Dan Meyer (00:04):
Hey folks, welcome to Math Teacher Lounge. My name is Dan Meyer.

Bethany Lockhart Johnson (00:07):
And I'm Bethany Lockhart Johnson.

Dan Meyer (00:09):
And this is the Teacher Learning Week. We're thinking this week about how we grow as teachers. And to start with, I just wanted to ask Bethany—first, Bethany, how are you doing? And second, <laugh> what has been your most favorite and least favorite, most effective and least effective professional learning experience? When you were a classroom teacher?

Bethany Lockhart Johnson (00:30):
I think for me, most effective was definitely when I could use it right away. Whatever we were talking about, whatever we were learning, when I got to go put it into practice. I remember we did something where we designed a lesson and then we went and taught it—like, one person taught it and the rest of the people watched. And then we kind of got to workshop it. That was like a one-off. The fact that we got to go out of our classroom and go observe somebody teaching—it was gold. It was gold. So that was probably the most effective, because there was so much opportunity for reflection. And least effective was something that felt just completely unconnected to, you know—either so theoretical that it wasn't touching on what we were navigating right there in the classroom. What about you? Can you think of times that—are you gonna say times you led a PD? Those were the most effective?

Dan Meyer (01:26):
<laugh> Yeah. My favorite ones are my sessions, of course. But if I had to throw those out for a second...I want both. I want it all. I want the big ideas that take a long time to settle in, and that also have like small bits that can carve off and use relatively quickly to test my understanding of the ideas. I've had some, some PD

where I'm like, "This is very relevant to tomorrow. And I also don't care." Like, for instance, how to use the software on my curriculum, for instance. It's like, "Yeah, this is just a little too practical." You know what I'm saying? I want some bigger ideas to chew on. I would also say my favorite PD by a long shot was writing up thoughts about how the day went and putting that on the internet in a public place that we used to call a blog, where people would come along, 'cause there were like 10 blogs, <laugh> and tell me, "That's no good. The thing that you like is not a thing you should like. Here's the thing you should like instead. Or try instead." Just this weird community that sprung up when I was starting to teach, a relatively new teacher, and I feel like I grew a lot.

Bethany Lockhart Johnson (02:28):
Go back to this idea. Blog. People would call you? They'd call you on the phone? What—

Dan Meyer (02:32):
They would fax me. It would be a fax.

Bethany Lockhart Johnson (02:35):
Oh! I got it.

Dan Meyer (02:36):
Fax a comment. Yeah. So that's, that's Bethany and I, and we're super-excited to have people who have a bit broader of a perspective, a bit more of the lay of the land than what the two of us think about with our own professional learning experiences. We've invited on an expert we hope will help us understand alternate ways to do professional learning as teachers, to grow as teachers, beside, you know, all of us getting into the same room once every few months together. Elham Kazemi is a professor of mathematics education at the University of Washington. Elham studies how strong professional communities develop in schools and how schools can be organized so teachers learn from and with their students. This work is informed by equity-oriented research on organizational thinking, on children's

mathematical thinking, and on classroom practice. She is co-author with Allison Hintz of Intentional Talk, which focuses on leading productive discussions in mathematics. And she edited Choral Counting and Counting Collections with Megan Franke and Angela Turrou, which focuses on the importance of counting from preschool to fifth grade. Looking forward to a great chat with Elham. Welcome, Elham, to the show.

Elham Kazemi (03:43):
Thanks for having me. My favorite topic ever to talk with you both about.

Bethany Lockhart Johnson (03:47):
I think something that I just deeply, deeply respect and admire is that I feel like you are constantly sharing about how you are learning. You're continuing to learn, continuing to try out new ideas and you do a very good job of highlighting things that you've learned. Whether that's sharing it through a tweet or sharing it amongst colleagues or peers. And I just really appreciate that, because I feel like being in the mathematics community with you, I feel like I grow by just paying attention to, like, "Hey, she's a learner; she's done all these amazing things and thinks in these amazing ways and has shifted my thinking in such amazing ways, but she's saying, 'Hey, I'm still learning!" So hi! Thank you! Thank you for your...I dunno, we're just glad to have you here.

Elham Kazemi (04:41):
<laugh> Thanks. I do feel like the perpetual student, like I've never left school. And I wonder, one day, maybe, when I grow older, when I grow up, will I ever leave school? Maybe not!

Bethany Lockhart Johnson (04:52):
<laugh>

Dan Meyer (04:53):

Let's dig in. So please tell us...you partnered with a school for some professional learning that wasn't the sort where you would go in and offer brilliant ideas and then leave. But rather it seemed like it was more of a job-embedded sort of thing that might have a life of its own after the grant ends or the program ends. Can you describe what it was you did and what the effect was?

Elham Kazemi (05:15):
I think I wanna first say that everything that I have done and experimented with is really the result of working with fabulous people. Teachers, coaches, principals, other colleagues and peers in the field, who are constantly trying to work on what good teaching looks like and how you learn to do it. And mostly because we care about kids. And we care about what students experience in the classroom. And we want kids to love school, to have school, be a place where they're known, they're loved, that they look forward to being in every day. And I think the why that makes you want to learn is really about the students. And doing things in service of them. Because as one of my colleagues said, when children thrive, teachers thrive. So what does it mean for us to thrive, if we are focused on our kids' experiences in schools? What we did at this particular school and group of schools is kind of tap into all that curiosity and drive that teachers have to do a good job and to use their imaginations well and to engage the actual ideas that children have in their classroom together. Not separately. Not like get a great idea and be inspired by it and then go figure it out by yourself. But be inspired by ideas and then try to figure them out together. Because as you both know, very talented teachers who also have been inspired to change your classroom teaching, once you figure something out, or as you're figuring it out, there's all kinds of intricacies. Like I remember when I first learned about three-act tasks, I thought what a brilliant idea. But it's not so simple to try to enact the brilliance of it. Because you can simplify it too much. Or you can get stuck and not really know how do you move from one act to the next. Or what's the point of the third act? Do you just reveal the answer and that's it? And then you move on? How do you even design the tasks to begin with? All of those things raise questions, and working on them together, and carving up that space and time to work on them together, is sorely missing in schools. And so that's what

we were able to do with the schools that I partnered with, is find the time and then design the structures so that teachers could think about their teaching together. And then also be in the classroom together with kids. So the kids see that we are also learning to be responsive to them. That's the point. So we have to work stuff out when kids are present. Which is the part that usually trips a lot of people up.

Bethany Lockhart Johnson (07:55):
Well, that to me is I think the part that shifted my teaching and continues to. It is a culture shift to tell your students—to invite your students into your learning. To tell them I'm learning too. It was an invitation to be vulnerable in a way that I think sometimes teachers are very afraid to be vulnerable...if they don't know what the student response is gonna be. Or they don't wanna seem like they don't know the answers. Or they don't know how to figure out a problem. I think that's a real shift in the culture compared to maybe what we experienced growing up.

Dan Meyer (08:33):
I hated not knowing the answer to a math problem. Admitting I was uncertain with the mathematics...but to admit that I am a work in progress as a teacher feels like an extra admission. An extra layer of humility. It's a really special thing that you were up to with that school. I'd love to hear like about specific structures that you worked with to help make that transition feel more natural, more welcoming, more productive.

Elham Kazemi (08:58):
So you probably have experienced common planning time, right? This is a thing that often happens for us teachers. I think that common planning time looks a lot sometimes like, "Uh, what are we gonna do on Monday, Tuesday, Wednesday? What do we need? What are the materials we need? Who is gonna do that? Will you write this?" And that's kind of common planning time, and then it's over. And then you might see each other at lunch and say, "Well, how did that go?" And you'll talk a little bit about it. But common planning time and learning labs, which is sort of what we call the PD that we designed, means "OK, so let's take three-act tasks. We read a

little bit about it. We've seen a couple. But what would it really mean to plan this particular one?" So common planning time is thinking, "How are we gonna launch that first act? What are we actually gonna say? What do we think the kids are gonna say? Why would we say it that way? What if they say something else?" And then, "What does it actually sound like to transition from act one to act two? What might we say? What would happen with this particular task?" And actually getting into the details of how you imagine what you would do when you were actually planning the specifics of a particular lesson. But leaving it loose enough that you're not trying to make it perfect. And I think that's the trick. So that you are not so invested that it goes in that particular way or that you fail. If it doesn't go that way. But that you have something you wanna learn together in trying out this three-act task with a particular group of kids. So that when you go into the classroom, first of all, you've all thought through the full arc of the lesson. And you're curious enough about what's gonna happen at particular points that you've left room for uncertainty and the taking of some risks. So then when you go together into a classroom and kids start to say things that you didn't anticipate, or they start to do something that you're so jazzed about that you didn't anticipate, that you're like, this is the thing we should pursue more! You give each other permission to do that. You're like, "Whoa, wait, did you hear what so-and-so said?! I think we should follow that road and see where it takes us!" Or, "Huh. OK. Hold on." And that's what we call teacher timeouts. Where you actually confer briefly and you tell the kids, "This is a super-special day. We've tried to design something. We're very curious how you are gonna react to it. So we're gonna try it out. And along the way, we might pause to get your ideas or for us to make some decisions and steer the ship in a new direction and see what happens. So we're gonna be sitting closely next to you, among you, and you get to be our teachers today while we teach." That's how it's framed.

Bethany Lockhart Johnson (11:46):
What were you seeing in professional development that wasn't happening amongst teachers? Where are the gaps? Because it feels like so much of your work, you've just looked in such nuanced ways at how teachers can continue to grow and be

more reflective of their own teaching. And I'm just kind of curious where that came from or where you're seeing the landscape.

Elham Kazemi (12:10):
That's a good question. Well, I owe everything I know about children's thinking to Megan Franke and the beautiful body of work called CGI. But one of the things that we noticed: There's so many great CGI workshops, and even all these seminars and conference presentations and amazing things that you can design to have engaging work time for teachers in professional development outside of their classroom. People get super-jazzed, you know, they have meaningful experiences. But to contextualize that back into their classrooms with their own students is where often I would see like...wait, the same group of teachers I just saw in my classroom or in either in math methods or in this PD seminar, or even myself—noticing I have seen and thought about stuff a lot, but when I went to go do it with a particular group of kids, holy moly, was that so hard. And I saw all kinds of new complexities that I didn't anticipate. And if I were just left to my own devices, I might very easily say, "Whew, this seems a little too hard."

Bethany Lockhart Johnson (13:21):
Right.

Elham Kazemi (13:22):
And that's the thing I always hated. I was like, "Oh, if only we had—" or if you watched somebody do a demo lesson and you saw something that was like, kind of cool, that you wished you had done afterwards...I often this happened in reflections. I wish we had, because we weren't allowed to interrupt each other during teaching. 'Cause somehow that would be rude or that would undermine the teacher's authority. But that's only the way we frame it. If we say, "Actually we're all capable people, so a question we ask ourselves during instruction doesn't mean you don't know what you're doing; it means actually we're thinking together," then the interruptions aren't about undermining authority. They're about thinking together.

Dan Meyer (14:04):
There's a performative aspect to a lot of teaching. Teaching feels like a performance and you don't—the movie's playing or there's a play that's going on, it feels inappropriate to interrupt that in any way, 'cause the performance is going on! And I love what this idea does to kind of redefine teaching as not a performance, but as this co-constructed thing. Or if it's a performance, it stars all of us. We're all a part of the cast. And it's always the dress rehearsal.

Elham Kazemi (14:30):
<laugh> It is like the dress rehearsal! Although some of my brilliant colleagues with backgrounds in drama and theater, Sarah Kavanaugh and Holly Guseini and Elizabeth Dutreaux, they actually were at a meeting together. And they talked about how this breaks the fourth wall, you know, which is out of theater, where the performer speaks to the audience: I know you're there and I have something to say to you. And I was like, "Well, why can't we do that in teaching?" So we actually wrote a little paper that's called "Breaking the Fourth Wall" as a metaphor for understanding and reframing what these interruptions could mean. 'Cause we often get people when we about this for an academic audience who say like, "Aren't you using the children?" And "What are the children gonna do while you just pause? Are they supposed to freeze while you talk about them?" But it's not really that. It's like, "Hey students, we're here because of you! So shouldn't we try to involve you in our decision-making to some extent? It's not like we don't know what we're doing, but we're doing things because we wanna advance your learning."

Bethany Lockhart Johnson (15:40):
I mean, I still remember the first time I did a teacher time-out and it was like, "OK, you're gonna see what happens, kids! My tap dance has stopped! And you're gonna see me like...." Whoa, wait a second! And I think it is about how you frame it. Right? It's a celebration of their thinking. And you use the term ambitious teaching, and to me, that is such a joyful way to think about it.

Elham Kazemi (16:06):
It is risky. And you would never say anything to shame any student. Or to shame your colleagues. Clearly it's not about that kind of discussion. And they're so brief. They're like, seconds. It's not like you're wasting time. You're actually trying to understand what's happening here. And I've just had so many instances where something goes on. Like we were doing a growing patterns task in a classroom, and the students built the fourth term. And they built stuff that did not follow the pattern. And I was so confused. I just didn't understand what was going on. And one of the kids said, "Well, if you, if you did follow the pattern—" that's not her words, but you know, she's like, "Well, if we built it this way, that would be too obvious." Because if you saw that and you're like, oh, that lesson failed; our kids don't understand what patterns are. We gotta pause here and we gotta say, "Well, what do you mean? Can you say more about that?" And basically what they said is—well, first of all, they're right. A pattern could change at any time. But it would be more interesting if they knew how many cubes it would take for the fourth term, that it would be nine, but they're like, "Hey, let's rearrange that nine in some cool new ways! <Laugh> 'Cause that's more interesting!" It was more interesting to them if they didn't keep the pattern. So you kind of had to wrestle with that in the moment with them. And that's how they can actually be partners with you in the teacher time-out.

Bethany Lockhart Johnson (17:40):
Right. That's making it about them and their learning. It's not about your performance and looking all shiny and "I've got it all together and I know exactly how this lesson's gonna go." That's so interesting.

Elham Kazemi (17:53):
And sometimes you pause because somebody else who's watching is noticing something about what the kids are doing. And if you happen to be the person who's up front at the time, leading, you've got so many things going on in your head that sometimes the person who's just been sitting on the rug with the kids has noticed something. And they're like, "Can I ask something right now?" And that's a

great teacher time-out too. They're interrupting you 'cause they're like, "I think I wanna see what kids will say if we ask this question next." And those moments have been amazing. Because someone has noticed something that another person hasn't, in the room, and it's been very helpful to illuminate how kids are processing something or what two ideas they could connect. That would be really powerful, based on what we were hoping to learn that day or do with the kids that day.

Dan Meyer (18:47):
It's like you have a bonus brain attached to you, there, in the room. Sounds really powerful. I wonder about the student experience of this. Imagine if I was a student in the room and I heard the two teachers kind of pause, take this time-out, and talk about how interesting my thinking was like, behind my back a little bit. Like trying to strategize about something interesting I had said. I just imagine I would feel very good about that.That would be a very positive experience for me. But I'm just curious, can you speak to how students reacted when they're in teacher time-out?

Bethany Lockhart Johnson (19:16):
You mean, if you had been a student in the class and you saw two teachers conferring about your work?

Dan Meyer (19:21):
Yeah. Yeah. It was kind of like was so novel that it stymied the teachers and then they like had to pause and like talk about what are we doing?

Bethany Lockhart Johnson (19:29):
Oh, Dan Meyer.

Dan Meyer (19:30):
I don't know, I can imagine that'd be, like, a fun feeling. I don't know. Maybe it says more about me than about the kids.

Elham Kazemi (19:35):

<laugh> It points to, like, how would you go about starting to do this work? Because you do have to tell kids, "Hey, I'm here with so-and-so and so-and-so, and so-and-so—it might be just two of you; it might be five of you; it might be more—and you know how we've been working on X thing in class? Well, today we wanted to try this new thing but we're not sure how it's gonna go, and we need, we need your feedback. So here's something that might happen. We might pause you—" I mean, you really do directly tell the kids to do that. "And then we're gonna ask you how it felt, and we're gonna share those feelings with one another." So you do that, you do a little exit card or you—

Bethany Lockhart Johnson (20:19):
How what felt? The pause, or...

Elham Kazemi (20:21):
Yeah. "How did it feel; how did this lesson go; how did it feel when you heard Elham and Dan talk to each other during this lesson?" And they might say, "Hey, it's cool. It's fun." Kids have definitely chimed in. If we ask a question like, "Should we do this next or this?" Somebody will pipe in and say, "Do that!" or "Do this thing instead." If you pipe in to say, "Can I ask a question?" they just turn to you and look at you and answer your question. And we always thank them and we just pump it up. Like, "This is so cool because this is all about you!" And usually when you say, "Today, you're gonna be our teachers!" Especially the little kids, they get all giggly.

Bethany Lockhart Johnson (21:02):
Totally, right?

Elham Kazemi (21:04):
Love it.

Bethany Lockhart Johnson (21:05):
You know, you were sharing about this really unique situation, which I wish it wasn't as unique, where you had the whole school involved. How did that happen? And

what if you don't have the whole school involved? What if it's just me in my grade level, who's like, "I kind of wanna try this, but what..."

Elham Kazemi (21:22):
<laugh> I think you could start with a peer in your school, or a colleague in your school. It's a little seed. It's a little seed and then you could make it grow. I also believe in starting small and growing. 'Cause you do have to invite people into a different way of thinking about what it means to learn together. So you need to experience it in order to believe it.

Dan Meyer (21:49):
Yeah. It feels like we would not want to write off any student as like, "Oh, they just don't wanna learn." I think a lot of us just like don't buy that, that there's other reasons why—

Bethany Lockhart Johnson (21:56):
You mean a teacher?

Dan Meyer (21:56):
That a teacher shouldn't...that it's not true of students, that they have been told they can't learn or there's various circumstances. I suppose the same should be true, is true, of teachers. Like, "No teacher doesn't want to learn more about teaching" is at least a helpful axiom to use to approach the work of teacher growth. And so maybe—I feel like I'm the only person in my school who wants to do this, but perhaps that's not actually true. Perhaps it's just a matter of creating an imagination, or the right kind of enticement. I don't know what. But to start small and grow from there makes a lot of sense.

Elham Kazemi (22:32):
I feel now it would be weird and a lot harder for me to invite someone to just come in and watch me teach and sit quietly in the back when I don't know anything about what they're thinking, and wait until afterwards to get their opinion.

Bethany Lockhart Johnson (22:46):
Oh yes!

Elham Kazemi (22:47):
I would be much more willing to co-plan with someone so that we were both on the same page about what we were trying to do, and then when you're in the classroom with me. So that's the other thing that's important. 'Cause I don't think you can just be in the classroom together and interrupt each other's teaching if you haven't planned together. 'Cause you do have to have some common understanding of "What are we trying to do here?"

Dan Meyer (23:10):
Or the intent here.

Elham Kazemi (23:11):
Yeah. So I would definitely say don't just show up in each other's classroom and start interrupting each other <laugh> if you don't know what the heck is going on.

Dan Meyer (23:21):
I know that's directed at one person on this call in particular. I hear that and I know who we're talking about.

Elham Kazemi (23:25):
It would be way more intimidating for me if I was trying to do a three-act task and Dan just came to watch me do it <laugh> and he hadn't planned with me. He didn't know why I selected that task. I had no opportunity to talk to him. Then it would be, "Hey Dan, would you just like do this with me? Let's think through this. Why would you do this? Then what? What have you normally done? Oh, ok. Why have you done that? Right." And then to, "OK, let's try it together." And then, along the way, if I have questions, you're there with me. So sometimes there is someone more experienced, and sometimes you're both just like, "I just don't have that much

experience with this. I'm learning this for the first time." And the beauty of the math ed community, whether it's on Twitter, is that we're kind of pretty accessible to each other. Right. So if I read something and I have a question about it, you bet I'm gonna reach out to the author <laugh> and say, "I've been thinking about your work and this is what's been coming up for us. Can you...?" That definitely happened with Hands-Down Conversations. We tried it in the Learning Lab and we just couldn't figure out, "How do you intercede into the hands-down conversation 'cause the kids are supposed to have a conversation?" So we had to give Kassia and her co-author a few specific examples so they could help our thinking, so that we could try it again. And make it better. And I think that is what it means to be learning in community, is that you use the resources more broadly.
Bethany Lockhart Johnson (24:52):
That's a beautiful reminder too. And it also helps me feel a little better about all the messages I've sent you like, "What does this mean? Can you help me with this?"

Elham Kazemi (24:59):
<laugh> That just makes you feel alive! <Laugh> I think!

Bethany Lockhart Johnson (25:06):
I think part of the beauty of you talking about starting small is that it does give those of us who maybe aren't seeing that those opportunities for collaboration reflected in our school culture, it gives us kind of some hope for like, "Wait, don't just think you can't start!" How do you see it growing? Or if you could magically <laugh> wave your wand and create some shifts around, around the culture where folks are feeling isolated or maybe don't feel like they have the opportunities to do this work...what could that look like?

Elham Kazemi (25:51):
Yeah, what could that look like? So time. We need some imagination around the use of time in schools. I have seen some really amazing opportunities where teachers get to co-teach, which means that they really have to co-plan when there's a break in a regular school session and there's an intercession or an elective that doesn't...I

haven't seen it happen a lot in public schools. But I have seen it happen a lot in independent schools. Where they'll have like, "Stop the presses!" It's like a Drop Everything and Read, but it's like a Drop Everything and Do an Arts Week. And then all the kids in the school get shuffled, into multi-age groupings, and the teachers get to plan something special for like the week. But you could start with a day. Which would at least get you to plan something together and try to teach together and be just in each other's spaces. And I think that might be kind of an interesting way to start. Where you have to mess with the schedule somehow. 'Cause the schedule is the beast in schools.

Bethany Lockhart Johnson (26:59):
Is the first step, like, we are going to create a shared activity? A shared instructional goal? A shared...where do I start?

Elham Kazemi (27:09):
Where do you start? There's so many good books we all read. Start with something that grabs your imagination. That you're like, "If I got to do this in my class, I'd be so jazzed. And I think my kids would love it." Why would they love it? There's so many good ideas that people are instantly blogging about, publishing...slow-reveal graphs. I love those, too. I have all these things I would love to try these out, but I gotta do them with somebody. 'Cause I need a sounding board about, "What does it mean to do it well? And what does it mean to just do it at the surface level, in a kind of a crappy way?" And we don't wanna do a crappy job. We wanna do a good job. But you have to start sometimes in an awkward, crappy way. And get past that stage. 'Cause often we try a bunch of stuff: "Eh." And then we drop it. But like you gotta work on it to make it really good.

Bethany Lockhart Johnson (27:58):
And if you've already tried it and it didn't go so well, this could be an invitation; it doesn't mean give up on the idea. It means, "Hey, let's collaborate. Come into my class. Let's co-plan this."

Elham Kazemi (28:10):
So I would challenge people to think about the schedule. <laugh> Try to do something just a little bit different. When we do learning labs, people are like, "Well, how do you do that? And there's no money for it." Actually we just use our money in a slightly different way, to make sure that everybody—before people get a sub. Which I know right now, sub shortages are crazy, crazy. But then combine your classes or do something different. You know, involve people differently somehow in your school environment to get that time.

Bethany Lockhart Johnson (28:43):
Really see this as a priority. There is intense value in this time to collaborate.

Elham Kazemi (28:51):
Yeah. There's so many side benefits for kids and teachers when you're able to do this.

Dan Meyer (28:58):
Yeah. You've heard it, folks. Usually our Math Teacher Challenge, our Lounge Challenge, has been pedagogical in nature or a new curriculum. And this is a different kind of one. This is, go be a rabble rouser. Go rouse rabble at your front office and figure out the right way to get some funding or some time or shuffle a master schedule in such a way that you have collaboration, time to plan, to co-teach, to interrupt one another. And let us know how it goes. We are super-excited and super-interested in all that. Thank you, Elham, for being with us here today and sharing all of your wisdom about how teachers grow.

Elham Kazemi (29:36):
Thanks for inviting me, you two! Loved it!

Bethany Lockhart Johnson (29:38):

We're never done learning. We're never done learning.

Elham Kazemi (29:41):
Nope.

Bethany Lockhart Johnson (29:44):
Thank you so much for joining us in The Lounge. I think all of us have sat through effective and ineffective professional learning sessions, and just helping us to envision how PD can truly transform our classrooms, it's exciting. It's exciting! And I think we've all learned a lot from our conversation. So thank you, thank you, thank you. And don't forget, you can connect with us in the Lounge on Facebook at Math Teacher Lounge or on Twitter at @MTL show. Let's keep this conversation going.

Dan Meyer (30:18):
Keep it going.

Bethany Lockhart Johnson (30:18):
Thanks so much for joining us.

Dan Meyer (30:19):
Thanks, everybody!