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The Focal Student

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John Newman:

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Andrea Brothman:

Welcome to the Math for All podcast. In this series, you will hear from teachers, instructional coaches and school leaders who are bringing the Math for All approach into their classrooms, schools, and districts. I'm your host, Andrea Brothman. Math For All is a mathematics professional learning program for school teachers. The program helps teachers implement high quality, standards-based mathematics education for a wide range of students, including those with disabilities. Math for All fosters collaboration among general and special education teachers, so that all teachers implement student-centered approaches for rigorous mathematics instruction.

Our first episode looked at the neurodevelopmental framework, an essential component of the Math for All program. In episode two, we explore another essential part of math for all the focal student approach. Starting in the first math for all workshop, we ask teachers to select a focal student. This is a child in their class who they're curious about or want to understand better, or it's someone who puzzles them in some way or who's learning strengths and challenges they want to know more about. The teacher keeps the same learner, the focal student, in mind over the workshop series as they plan adaptations to upcoming mathematics lessons.

This episode comes to you in two parts. In part one, we'll hear Math for All. Coach Matt McLeod's, conversation with fourth grade teacher Jenny Montgomery. Jenny shares a story about her work with a focal student and the joy in her voice is unmistakable as she describes the impact it had on her and on her student. If you're like us, you'll find yourself smiling. In part two, we'll listen to Matt's conversation with John Newman, a network instructional support leader. John supports teachers with their mathematics instruction and helps administrators learn about what to look for when they observe a mathematics classroom. John experienced math for all professional learning during the COVID-19 pandemic. He'll share how even during that most difficult time in education, he saw significant value in keeping a focal student in mind when planning lessons.

So let's begin.

Jenny:

Hi, I am Jenny and I'm a Chicago public school teacher. I've been teaching for over 30 years, at the same school, and I've been teaching fourth grade for some time. I teach math and science.

Matt:

Wow. Jenny, I didn't realize it's been 30 years.

Jenny:

It's actually, I'm working on my 34th year same school.

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Matt:

Thank you for being with us today. It's exciting to know that you continue to think about this focal student approach even after you finished all of the professional development workshops. So why did you pick this focal student?

Jenny:

I feel like I'm fortunate to work at a school that has many built-in supports for students. So when I think about choosing a focal student, I want to focus on a student who may not have access to those built in supports. When I chose my focal student for last year, he didn't get any special education services. He didn't get any EL services, he didn't get any MTSS services. So I try to focus on a student who I think needs some extra attention from me.

Matt:

One thing that just about every teacher who joins Math for All wonders about when they begin adapting a lesson, with the focal student in mind, of course, is how adapting a lesson with one child can positively impact the entire class. We often hear versions of, "Okay, but what about my other students? I got a classroom full of learners with different needs!"

Jenny:

I remember Matt, when we started the workshop our first year, someone said, it might've been you, you choose your focal students, you analyze the demands of the task, and how you think your focal student will respond to them, you adapt your lesson, and I'm sure one of you said, "and your other students will benefit from that."

Andrea:

We often keep the average student in mind when lesson planning. We think about where in a lesson a class will generally succeed and where they might generally struggle, and we adjust our presentation and activity and materials accordingly. We then teach a lesson, compare our expectations to how the lesson actually played out and then make adjustments, keeping the "average student front of mind." But therein lies the challenge. What happens when a student's needs are different than the average? What happens for the student whose strengths and needs are different from those of most classmates? The focal student approach suggests that we come to lesson planning with a shift in focus. Rather than plan for the hypothetical average, we hone in on a specific student whose strengths we want to build upon and whose challenges we want to better support. Planning in this way inevitably benefits the focal student, but others as well as Jenny's story will show us.

Jenny:

So my focal student was a very popular kid. Athletic, very social, got along with everybody. He was an extraordinary football player, great member of a team, and the kids listened to him. They respected him and listened to him. So he had a lot of credibility with my students. But he was marked by his third grade teacher as a student who wasn't performing. She felt he needed probably to be referred for some kind of testing or identification and told me a lot of things that he couldn't do. I took a few weeks to get to know my students and I found out there were a lot of things he can do. He was, according to our standardized testing, in the first percentile in math and the eighth percentile in reading, and I've looked at that and said, that has to improve. I have to figure out what I can do to show this child that he can be a learner in this classroom and an achiever in the classroom because he is so respected by his classmates for his athleticism. I wanted him to feel that kind of pride in the classroom too.

Matt:

There's lots of talk around student identity and mathematical identity and growth mindset and all that kind of stuff, feeling like you can learn something. So if you would tell us a little bit more about what you did with him and how it progressed.

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Jenny:

He was a great collaborator and team member. He could get kids basically to do anything. He was also really good at resolving conflict between kids. They respected his opinion. He was great at keeping kids on task. But academically, he was kind of a pretender. He didn't really want the kids to know that he didn't, he was struggling with things. And language was a real weakness for him.

We would do vocabulary activities in class, whole class vocabulary activities, so everybody was getting it. I gave the class as a whole discussion starters so he could use these to help start a discussion or focus a discussion. A lot of math today, especially on the standardized test, is explaining how you found your answer. So we did a lot of, "First I did this, then I did this, after that..". So we talked a lot about transition words, how to form a written response or written explanation. So I spent a lot of time with the class supporting language so that I could address that particular need with him.

Andrea:

Jenny just talked about two keystones of the focal student approach. First, she talks about the areas where her focal student had significant strength: collaboration, conflict resolution, keeping others on task. Later on in this podcast, you'll hear how Jenny built on those strengths to support his challenges. The second thing that Jenny describes is doing a variety of whole-class language focused activities. She talks about using sentence starters, exploring transition words, developing written explanations. Her focal student benefits from repeated work in these areas. But here's the thing, everybody else in the class benefits too.

Jenny:

We did a lot of small group problem solving. I would give the kids a math problem that asks them to answer several different questions, or I would give them an open-ended math problem and paste it on a big sheet of paper and had them move around the room and find a place to sit to work in their group.

Andrea:

Creating partnerships for success, setting up just the right mix of personalities and skill, requires purposeful planning. In Jenny's case, she opted to partner her focal student with a friend where she knew she could capitalize on their strong interpersonal connection and investment in each other's success. This provided a strong base from which her focal student could take risks, exploring challenging content alongside a trusted peer.

Jenny:

So we worked. We worked months and months in small groups problem solving, presenting our problems in front of class. And every time we did this, my focal student would take on a bigger and bigger and bigger role. And he started to change the way he thought about himself. Like, "wow, I'm really good in math." He was even doing more reading out loud in science class. Things were changing for him. His confidence, his participation in class. was just growing.

Matt:

You once told me a great story that happened later that year. Could you share that again for us?

Jenny:

It was pretty late in the year. We were working on a particularly challenging open-ended math problem. And his buddy, this really high-level math kid was having trouble explaining how he found the answer to this problem. His group came up to me and we sat down and he's just, "I can't figure out how to explain it." And I said, "Okay, show me how you solve the problem." And we're solving the, and I was sort of part of the group. The four of us are sitting at this table and we ran out of paper. So we just kept going on the desks and we're finally figuring out how we can solve this problem and what the standard explanation is. And I look up and the whole class is standing around us watching.

And my focal student just, he became a different kid over the course of the year, so confident in the classroom. So attentive. And he thought of himself as one of the smart kids.

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Matt:

So many parts of your story stand out for me, focusing on your students' leadership skills and his interpersonal strength paved the way toward addressing his challenges with language and math. Another is that his perception of his own mathematical ability, how he identified as a mathematician completely changed. What can you tell us about how he's doing this year?

Jenny:

I did see him in the hallway last week, big fifth grader, and I was really nervous about fifth grade for him because the fifth grade teachers are tough, and I saw him in the hallway and he says, "Oh, Ms. Montgomery, guess what I learned today?" And he told me about how they learned in class volume and how he was part of the big brain math kids, and he proceeded in the hallway to tell me all about volume and how he's a math master. Even his teacher looked at me and is nodding her head and supporting that, and it was just so exciting to see that he had not lost that confidence and he looks at himself as a learner. He didn't want to share how his football team did. He shared a math experience.

Matt:

So what is your biggest takeaway from this whole experience?

Jenny:

Well, my huge takeaway is if I can focus on one student, anything I do for that student is going to benefit others. I don't sit with that student and only give that one student all these supports. I do it in front of everybody and everybody benefits.

Andrea:

We are now going to hear from John Newman, the instructional support leader I mentioned at the start of the episode. John is part of a network of schools that supports over 20,000 kids. We'll hear Matt and John's thoughts about the value of the focal student approach.

John:

Hello, I'm John. I am a network instructional support leader. I not only coach teachers in terms of supporting instruction in the classroom, but also support administrators and what they should be hopefully looking for when they go in to observe in the mathematics classroom.

Matt:

Thanks for joining us, John. Let's kick this off by hearing your general thoughts on lesson planning in light of your work with Math for All.

John:

I think when I started my teaching career, I always thought of planning for instruction as trying to find the middle ground or trying to find the area that would most support a majority of students in my classrooms. And in doing so, I probably was missing a lot of students. I see the transition into looking at a focal student as one where if I look at just one student at a time and try to plan my best lesson for that student, I'm doing a better job for all of the students.

Matt:

So when you and the CPS teachers took part in math for all, it was unbelievably, during the pandemic. So we of course met online for our workshops and we weren't sure how doable the focal student approach could be given this situation.

John:

When we started this, we thought, okay, it was brought up at a principal meeting, I want to say in April, which was a month into the pandemic, and we're like, by June, school year might be over, but we'll be back to normal pretty soon. Well, that was 15 months later, 18 months later, before teachers and students saw the insides of classrooms again.

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One of the biggest changes that I saw looking at focal students and using that to plan lessons was not only were teachers able to plan and look for how they would support their focal students within a regular lesson, but then in addition to that, adapt that for the virtual setting. And so that's something that I was super proud of to see. The lessons that I saw in classrooms that were being supported by the teachers that were a part of the Math for All program, the kids in those classrooms I could tell were more engaged than the standard lessons that I saw in classrooms that maybe did not have a focal student in mind during that planning.

Matt:

Could you say more about that?

John:

So the teachers that were being supported within the Math for All program were taking it to heart that they needed to come up with something that was going to be different for their students and that was going to be better for their students. Even with the challenges and knowing that probably anyone would've given them some grace in terms of their planning and instruction in a virtual setting, but the teachers were really knocking it out of the park, trying to come up with engaging in differentiated lessons for students, even in a virtual setting.

Matt:

I've said for a long time that teaching period, even under the best of circumstances is a really tough job. But during that period, my hat is off to anybody who's still in the classroom and anybody who's still trying to figure this out. So thank you, John, for recognizing that because that's really, really important and I'll share that I've also heard from other people in your position that they went to another school who participated in Math for All, and they said almost the same thing about the classrooms there. They said the classrooms are more engaging, the students are more engaged, and the teachers just had something different about them in understanding where the focal student is, where the student's challenges and strengths are, you have to get to know the student a little bit. And one of the ways that you do that is through observing how they act in class, what they do in class and what happens under particular circumstances. And we make adaptations based on what we know about the student. So let's turn for a second to observing the student.

John:

And a few of the schools that I worked with and supported. What was really nice is that they were teams of teachers that were working on selecting a particular student and then having more than one voice to support that student. It was never just one teacher planning to support one student. It was a team of teachers working to support that student. And because of that, I think the observations became very rich. Teacher one and teacher two are in the classroom, and teacher one isn't going to catch everything that a student does. Teacher two isn't going to catch everything. But when they're able to work together to put that full picture in place, then I think that's where the observation was strongest. In one of the classrooms, it was certainly a bilingual setting, and so one of the teachers was certainly stronger with the language acquisition type skills, while the other one was certainly stronger in terms of the math specific skills themselves. And so in observing a particular focal student, they would be able to merge their strengths with language and with math to come up with a plan that could support the entire classroom. And so I think that was one of the powers that I saw in terms of observing a focal student.

Andrea:

A note about student observations. Part of the math for all lesson adaptation cycle includes observing one's own focal student while they're doing the adapted lesson. Teachers develop skill with conducting low inference observations, documenting what they see and hear in a way that is, ideally, free of interpretation and bias. This information can be used in future lesson adaptations.

Matt:

What are some things you find yourself thinking about after your Math for All experience, post pandemic?

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John:

So I think one of the things that I look to is shifting mindset. In Chicago, we often have a lot of street festivals or block parties, and people always ask what you do and how you do it, and as soon as you say anything related to math, they're like, "Ugh, how could you be a math person?" That's the experience of many adults when it comes to math, and that's probably the experience of many math educators as well, that some of us have very great math experiences. Many of us may not have. And so just from that kind of lens to take a look and be like, "You know what? Let's try to look at our lesson planning and engagement of students a little bit differently." And if we can do that with the platform and the research and the support with Math for All behind us, then maybe we're going to get some different outcomes for our students.

And I think that's a conversation that no matter who I speak with, whether it be a teacher or their administration, that it just makes sense to them, after we talk through and say, "Hey, when you're getting into this program, you're going to go dive deep and you're going to look deep at a student. There's going to be a lot of work involved. But if that's not something that your teachers have done before, what's the risk in trying something different? What does it cost us to attempt to look at math instruction through a different lens and provide our supports that way?"

Matt:

I'm wondering if you'd be willing to name one or two things that you would count as some of the biggest takeaways in using a focal student approach to planning lessons.

John:

When we look at focal students, it doesn't just benefit an individual. It builds success for the whole classroom. And so I think that's one of the strengths of this type of focal student approach. But I think for me personally, one of the things that had also happened was I was certainly one that if I found the first right answer, back in the day as a teacher, that's where I would stop. But identifying focal students I feel like made me think of the second right, the third right, the different ways to getting to the correct answer. And then finally, I think what changed in my mind is I personally probably spent too much time looking at a student's deficits and trying to support deficits rather than looking and assessing through a student's strengths.

Andrea:

Jenny's story and John's reflections exemplify the potential of the focal student approach. Jenny planned with her focal student strengths in mind, and she saw him grow. Both Jenny and John spoke about how adapting lessons for one student opens up learning opportunities for all. And John noted that appreciating multiple approaches to answers includes more kids and that teachers can very much support students via a strength-based approach. These all highlight the value of planning with a single learner in mind.

It's all about the on-ramps. It's about developing those pathways into learning so that all students are included in mathematical experiences.

Thank you to Matt McLeod for facilitating today's conversations. Thanks to our guests, Jenny Montgomery and John Newman for sharing their stories and insights. Thanks to our producer and editor, Burt Granofsky, and the entire Math for All team for their dedication to equitable math instruction. And thank you for listening.

In episode three, we'll hear from school administrators who will share the impact Math for All has had on their learning communities. I hope you join us again.

I invite you to learn more about Math for All by visiting our website mathforall.edc.org.