

MIA BULJAN: The last piece, the last big idea, um, that surfaced...well, there was many, but the last one I wanted you to talk about specifically was, you had designed this to be almost self-differentiating. Like, you had the...and it did. It wrecked them. That two and a half times and the four times. Oh my god, it wrecked them. So, um, the elastic rubber band...

ERIKA ISOMURA: Yes.

MIA BULJAN: Um, context was too much...

ERIKA ISOMURA: That came from one of the traditional word problems that I pulled off of some web site. I just...I thought, "Ooh, that's going to blow their brains."

MIA BULJAN: It did, it wrecked them. It was great. It was great.

ERIKA ISOMURA: Yeah, I know. But it was good. They really want...they were very... And I'm so proud of them because at the beginning of the year it would've been, "Hm. All right, never mind." But at this point of the year it's, "Ugh!"

MIA BULJAN: So I want you to talk a little about that because we've talked about this class at length in terms of, um, mathematical personality.

ERIKA ISOMURA: Yes.

MIA BULJAN: Okay, can you describe them at the beginning of the year?

ERIKA ISOMURA: So at the beginning of the year, anyone who knew their times table was a math expert. That was the straight up criteria. If you didn't know your times tables, you were not. Um, and it didn't matter what we were doing as long as you were the first one to the answer, and I had to verify it.

MIA BULJAN: Nice.

ERIKA ISOMURA: So it was all of those ideas of agency and authority, and it was all about, "Here look! I'm right, right?"

MIA BULJAN: Uh-huh.

ERIKA ISOMURA: And um, so the first couple of times that happened, I responded the way I typically do, "I'm not sure. What makes you think you're right?"

MIA BULJAN: Mm-hm.

ERIKA ISOMURA: And that would get a frown, and occasionally because this was an interesting class, a stomping off to the back of the room.

MIA BULJAN: So they weren't hearing you?

ERIKA ISOMURA: No.

MIA BULJAN: They weren't having that? Okay.

ERIKA ISOMURA: No. And that, um, so...

MIA BULJAN: Can you tell the Patrell story?

ERIKA ISOMURA: Yes. So we had been doing math talks for a week. We had done five math talks in five days. And I was kind of feeling them out, the fourth graders, because they had done math talks, were solid; and the fifth graders had never done them and were really fragile.

So we were doing a very, very simple math talk and it was a...I always start with two-digit additions, usually with regrouping unless that goes badly the first time. So we were still doing one. And everybody at that point had heard somebody else get questioned by me, and so they knew it was coming.

It was now at this point automatic that no matter what I say, there will be a question. Even if I'm right, there will be a question. And so they understood that idea. And so they had the problem, Patrell had his answer, he wanted to defend it, and I said, "Okay, so Patrell, tell me about your answer." And he says the answer is, you know, whatever it was.

And I said, "Okay, great! Now, can you tell me how you got that?"

"Oh, because that's the answer."

"Okay, but what did you actually do?"

"I thought about it."

"What were you thinking?"

"I thought about the answer."

And then as this is happening, all of the kids around him, most of whom had already defended an answer [inaudible], "No, she wants you to tell her the numbers."

MIA BULJAN: They're going to fix it.

ERIKA ISOMURA: Right. They were saying...I remember Lizzie clearly saying, "She wants you to say you thought about this number and this number, and you added them and got this."

MIA BULJAN: They're all coaching him?

ERIKA ISOMURA: Right. She was straight up, she was so explicit with him. And he's going, "What? What?"

MIA BULJAN: Mm.

ERIKA ISOMURA: And so I pushed a couple of more times and then it turned...he literally, he crossed his arms, and he leaned back and he started to shake his head and he said, "You can keep talking but I'm not going to answer."

MIA BULJAN: Oh!

ERIKA ISOMURA: And he just stared at me. And I said, "Okay, so does anybody else want to defend Patrell's answer and talk me through it?"

And a bunch of hands went up and at that point again, most of them understood that it didn't really matter if the answer was right or wrong, I still wanted to know the thought process and that was what was going to get you the accolades they were looking for. "Thank you so much for sharing that. Thank you for sharing your thinking. That's so cool how your brain was doing that," which isn't what they're used to getting, which is yes or correct.

MIA BULJAN: Right. Or you're speedy, or you're fast, or your smart, or you're...

ERIKA ISOMURA: But it was still self-empowering to them of, "But she likes something that I'm doing. It's not what I'm used to people liking but she does like that, so let me do that." Um, and Patrell would not...

MIA BULJAN: So specific praise was one way that you, um, encourage them...

ERIKA ISOMURA: To do that kind of talk.

MIA BULJAN: To take on this kind of talk that you valued.

ERIKA ISOMURA: Yes.

MIA BULJAN: Okay. And then what else?

ERIKA ISOMURA: And, um, Patrell didn't raise his hand again for months.

MIA BULJAN: Yeah, that sounds right.

ERIKA ISOMURA: I don't think he raised his hand again until probably November.

MIA BULJAN: Uh-huh.

ERIKA ISOMURA: And he raised his hand and I told him, "I'll call on you next." And so, um, I called on somebody. We talked it through. I asked them to talk about what their thought was, and I pulled Patrell to me one on one and I said, "So the last time this is what happened. I'm not going to be happy if that happens again. Do you understand by volunteering, I will ask you to explain your thinking and I may be really picky about...but what about, and how did you, and what did you...? And I'm going to be kind of annoying to you." And he said, "No, I'm ready for it."

MIA BULJAN: Nice.

ERIKA ISOMURA: And he did. He was great. And then...

MIA BULJAN: I'm ready for it. Bring it lady.

ERIKA ISOMURA: And he was able to talk me through it, and I could see a couple of times he's like, "Well, it's obvious." And I said, "Well, talk us through." And I used the fourth graders completely. "Because, you know, we have fourth graders in here, so you need to talk us through it so that they can get it."

MIA BULJAN: Yeah.

ERIKA ISOMURA: And that's also very handy for him in particular. Um, but then one thing that I thought was really...signaled to me that that child specifically had finally made it past that thing that was going on in him. Couple of weeks ago he had been pulled out just for something, I don't know what. And he came back in and it was math, and he comes back in, he sits down, he opens the math book and he says, "What are we working on?"

MIA BULJAN: Wow.

ERIKA ISOMURA: And I said, "We're doing this." And he's like, "Okay, great. Here let me," you know, and then he writes something down and he turns and he's like, "Okay, like this."

MIA BULJAN: So we've been talking a lot about this idea of agency.

ERIKA ISOMURA: Yeah.

MIA BULJAN: And, um, and identity, and so, um...so with him, you know, clearly there was praise and you were modeling praise and modeling, um, being explicit when other students were doing what they wanted. But, um, when I hear that story...I've heard different variations of that story.

ERIKA ISOMURA: Right.

MIA BULJAN: Because we talked about different things and different context, but when I hear you tell it now in order, there's something also about not lowering your expectations. The little pep talk, I'll call it, um, of like, "Just so you know, you know, this is how it's going to work. And I'm not going to like it if you don't..." I think, um, you know, that sort of, um, outlining of the expectation and how it's going to be explicitly, was probably really helpful for him. Because seeing you model it with other people is not the same when it's happening to you.

ERIKA ISOMURA: Right.

MIA BULJAN: And I think that little warning probably helped him...

ERIKA ISOMURA: Yeah, "Are you really ready to go through with it now?"

MIA BULJAN: But letting him know it's going to be the same as it is for everybody else. Like, there is no...

ERIKA ISOMURA: That was one thing that I thought was funny because they had...that first time multiple people in that back and forth were telling him, "She's not picking on you. She does it to everybody. I had to do that yesterday. So and so had to do it on Monday. It's not a personal..." Like, the kids, the rest of the class was very clear it was not a personal attack.

MIA BULJAN: He was just in a different range, a spectrum of understanding that, and when he did understand it...

ERIKA ISOMURA: And now he's...yeah and he's fine. He doesn't get into those, those kinds of emotional breakdowns when we do math any longer.

MIA BULJAN: So when you first met this class and you would tell me, like, "Oh, um, I'm not sure."

ERIKA ISOMURA: Yeah.

MIA BULJAN: Um, today what we saw was very different.

ERIKA ISOMURA: Yes.

MIA BULJAN: They are so hyper engaged in sense making and able to talk about it and "I disagree..." Not always totally on point. Like, not always, you know, saying the correct mathematics, but there's this sort of...there's this glimmer of hope when I hear them that they will get to the correct mathematics because of this, like, the attitude is there.

ERIKA ISOMURA: Mm-hm.

MIA BULJAN: So can you describe, like, when did that switch and how did you...?

ERIKA ISOMURA: I think from what I understand of the history of the fifth graders, um, Dylan was the math guru in the class. He's super great at computation. He has...I talked about him earlier, he was the one who recognized that the numerator is the multiplier and the denominator is the divisor. And, you

know, he got that without anything other than just kind of looking at pictures and thinking about what's happening. He has a fabulous math brain. And the other kids learned that if Dylan...if we wait long enough Dylan will do it, the teacher will praise Dylan, and nobody else has to work.

MIA BULJAN: Mm.

ERIKA ISOMURA: And, um, I'm not as inclined to confirm right or wrong answers. I'm more inclined to just say, "Okay, tell me about it and then keep trying, and then convince somebody else and..." But I seldom do, "yes, you're right. Check. Star. Whatever."

So Dylan was really frustrated at the beginning of the year because I wasn't giving the kind of response that he was used to in his life. And I had...there were a couple of times where I asked him to explain himself and he wasn't able to, and he was very frustrated because that was not what he was used to.

Um, and the kids looked to him as he's the math expert, so he... So I knew one of the keys was getting him to buy into my system. And I know this is very...there's issues around what I'm about to say but he's Asian, I'm Asian. It's a very small minority in our school. There are those perceptions about Asians and math and science, and I am one of those math and science Asians, and so he wanted me to look at him as, like, he's the same kind of person as me.

MIA BULJAN: Right. You're on...he's on your team.

ERIKA ISOMURA: Right. And I wasn't giving him that and it was very aggravating to him.

MIA BULJAN: That's provoking, yeah.

ERIKA ISOMURA: Right. So I had pulled him aside at one point and I said, "So you know, these are things that you do and they're really good, but that's not enough. I have a background in science. I have done a lot of math in college. I've done, you know, engineering. I'm...I have all of this background and you, I know, want to be an engineer or a scientist, this is what it takes. It is not enough to take a bunch of numbers and get an answer because you can do that on a computer or a calculator.

It's more important that you understand the context and you can explain to others, because if you're an engineer and you design something, somebody's going to have to read your plans and build it. And if you can't clearly explain to them if they're confused, you're out of a job." And he was really...I'm really impressed with this child because he was able to take that as not I'm doing it wrong but, "Oh, there's a next step. So here's my next step."

MIA BULJAN: A challenge as opposed to a critique. Yeah.

ERIKA ISOMURA: Yes. And so he bought in fully to, "Oh, this person actually knows because she's done it and I want that. And she's telling me how to get there so let me go do that." And I really feel strongly that once Dylan bought in, and other kids saw him no longer just jumping on answers but really being thoughtful about, "Let me understand. Let me question you a little bit more to make sure I understand. Let me try it. Let me explain it and let me keep pushing." That's when I think a lot of the class jumped on board because I got their leader to buy into my system of what I do in my classroom.

MIA BULJAN: Their leader. Like it's an alien life form.

ERIKA ISOMURA: Yeah, it's a little bit of that. Yeah.