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The Administrator View

Gerardo Arriaga

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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 elementary and middle 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 in this series took a look at the neurodevelopmental framework. In Math for All. Teachers learn how to use the neurodevelopmental framework, taking into account eight different cognitive lenses to adapt math lessons to support student learning. In episode two, we explored the focal student approach. Rather than come to lesson planning with the average student in mind, teachers start by zooming in on a specific student's strengths and challenges and adapt mathematics lessons from there. In this episode, the third in our series, we'll be hearing my interview with three Illinois Public School principals about their decisions to bring Math for All to their schools, how they maximize teacher commitment and ensure program success, and about the ongoing impact the program has had on teachers and students. Let's begin.

Andrea

Welcome principals! I'm really so excited to be speaking with you today. Let's start, if you wouldn't mind, with each of you taking a moment to introduce yourself.

Rebecca:

My name's Rebecca Hansen. I am the principal of Tremont Grade School. We serve students in kindergarten through fourth grade. We are located in central Illinois about 10 minutes south of Peoria.

Gerardo:

Well, my name is Geraldo Arriaga and I've been the principal of the Monarch Academy for the last 16 years, and we are at school of pre-K through five, very diverse, mostly Hispanic, about 96% Hispanic, low-income Hispanic community that has migrant families, newcomers, very diverse and changing population.

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Andrea

So before we really get going, I want to set up some context for our listeners. Math for All took place over two years at each of your schools. Pritzker participated in Math for All, twice for two years back in 2015 and then again for two years in 2019. Monarchas joined in 2019 and Tremont faculty started participating in Math for All in 2021, just at the cusp of schools returning, in varying degrees, to in-person instruction during the COVID-19 pandemic. So we've got three schools and a collective eight years of Math for All. Okay, so let's start at the beginning. Why did you choose to bring Math for All to your school?

Jonile:

We opted into Math for All because math has always been one of those struggling areas, and although it's quite analytic, students have had a difficult time showing progress and moving the data has been difficult for us and we could not figure out why. So we opted into Math for All because they gave us that additional support, additional strategies, additional usage of manipulatives and lessons that helped to make that curriculum engaging, and get teachers and students doing more hands-on math, which drove the skills deeper and allowed them to show more mastery. It's always good when you have a collaborative thought partner who can come in and get on board with you. There is no judgment, there is no evaluation. This is let's just do what's good for children, let's just do that.

Rebecca:

Even though we were doing a good job with making sure most of our students were meeting math standards, I did feel that we were missing a key piece in helping some of the students in hopes that we could do and provide instruction that would keep kids out of our MTSS system. So the Math for All really it helped us look at the whole picture instead of just saying the student is struggling with adding, why are they struggling with adding? Where in the process of adding are we falling apart?

Gerardo:

When I heard that the focus of this program was K through second, at that time, I felt that that was something worth trying. Right from the beginning, I really liked the philosophy behind Math for All. It was focused on training teachers, educators on using the best strategies to reach all the students, not just at the tier one level, but all the students and find ways to get them involved. My school has a high percentage of English learners, so we felt that the focus of this program was also supporting those teachers as they tried to integrate these students in the mathematics learning.

Andrea

You each talked about wanting to advance or expand academic progress; increasing test scores, avoiding MTSS referrals and overall just widening teacher's reach and bringing all students into successful mathematical experiences. So philosophically, there was alignment between Math for All and the work you set out for your schools, and then there's teacher buy-in. How did you approach this in your schools?

Rebecca:

Buy-in is a huge issue for teachers, especially when they already have full plates. When I learned about Math for All, I approached the teachers and told them that I was applying for this grant and just told them about the possibilities. I just explained that we are going to take what we already do and make it better. And yes, it may mean a little bit more in the forefront with lesson planning, but the amount of time saved after the lesson planning and during the lesson, because the students are grasping it quicker, it was a no brainer. The teachers didn't hesitate to give it a try.

Jonile:

I got buy-in from the teachers because I kept telling them the things that we're doing are good. This is going to help us get to the next level. This is going to push us up a bit. This is going to give us more strategies, more support, more tools, and it's going to, we hope, open the door to more mastery for children and more strategies for you.

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Andrea:

Did anyone involve others in their school communities when you were deciding about Math for All?

Gerardo:

I involved my instructional team in that decision, and we all saw the need for something that was going to help us with this area. My instructional team is represented by teachers from all grade levels, my lead teacher, my reading coach, my bilingual coordinator, my special ed case manager. So yeah, we have a variety of people in there that represent every grade level.

Andrea:

So once that decision was made, how did you move the initiative forward and what was teacher feedback like?

Gerardo:

Just like everything else, obviously people need to be convinced and need to be given the opportunity to try. I feel that when my instructional team saw the potential on this program and then they went out and they shared that with their teams or the grade level teams, they also led that conversation and persuaded them to try this new training. You needed some buy-in obviously because it was something new. But as we started the sessions and as we started the professional development, my teachers, they saw themselves on board and they started using some of those strategies.

Rebecca:

So I would say the first lesson was a little difficult, but I had rearranged the schedule so that they could have common planning time every day. So they used that time to do the Math for All planning together. So that helped some, just them being able to connect with one another and what do you think brainstorming. That helped a lot. But once we got through that first lesson and the teachers saw how much better the lesson actually went when they did that front loading of, "Okay, here's all that they need to know, here's where understanding could break down." When they looked at it through that lens, the extra time in planning was worth it. They didn't see it as one more thing. They saw the value and they just kept going with it.

Jonile:

I want you to know that I was not in all of the Math for All sessions, but I did attend a few of the Saturday sessions. And it was important to me that I was there as the administrators so the teachers would know my level of buy-in. So they would know that it was important to me. So that I would also have the learning to be able to help them do what it is we need them to do so I could learn also the strategies. And then when I'm in meetings with them, my enthusiasm is real and it's genuine. Because I was there, I learned the material. And so teachers felt more confident in the workshop. Teachers were intentional about bringing the workshops back into the classroom because they knew I knew what I would be looking for in the classroom. And they were also anxious to do it in the classroom. I think a lot of times we lose rigor between theory and practice, and that's what Math for All does for you, and when I say you, I mean our educators as well as our principals. It shows you how to transfer that theory into actual hands-on practice.

Andrea:

Practically speaking, schools participate in 35 hours of professional learning across five full-day workshops. At each workshop, teachers take a deep dive into one neurodevelopmental lens and then work on adapting an upcoming lesson to better support a specific student in their class in light of that lens. After each lesson implementation, teachers reflect on the success of their adaptation based on the child's strengths and challenges. The school also identifies two local facilitators, ideally one general and one special education teacher, who the Math for All team works closely with during the school's participation. The local facilitators support their colleagues in between workshops and are trained to eventually lead workshops, the goal being to increase local capacity to sustain inclusive mathematics planning and implementation practices.

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Gerardo:

I mean, since this implementation included all my teachers, including the special ed teachers, I feel that they also felt that they were finally being included in something that the school was implementing for the regular classrooms, and this was something that was going to improve their collaboration with the rest of the teachers. And I still see some of these special ed teachers implementing some of those practices too. When I go to those classrooms and when the regular classroom teachers ask for some more ideas on how to reach those students, how to help those students when they are in their classrooms, they find it easier to collaborate with the special ed teachers.

Andrea:

I'm curious to hear your thoughts about the ways Math for All professional learning may have felt different than other approaches to professional development.

Gerardo:

Right from the beginning, I really liked the philosophy behind Math for All. It was focused on training teachers, educators, on using the best strategies to reach all the students, not just the tier one level, but all the students. Students in special education, students who were in the bilingual programs, students were maybe new to the school, and find ways to get them involved. As I mentioned before, my school has a high percentage of English learners, so we felt that the focus of this program was also supporting those teachers as they tried to integrate these students in the mathematics learning.

Joenile:

I think principals need to know that Math for All is not just a one-stop shop. It's not just a sit and get. The program offers coaching, it offers ongoing support. It is not just a program that's going to tell you this is what you do and these are the materials you need to do it with and set you free. It's going to offer you some professional learning opportunities where you can have them model and have them show and allow you an opportunity to do it with them. It's going to give opportunities to sit and hear the theory, see the theory, and practice the theory. So it's a full 360 degree of learning for the teacher, which she can also then do in the classroom. And when they can come back and utilize what it is they learn and see it make a difference, they're more enthusiastic about continuing. They're excited about the next session. They are able to form questions around how we can use this and what can we do, and those questions then get answered. I think that's an important thing. It's one of the things that makes Math for All different because they can ask questions and they get answers. So I have to say that with Math for All teachers have ongoing support, and that makes a huge difference.

Andrea:

We talked about teacher buy-in and the commitment your school's made as they participated in Math for All. Can any of you speak to teacher impressions or to the impact that they or yourself saw?

Gerardo:

I think one of the things that I'm really happy with this, the philosophy behind making sure that all the students are seen as learners with possibilities, with potential. That we are not separating or tracking students because we feel that they need a different kind of instruction. In my way of thinking after going through this experience with Math for All is that there is no such thing as gifted students only. To me, all the students are gifted to me. All the students can learn, and it's important that we find the ways, find the right strategies, find their learning styles, to get to them and to make sure that they are learning. And I see the impact in my students now because we can see that when they are engaged in math, they feel pride when they solve a problem and when they see themselves as mathematicians.

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Joenile:

I would often hear teachers say that they learned a lot in the PD and it actually works in the classroom. The feedback and the response that they got from the students, the engagement they got from the students, the excitement they got from the students, the learning that came from the students, that's what the teachers were giving me back. Well, this actually worked. I didn't expect it to be this successful with the students. So from Math for All, when teachers who were participating had their focal students that they focused on to really target their math goals, their student targets, and then support them in reaching those goals, those students did so much better. And from that, teachers developed student goal logs so that students had an opportunity to sit with the teacher, look at their math data and have the students say, this is where I am and this is where I want to go. And then the teacher sitting at her desk with said student and their data talk could say, these are the strategies you can use, these are the activities you can do, and this is how we can help you, help you.

Rebecca:

I think the biggest impact I see with Math for All is the conversations between the teachers about the skills that the students need to have in order to do a lesson. And also just the brainstorming, if a student isn't meeting the standard, if they do seem to be struggling. Those professional conversations and support that they provide one another on what they could do in their classroom, just from an outside perspective, I think those have been the biggest impact that I've seen and just really considering everything from I've tried everything. Well, no, you haven't. And we have other ideas. People feel confident enough to have ideas. They really do know what to do if a student is struggling with a particular concept. After the professional development ended last year, I really saw the teachers, just the neurodevelopmental framework, the lesson planning, that all just became natural. It was no longer, at the beginning, I had mentioned that it was a lot. It was a lot for the teachers to think about. But by the end now it's just part of their regular lesson planning. And when I do observations and I see their lesson plans, it's in there. It kind of just became this is who we are, this is how we teach math.

Joenile:

Because of Math for All we now have what we call Select Six. So each teacher selects six students who with a little push, a little differentiation, a little bit more attention, would jump leaps and bounds, and we keep records for those kids, and not just in math, but also in ELA. And it has been phenomenal. You can ask any teacher about their Select Six and they'll tell you, "Oh, we do this, this, and the other". So that is still at Pritzker from all these years back from Math for All, and I'm excited about it. It makes me happy to know that this is a lingering effect from Math for All. And I don't want to belabor this, but can you imagine, I've got 32 teachers. If each teacher selects six, do you know what a difference that makes in all of those students' lives? Select Six. That's all. Just Select Six.

Rebecca:

We meet with our MTSS team four times a year to discuss students who are not making enough progress or are slowing down in their progress. And the framework has just become part of our POD meeting. We call them pods, Pouring Over Data, our POD meetings. And just so the student is struggling with sight words. Well, what part of the sight word? What is it? Is it the letter sounds? Just going back to it, it's not just they can't read sight words. It's where in this development is it falling apart for the student and how can we support it? It started in math and I've definitely seen the carryover, particularly in K-2, because they've been doing it longer with the reading and the writing. It's really become part of our culture.

Andrea:

It sounds like there's a strong embedded commitment to integrating the Math for All approach into more than just math. How are you handling introducing new staff who weren't part of Math for All to this work?

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Rebecca:

We've had some staff turnover in recent years, teachers leaving for a variety of reasons, but as we hired new teachers, it was nice to have the Math for All framework for them so that they knew that this is how we do math. And that common planning time helped support the new teachers too. As the experienced staff led them through the framework and looking at the lessons through the different lens. It just gave them, them being the new teachers, a good foundation for how we expect math to be taught at Tremont Grade School.

Gerardo:

Even though it's not happening intensively anymore, some of those mind shifts remain, and I can see that as I go into classrooms and I see students working in small groups, and I see the type of activities that the teachers are designing for the students, the use of some of the manipulatives, some of the ideas from the program. I think we're still using some of those ideas that we learn and integrating them and making sure that we're not abandoning those ideas. And my students' results and performance on the assessments show that there has been an improvement, and there's still an impact of Math for All in this results.

Rebecca:

We have one student who really truly embodies the Math for All approach. In first grade, we were very concerned about her progress, and so her teacher had chosen her as the focal student. And through the process, we noticed her scores improved some, through our progress monitoring and benchmarking. But there was still that lag. In second grade, she also became a focal student, and at one point we were really contemplating "Do we need to evaluate her for an IEP?" But we kept through, kept with the Math for All, and then this year, I am so proud of her, she is at grade level. And there's been no outside tutoring. It has just been the Math for All program in the classroom, and we've got her caught up.

Andrea:

An MTSS referral is no longer needed for a student. Special education and general education teachers collaborating in new ways, teachers focusing differentiation efforts on a Select Six, a school develops a shared approach to lesson planning across content areas. These are all exciting examples of change due to strong and supportive leadership, and because of that, more students gained increased access to mathematics.

Carol Ann Tomlinson, an educator and authority on differentiation, said that "Differentiation is simply a teacher attending to the learning needs of a particular student or small groups of students, rather than teaching a class as though all individuals in it we're basically alike."

We know this approach to lesson planning is not necessarily automatic, but thanks to the principals, teachers, and coaches who we featured in this podcast series, we know it's possible. And it's critical. Every child must be able to reach their mathematical potential and they can, thanks to everyone who is helping them do just that.

Thanks to our guests, Dr. Joenile Albert-Reese, Rebecca Hanson, and Gerardo Arriaga for joining us today. 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 and for your commitment to making mathematics classrooms accessible to all learners.

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