to see the tutors grow.

And so, now that we've hit on a lot of the main components of tutoring, we also have learned in our work over the last seven years of Saga, and Alan in the last 17 years, of different ways to support states, districts, schools, and organizations that are launching a tutoring program. We use the same structure, material, and support that we use in our direct services to help design, train, and check in on the program throughout the year. This comes in the form of technical assistance and quality assurance. For states, districts, and schools that have their own tutoring cohort and are looking for additional support on getting started or capacity building throughout the year, we are able to take our materials and provide you the support that you need.

KATIE DRUMMOND

Thank you, Maryellen. We're going to next shift to a panel discussion that's going to focus further on tutoring in practice and serving a diverse student population. For this, we'll add a couple other voices and faces to the conversation. We'll hear from both Chad Thomas, who's a principal in Chicago, as well as Lisa Lanigan, who works for Saga in Chicago. Chad started his career as a nationally board-certified English teacher. He then transitioned to school leadership, serving first as an assistant principal, and since 2013, he has been the principal at Sullivan High School. In just a minute, I'll let Chad tell you a little bit more about the context of Sullivan High. Lisa began her career as a mathematics teacher, and she joined Saga in 2017 and is currently one of the Chicago directors of program for Saga and supports tutoring in eight different schools. So Chad and Lisa, I'm hoping that you could each start by briefly telling us about the specific ways that you are involved with organizing and supervising tutoring. And Chad, maybe we could have you start and tell us a bit more about the context of Sullivan, where you are the principal.

CHAD THOMAS

Good afternoon, everyone. I'm Chad, the proud principal of Sullivan High School. I'm in Chicago, in particular in Rogers Park on the North Side of Chicago. This is my ninth year as the principal at Sullivan, and I'm proud to say that we've been a Saga partner for the last seven years. Sullivan is a really unique school. Recently, there was a book released about Sullivan

called *Refugee High*. We have around 600 students, and roughly 65% of the students are bilingual students with over 40 languages spoken at Sullivan. Currently, we have about 35% of our students are special education, our diverse learners as we call them in Chicago. But it's really one of the most beautiful and diverse schools, I think, in the city, but also in the country that has so many diverse needs and so many beautiful geniuses in this school. I'm proud to serve this school.

And Saga was really one of the first interventions that I brought to Sullivan as I took over the leadership of the school. The history of the school—it was on academic probation from 2000 to 2013, the lowest-performing high school on the North Side of Chicago when I first became the leader here in July of 2013. It probably should've been closed when Chicago closed about 50 schools. This was definitely one that probably should've been closed because of the performance of the school, but at the last minute, the district decided to not close any high schools. They zoned in on mostly elementary schools that were failing. So that's the brief history. I'm proud to say that we're doing well now, we're in the middle of the pack as far as high schools on the North Side of Chicago, and no longer on academic probation thanks to the work of many partners, but in particular, Saga, the one that we're focusing on today.

KATIE DRUMMOND

And, Lisa, do you want to chime in in terms of your role with supervising tutoring in Chicago?

LISA LANIGAN

Great, thank you. Yes, so as a Director of Programs, I have the opportunity to oversee program implementation at many different schools throughout the city of Chicago. In my time, I have seen Sullivan, which is on the north end of our city, all the way down to the south end of our city as well, so I, as a Director of Programs, liaise with multiple different schools with multiple different contexts in order to ensure that our program is being implemented with fidelity. So that means checking in with key players at the school, principals, to ensure that the goals that they have for the program and their students are being met. And I also support the site directors in ensuring that the program is running at its most effective, and that means providing high-quality instruction for the students and also high-quality tutoring for the fellows.

KATIE DRUMMOND

Great. And based on questions that came in, we know that our audience has a lot of interest in hearing about English learners and tutoring. So Lisa and Chad, I'm hoping you could both talk a bit about the Chicago context when it comes to ELs and how Saga's tutors work with English learners. So, Lisa, let's start with you.

LISA LANIGAN

Great. So for Chicago, we are in many different schools, and given how we hire our tutors, we provide them with a lot of support in terms of being able to reach English language learners without having or needing that native language themselves. So we provide them with strategies, and we have a department within our academics team that supports with English language learning strategies and techniques for our fellows, which includes professional development and also includes different consulting opportunities where they can meet with our English language learning department to help them really find ways to navigate that space when you're working closely with students. And I think the most exciting thing is, I had an

opportunity to be at Sullivan as a site director when I first started my experience with Saga. And having the opportunity to see just that individualized education, where a fellow is sitting across from one or two students that have completely different languages and finding a way to communicate through hands-on activities, through math, through learning intentionally is just one of the hallmarks, I think, of our program and just really naturally supports language acquisition, both in terms of just English language, but also in a math language space as well.

KATIE DRUMMOND

Chad, would you add anything about what you've seen in how tutors—and I know, Lisa, you refer to them as fellows but that's the same concept as tutors—do you want to say a little bit more on what you've seen in work with English learners?

CHAD THOMAS

Well, we're a personalized learning school, and the catchphrase we use with our EL students really is, verbalize to internalize. Whatever content you're working with, that opportunity to verbalize as much as you possibly can so you can internalize the content. That's sort of the mantra that we have, verbalize to internalize. And always thinking of the five senses, getting the EL kids really using all five senses in the classroom, whether it's in math or English classroom. Using your hands, using the different learning modalities on a continuous basis. The two students to one fellow or tutor ratio really allows the kids to verbalize and to speak the language of math, but also speak the language of English in a lot of cases, giving them that opportunity to practice, with instead of 25 kids, you're sort of sitting quietly by yourself just listening to the teacher, you get that one-on-one attention where you can really practice English with math as the vehicle to communicate.

And math is such a universal language. It's sort of that one great content area at our school where kids from all over the world that come from refugee camps to some of the governmental housing that's close to the school still speak that language together, so there's that common culture that they can speak in math and there's just an excitement that's built around math. But when you have that one-on-one touch, it really does allow the kids to explore and ask those questions that they might not ask in the larger context of a classroom, especially not being comfortable with the language quite yet. So they can leave a math room, go into the Saga lab, have that one-on-one attention, and ask the question that maybe they didn't get a chance to ask in the big math class.

KATIE DRUMMOND

Great, thank you. And let me open up our related questions to some of our other speakers. Vincent, from a research perspective, are there approaches that arise in the research or promising practices that you've seen when it comes to tutoring English learners?

VINCENT QUAN

I think with English language learners, in particular, the jury is still out, at least from the research perspective. So when we looked at our meta-analysis, we included a handful of studies that specifically focused on English learners, but it didn't seem to have as clear of a consensus around what specific characteristics drove the most beneficial impacts, but there were a couple of programs that were found to be effective, and I can share a bit more detail about what they did specifically. A lot of it actually connects with what Lisa and Chad already

mentioned. I think the small group component, which of course, is something that has been found to be effective even for non-English learners, also seems to be effective for English learners. I think the high amount of frequency—so two of the programs that we looked at that were effective, I think, met on a daily basis and had about roughly 30- to 50-minute sessions. And then, one other thing that emerged from some of the studies that we looked at was the teachers were actually bilingual in some instances. And once again, the jury is still out on whether or not that ends up contributing a major impact. We just had too few studies at the end of the day to say one way conclusively or not. But it was the case that at least in two of the studies we looked at that focused on English learners, they utilized bilingual teachers. And they also provided them with a lot of additional training and coaching as well.

KATIE DRUMMOND

So it sounds like this is a place where there's space for more research to occur, most definitely.

VINCENT QUAN

Definitely. And the ones that we looked at also focused on 1st graders as well, and it was really targeting literacy in particular. So the jury is still very much out for different age groups and different subject areas as well. So definitely, more research is needed there.

KATIE DRUMMOND

Chad and Lisa, let me come back to you and ask if there's any common pitfalls or misconceptions when it comes to tutoring English learners. And, Chad, I'll start with you.

CHAD THOMAS

I think it sounds ridiculous to say, but speaking louder or slower to someone that speaks a different language isn't really an effective strategy or tool. You've got to just be yourself and be the person you are. I don't speak another language, and I'm in a school of over 40 languages here. The kids are very adaptive to navigating the world because they've navigated the world without their common language a lot of times in spaces, whether that's the grocery store or the math lab. So they're able to adapt a lot faster than I could as a 45-year-old person who doesn't speak another language. They're just so adaptive. Not thinking that you need to slow down with the relevant and rigorous content that you're trying to provide. I think another misconception is that, "Oh, they don't speak English, so maybe they don't get the content." Actually, they get the content. You're actually holding them back to the rigor. And so, I think that's a common misconception that teachers have, that kids can't do rigorous work because they don't speak the language. I would beg to differ, especially in math. The kids are ready to go.

We cohort kids at Sullivan. What I mean by cohort the EL kids, we cohort them with their language proficiency. So you don't need to spend a whole year in ESL 1 if you're speaking as an ESL 3. We'll move you as fast as your language proficiency moves you. Same in any content area. We're ready to move you if you're ready to move. We want to get to the rigor, regardless of your language acquisition. I think that's the biggest misconception, that you need to slow down with your content. Really, the kids are ready to go, and they're excited about the extra tutoring, especially now at Sullivan, they'll have one section of Algebra 1, and then they also have the Saga room, and it shows. Our growth scores are 90% compared to other Chicago public

schools. And most of our freshmen have Algebra 1, or we call it Integrated 1, and Saga. So it's working. So slowing down doesn't provide any success. Rigor is where it's at.

LISA LANIGAN

I'm going to add three misconceptions that I see. From a tutor standpoint, many of our tutors think, one, if you're working with ELL students, that you need to speak a common language; and two, they think if they don't speak a common language, then they need to have curriculum materials translated directly into the student's language; and three, the other misconception we see is, that fellows or tutors think, "Oh, no, they can't read or understand English, so I'm going to take all the words out of this word problem and only give them compute-style problems, only the numbers." And we know and we've found that none of these things actually help students access math at a high level that we really want to see.

So just like Chad touched on the rigor, we maintain a high level of rigor by allowing students to utilize resources. They can use their phone to translate, they can use dictionaries. Fellows or tutors use a lot of opportunities to highlight specific math vocabulary words and make connections to prior topics so that students are able to write out or talk through problems, whether it's in their own native language and utilizing some English as well during those descriptions and instructions, just really leaning into that space and allowing it to not only be an opportunity to learn math, but an opportunity to learn English and not worry about removing the language or changing the language, but using that as a learning opportunity to have a deeper and more robust conversation about how the language is connecting to the math topic. Because like Chad said, math is universal. So students are able to see how the math is working, so they're able to quickly make those vocabulary connections when they're having those conversations.

KATIE DRUMMOND

Let me ask another question thinking about other kinds of diverse learners. How has Saga incorporated students with disabilities, whether it's IEPs, or 504 plans, and/or gifted students into tutoring? And I've seen in our chat that someone asked the question, "What's the difference between in-house tutoring and IEP programs?" So Lisa, maybe you could start with this one.

LISA LANIGAN

Great. One of the wonderful things about Saga is that it fits very well with students, and their IEPs, and the needs and modifications or combinations that students might need. So for example, many accommodations that students have on their individualized education plans are more frequent check-ins, more time to work through problems, more examples, the use of a calculator, more frequent breaks, needing more hands-on time with the content. So all of these things are embedded into a small-group instruction style that we have at Saga. So it really naturally fits in to what a student may need as an intervention. And we have found that these work also with students that are gifted as well. We have students who are in geometry courses who are able to really do the same things and accelerate to a very high level their conceptual understanding and not just be application, but also understanding where that math is coming from through having really in-depth and detailed conversations with their fellow or tutor and with their peers as well. So it really fits into any student's schedule, whether they have an IEP, whether they're gifted, or whether they're in a general track. The

accommodations, and modifications, and just natural way that a Saga tutorial flows, like Maryellen described, really fits for any sort of student's growth.

KATIE DRUMMOND

And Kim, let me come back to the research picture again. Are there approaches that arise in terms of promising practices for students with disabilities from the literature?

KIM DADISMAN

We didn't include any studies in our meta-analysis that focused specifically on tutoring with students that have disabilities and IEP or a 504 plan, 503. But just echoing what Lisa just said, if you think about the context of high-impact and high-quality tutoring, it's additional time to study a particular subject, it's a small group setting, and it's personalized learning. And I think many of those characteristics of that kind of interaction are what a student with an IEP would require anyway. And so, I think it meets those students' needs. Students are grouped by ability to some degree, so you're working with a group of students who have a similar take on that particular topic that you, as an individual student, has, so it's personalized across that group. You have that extended period of time, and you're working with an expert one-on-one. So I think while we didn't study specifically tutoring programs that were designed for kids with special needs, I think the personalized learning and the mechanisms behind one of the reasons why tutoring is successful is definitely a structure that meets those students' needs.

KATIE DRUMMOND

I'm going to turn to a slightly different topic. And I'm wondering if Chad, you can talk a little bit more about the way your school and personnel have thought about interaction between existing math curriculum and teaching practices in the classroom versus the work of the tutor. So what does this collaboration really look like in practice?

CHAD THOMAS

Yeah, that's a great question. We made the switch here at Sullivan a while back to a more integrated approach. Typically in Chicago schools—this is my 28th year—a school would have Algebra 1, and then they would have Geometry, and then Advanced Algebra their junior year, and then some sort of pre-calculus sort of thing their senior year. We switched to more of an integrated approach. And the reason I think that's important for this conversation is, math is everywhere and math is not siloed. Full disclosure, I failed the 5th grade, and I was an IEP student. I say that to almost everyone I speak to because I think it's important to remember that people with IEPs can succeed in life and be successful.

But also, I failed geometry twice. And the reason I failed geometry twice—I'm not going to blame the teacher, Mr. Evans—but it was mainly because it was so siloed. It was in a box, and I wasn't able to play in the sandlot of algebra with my algebra skillset. And so, I think that that's important to remember. And then, going back to the question, with that integrated approach, we have our site director that really sits in with the math team, is in those planning meetings when the fellows are tutoring— that math director used to be Lisa. She used to run down the hall and chase kids to Saga class. But those site directors are in that room with the math teachers planning that curriculum, planning those scope and sequences, reviewing data so that site director can then go back to the tutoring lab and have those meetings with the fellows and tutors to really do the DDI work, data-driven instruction work, that we need to be doing.

And then, really trying to integrate and personalize that approach based on what the standard might be and unpacking that standard down to the skills. A lot of times, the kids in math have the curiosity and the critical thinking skills to solve the big equation, but they sometimes don't have the smaller executive functioning type skills almost to get them there. So the misconceptions and/or the problems occur before you can even get to the higher-level stuff. They can think critically, but because our kids and their deficiencies in their language, but also coming from other countries and special education, sometimes the basic skills that allow them to access the critical thinking part of a math problem are where they struggle. They can do and understand the problem, but they can't get all the mechanisms right to get the problem right in the long run, if that makes sense.

So I think it's important to use the Saga lab to unpack that bigger power standard or that big Common Core standard and what's at the roots of that standard in the math world so we can get them there. Because the critical thinking and the curiosity is really there with kids. It's sometimes just the little steps to get you there so you can unpack that bigger thing that is where they struggle and are challenged, I believe.

KATIE DRUMMOND

And either Maryellen or Alan, I'll pitch this question to you. Are there other issues with teacher/tutor collaboration that you think are important to mention?

MARYELLEN LENEGHAN

I think one of the most important things at the start is having a principal who buys in to the program and is able to communicate to the staff what the program is here for and why, so it does not feel intimidating to the school-based staff. Once you have that buy-in from the principal, it's then very easy to, like Chad said, have that site director sit in on math department meetings. It makes them feel like they're part of the school staff if they're in that meeting with them. And then, also making sure that we're aligned to their curriculum. If a math teacher sees that we're either moving too far ahead of what they're teaching and the tutors are teaching it before they see it in their math class, or they feel that we're getting way too far behind, that can cause some friction. But that's when that school-based site director is that extremely important person who liaisons between what's happening with the math teachers at the school and what's happening in that Saga classroom.

ALAN SAFRAN

I just want to follow on that. Katie, your question is really interesting. I think some teachers are skeptical. "Who are these people who are going to be sitting in front of my kids?" they would say. And we found that experience some places. And communication before the program begins is important. But in the absence of it, after a week or two, the teachers see their kids coming to their class more excited, more confident, more engaged, kids get really interested. "What's going on in that room?" What's going on in our room is what every teacher dreams of, which is personalizing for kids. But no teacher, except perhaps at the very end of the Bell Curve, can do it. Because they've got five classes of 25 or 30 kids a day, and they just don't have time to build relationships or to slow down for kids who are not at the grade level. It's understandable, but it's a structural problem. The solution to that structural problem, we think, is building personalization not as a replacement for the class, but as a complement to it.

The second thing I'd say, what really long term becomes very appealing to the collaboration is that a number of these tutors might want to become teachers after this year. So a principal like Chad could have a 180-day observation of that tutor if he wants to see them every day. And he can make a decision, "Is this someone I'd like to cultivate to become a teacher after their year of tutoring?" We've had a network of schools in Chicago called Noble that one year hired 37% of their high school teachers straight from our tutor core, people who have done a year of tutoring, as compared to where else they might've traditionally sourced them because they found that experience, learning the rhythms of the school, learning about kids really intimately and personally, learning about kids' families. It really mattered a lot to the preparation of the teacher, especially for urban schools.

KATIE DRUMMOND

Kim, I'm wondering if we could revisit a topic that you had in your earlier slides, which is, in what ways can tutoring programs and schools collaborate to measure the impact of tutoring, and what kind of issues arise with data collection and analysis?

KIM DADISMAN

This is, I think, really in the area of what we think of as emerging evidence. The meta-analysis didn't speak directly to this, but as we support evaluations for programs like Saga and other kinds of programs, we start to learn more about this idea of collaboration. And I'd love to touch on this but then circle back and get Alan, Lisa, and Maryellen's perspectives as well. Our perspective is that this is critical that tutors and teachers understand where kids are, and that the tutors know what's happening in the classroom, and the teachers know what's happening with the tutoring so that both teams, if you will, the school team and the tutoring team are working together to move the student forward. And if there are assessments that a tutor uses to measure progress, that those assessments are shared with the teacher so that he or she can get an understanding of where the student is excelling within the content that's being taught within the tutoring group and where that student is still lagging, where there might need to be additional support that could happen even in the classroom or with other kinds of assignments. And if both groups are using assessments, that they're sharing that information back and forth with each other.

I think it's also important, and again, this is something we would say is emerging from the research, we don't have actual data on it, but that there's consistent communication with families between the tutoring organization and the school so that the parents are getting a similar message about why their student's in tutoring, how their student is progressing, and how what they're doing with their tutor impacts and complements the work that they're doing in the regular classroom. Again, this is what we think of as sort of emerging evidence. We don't have RCT evidence around this kind of collaboration. But I know that Alan and his team have extensive experience. So I'd throw it back to them to get some more ideas about some of the specifics of how their site director and fellows interact with individual teachers.

KATIE DRUMMOND

Does anyone from Saga want to chime in? I'm particularly curious about how the tutors and/or the teachers together look at data and students' progress to decide where to go from there.

LISA LANIGAN

I can speak a little bit to that and to some of the mechanisms we use and ways that I have seen done as well. We have an internal assessment that is a foundational skills assessment that first kind of gives us an idea of some of the prerequisite skills, the previously learned skills that may cause a student to struggle to access grade-level content. So we have an assessment that we work on with the students, and then we're able to really adjust the course as needed because we know, "If a student might be struggling with simplifying fractions, then they may struggle with slope," and make those connections as well. That data can be shared with teachers, and additionally, when our teachers are entering grades and they're entering their assignments, fellows have that mentor opportunity with their students, so they regularly check in on a student's progress in their math class. So when they see a student needing more support in a certain area, they're able to kind of lean more into that support as well.

Maryellen answered a question in the question-and-answer section where somebody asked about curriculum alignment. And so, I just wanted to draw people's eyes there as well, where the site director will liaise and discuss with the math teacher, "Hey, what are you working on?" And then, we choose lessons that align to grade-level content and also supplement the student's foundational skills need so that students are able to access grade-level material in an environment that is really individualized and supportive based on, again, that foundational skill need we know that they have. So that's another way that we use that data and use that communication style. Fellows also can check in with teachers as well to give updates on what their students are doing. So it's a very collaborative, very intentional, and very individualized experience for the students and also for the fellows.

KATIE DRUMMOND

I'm going to step back and take a little bit broader lens of some questions related to tutoring that have come in from our audience. And maybe we'll try to do these somewhat rapid-fire so that we can get through as many as we can in the next minutes we have. Vincent, I'm going to ask this to you. Could you address the use of elementary and secondary school emergency relief fund, ESSERF, and other funding sources for the purposes of tutoring?

VINCENT QUAN

I think we have a really exciting opportunity right now to actually take funding that's coming at the federal level and to be able to reallocate it towards evidence-based approaches. So I think the best way to do so is to keep in mind some of the key evidence-based principles that we shared early on and do our best to encourage districts to actually adhere to some of these evidence-based principles. So thinking about being able to embed in a school day, or partnering with a tutoring organization like Saga that has such a proven track record of being able to deliver high-quality tutoring and has the experience of how to do it well. So I think to the extent possible that we can actually provide guidance and push school districts and other entities in the direction of adhering towards these high-quality evidence-based tutoring principles, such as having trained tutors, ongoing support for tutors, high-frequency, small-ratio. As much as we can connect it to that, I think it would be great.

I think the other thing that I would mention is, although we have a lot of evidence about tutoring, there still is additional research that needs to be done. So for example, this pandemic has brought to light the role that virtual tutoring potentially could play, and we think that there's a lot of promise there. But at the same time, we don't have as much high-quality

rigorous evidence to suggest whether or not virtual tutoring is effective. And if so, what are some of the most effective characteristics of virtual tutoring? So we're trying to utilize this opportunity to also generate new high-quality evidence on promising tutoring approaches that we're rolling out.

KATIE DRUMMOND

I'm going to ask a couple questions putting on hats of different stakeholders in the education system. So the first question that came to us was from the perspective of a school board member, what are the questions to be asking staff to ensure we're providing high-quality tutoring for kids? And Alan, maybe I'll ask you to take that one.

ALAN SAFRAN

Sure. Well, it really relates to everything we've talked about today. A school board member should ask the superintendent, or whomever the superintendent designates, "What are your parameters? What are the guardrails you use to set up a tutoring program? Have you looked at the choices of labor force, full-time versus part-time, paid versus volunteer? Have you found ways to schedule it so that it works as part of the regular school day so that it's equitable for all kids? Who will be your talent? How will you source them? How will you train them preservice? How will you approach them in-service?" Those are the key questions. The human capital, the schedule, those are the decisions that the school-based staff under the direction of the central staff need to make. If they make those decisions against the evidence, then they're likely to be set up for success.

And I think the number one pain point for districts is, where do you find the people who want to be tutors? There are three pretty good pipelines if you're looking for full-time, and even more pipelines if you're looking for part-time. Recent graduates, mid-career, and retirees are great potential full-timers. Part-timers, undergraduates, interested or not interested in teacher preparation, volunteers. There are lots of pools of labor. But the key thing, what many of the researchers writing their draft papers about tutoring in the last year and a half forgot, was the issue of in-service coaching. You can't take a tutor on day one and expect them to be good. You've got to give them coaching embedded in the job. By the way, dream of every rookie teacher, to get embedded coaching. They don't get much. With tutors, in our model, they have someone who's in the room with them giving them coaching every day. That's the highest dosage of coaching that's possible, not just high-dosage. But there needs to be a component of support for those tutors inside the day. So the school board member needs to ask those questions, get answers that align with the evidence, and then start small, learn from the initial efforts, and grow it over time.

KATIE DRUMMOND

And here's a similar question from the perspective of a parent. If you hear that your child is going to be invited into a tutoring program, has been placed into a tutoring class, how would you know that the tutoring they're receiving is high quality? And maybe Chad, I'll ask you to start with this one.

CHAD THOMAS

I wrote some notes down before this call. For me, it's what training did they receive? Do they know how to build a relationship with a child? And is it relevant and rigorous? Those are the

four words that sort of come to mind for me. Everybody likes to use the word tutoring like, "Oh, we'll just start a tutoring thing." Well, that's great, and that will help a certain group of kids. But if you're not training up on what that looks and sounds like, it could go south in a hurry. And then, the fellows do a great job of building relationships with the kids, but also with their parents, to build that partnership with them. Because by the time they get to high school, math hasn't just been a struggle this year. It's been a struggle their whole life. My son is in 7th grade, and the math is starting to catch up to me. And then, I would say, asking some questions about, "How is this relevant to the math that they're learning in their regular math class? And how is this going to be rigorous so my kids not bored out of their minds?" Those four things.

ALAN SAFRAN

I have to say, I always love everything Chad says. I love the summary he just provided here. But the other thing I'd say is, if I'm a parent of a student, and my student's been struggling, after a few weeks maybe a month, maybe I'm seeing something different. I'm seeing a different outcome. I'm seeing my student actually more excited about that class that he or she was afraid of before. Maybe some evidence and assessments, some more confidence. If you talk to the teacher, "Oh, Chad was not really participating in my class early on. Now, he's in tutoring, and he seems eager and willing to participate." So there will be a shift in efficacy. Kids feel that effort pays off if tutoring is done well. That's the ultimate goal here. Not just the academic goal, but the confidence and engagement of kids in learning.

KATIE DRUMMOND

All right, I think that's actually a great note to end on. I want to thank everyone for their participation. We've covered so many great topics here. And I know there are some questions we did not get to. I'm going to actually use this opportunity to plug once again the two other webinars that we'll be having on tutoring because they will cover more in-depth the when and how of tutoring when it comes to planning it and implementing it. We've got some great tools that will be shared, specific checklists and planning tools. And then, we touched the surface of math here with Saga, but we'll hear from other programs that delve into literacy and math in particular, and the different approaches that can be used.

Thank you to everyone for your patience with our slides. As you can see, we are not showing slides now, but we will be sharing the slides via email. I know there's been a lot of questions about that. We will also be sharing the recording once it's ready in a couple weeks. And we'll also send a handout that we have that summarizes this information in sort of a nice one-pager. So once again, really appreciate everyone, and we will see you again in October.