



Welcome fellow recovering traditionalist to Episode 95. Today we are getting inspiration from Jill Bratton who prompted me to pose this question, is student achievement or student enjoyment our goal?

Welcome to Build Math Minds the podcast, where fidelity to your students is greater than fidelity to your textbook. I'm your host, Christina Tondevid, the recovering traditionalist and BuildMathMinds.com Founder, where my mission is to change the way we teach elementary math to our kiddos. Are you ready to start building math minds and not just creating calculators? Let's get started.

Today is one more interview with an educator who has gone through my online course, The Flexibility Formula. Now the courses are only open through this Thursday, May 13th so if you're interested in taking the course, go to [buildmathminds.com/enroll](https://buildmathminds.com/enroll) to get registered.

In this conversation with second grade teacher, Jill Bratton, there's a point when I asked her to share a story about how the thing she learned has impacted student learning. She shares a wonderful story about how her students are loving math more and enjoying it. But before she shared it, she said, "I'm not sure if this counts.

I think it's an important lesson and it begs the question, is student achievement or student enjoyment our goal?" And yes, I know it really is both of those, but I feel like too often students' enjoyment of mathematics gets thrown to the wayside in an effort to get student achievement up high. And if we see that success of student enjoyment going up, we feel like it isn't enough. What do you think? Have you experienced that before? Are you like Jill and you have that success of your students having fun and enjoying math, but in the next moment, the success gets replaced by worry. Worry that enjoyment isn't going to translate into student achievement.

I want to encourage you to sit in that moment of success a bit longer. If your students are enjoying math, the learning and achievement will come.

Okay, enough from me. Let's actually hop in and get inspired from Jill.

Christina: Jill, thank you so much for joining me for this podcast. Let's start it off with having you tell us a little bit about you and what your role is in education.

Jill: Sure. I'm currently a 2nd grade dual language teacher in Santa Fe schools. I just went back into the classroom this year after two and a half years as a math and reading specialist for an organization out of NMSU. When I was there, that's when I became familiar with your work and some of the work that you reference often and have people on the podcast and the virtual summits. That was my introduction to you. And before that, I taught in 5th grade. I've always been either involved in education as a teacher or in some sort of capacity. Instructional coach, that sort of thing.

Christina: And so currently 2nd grade, and you are in person?

Jill: I am now in that la la land of hybrid world. I have 7 kids in the classroom and 9 at home. Yeah, and we just switched. We were remote obviously entirely all year and then this is the second week of our kind of hybrid plan.

Christina: Yeah. And I had said in person with a question mark, because for those who are listening to the podcast, you aren't seeing, but we're meeting via Zoom and I get to see the wonderful background of her classroom I'm seeing here. I knew she was in a classroom.

Jill: Yes, I am. Definitely this is not my home. This is the classroom.

Christina: It looks awesome. You had put in your thing that you've done [The Flexibility Formula](#) through us and the Build Math Minds membership. Did you join the membership first or did you take a course first?

Jill: Well, I actually kind of did a little of, I started a membership and then I got busy and I wasn't following so I left, but then I realized, no, no, no, I really need to come back. And then that was at the same time that you opened The Flexibility Formula. Then I did that and I was like, oh yes, this needs to be a standard part of my personal development. I call it personal because it's not just professional. It is I continue to always want to learn as I'm working. Then I said, "Yeah, I just need to do the Build Math Minds as a membership as well."

Christina: Awesome. That's nice to hear that it's been valuable for you.

Jill: Oh, for sure. For sure. And it was not just me. I guess I'm speaking with you right now, just me, but I have colleagues that are also members and so we compare stories and I see them comment and it's not quite as frequent as I would like to see, of course. I'd love to see more of the staff that I work with on your courses and in Build Math Minds, but we'll get them there. We'll get them there.

Christina: The point of these podcasts are really to help inspire other educators out there about the changing of our teaching and what that looks like and the benefits that you've seen from it. Before you took The Flexibility Formula and were a member, what was your teaching of math like?

Jill: It was one of those hodgepodge scenarios where I knew that I didn't feel right with the texts. I knew that the textbook didn't feel right and I'd worked with math educators in other capacities so I knew it wasn't what would be recommended, but I didn't quite know how nor did I have the confidence to just sort of take that step and do the things that I know now that are recovering methodologies. It was not completely by the book. You wouldn't say I was a completely traditional teacher, but I was trying to be something that I didn't feel confident enough to be. Even as a math specialist, I would go in and tell a teacher, because I knew you're the right thing and I know Graham Fletcher is, and I know Jo Boaler and I knew all those people, but actually putting it into action in my own classroom was stymied. And so by listening to your podcast and watching your vlogs and then seeing comments from other math teachers, helped me sort of start moving toward where I want to actually be.

Christina: And where is that? I know there's stuff that you sent me before we have done here. You said, you're not perfect, you don't have this all figured out. You can kind of talk about where do you envision yourself being? Because this is a whole journey. You don't just change your teaching overnight. What do you feel like have been some things that you have done well that you're really working on that are working really good? And where do you see, I guess that you want to still are improving and moving towards?

Jill: Okay. What I think I'm doing really well is doing a lot of the things that you say when you say when we're working on the number sense routines in the early grades, making sure that we're doing that consistently and watching how kids are responding, the language that they're using, with the Esti-mysteries and asking probing questions. Not just putting it up there and saying, "oh yeah, okay. That's the answer," and we're done. But using those things to really guide me to see where they are in their progression. I feel like I can ask those questions and say that more, look at the material in front of me, which is their responses and their estimates and their reasoning and I have a better sense now where to go.

Jill: I'm not quite there yet. My questioning sometimes doesn't give me what I think I should get out of it. Does that make sense? I know what to ask, but I don't know necessarily when I see it, what to do with it. And so going back to the [The Flexibility Formula](#) and saying, Oh, they must be sort of still developing one of the main things, maybe they're not getting 10 more, 10 less, one more." I can see that by using one of those routines. Does that make sense?

Christina: Absolutely. Because it's the questioning and kind of digging out student thinking, I think is one of the hardest things for teachers. I feel like it is too, but also for kids, because sometimes in math, they're so used to just kind of ending when you give an answer. And so trying to craft the questions in a way that will bring out information that you can use to inform your instruction. It seems so easy. It seems simple. That's what I've been trying to say. It seems simple, but it's not easy to do. And when you get in there you realize, okay that didn't come out the way I wanted it to, because I'm not getting the response back from the kid that I was hoping.

Jill: Exactly. And so that's the combination that I like because I'm taking more chances with that. I'm taking more risk, I'm comfortable. And then when I get something that I'm not quite sure what to do with, oftentimes it's funny because with your Wednesday question and answer things, oftentimes someone has asked that same question, you know what I mean? I feel like, I know there are other people doing it and then when you answer, then I know what to look for a little bit more the next time or then I know where I need to go back and look in the course. Okay, I must not have really quite grasped that so let me go back and look at it. You know what I'm saying?

Christina: Yep. Yeah. And that's very interesting too. The course has a lot in there and it's like drinking from a fire hose a lot. I feel like, even, when I was making it, I'm like, I feel like there's so much more I could put into this too and talk about, but it's trying to find that balance between overwhelming you and making it so that it's actually doable. But once you go through it and then you start making changes and you're like, okay, I remember a little piece of this. Or maybe you didn't even remember it and it was in there. It's just like when our kids learn it, you hear it one time, it doesn't mean that that stuck and you know exactly how to use it and implement it. We have to hear it multiple times just like students do and we've got to put it into practice and see how it works and then come back and rewatch something and see, okay, that's what I missed of this part. And I can go back and try it again.

Jill: Exactly. And so then I do that and then I also, when you brought in all of the people that you bring in for the conferences and you have them connected to whatever that topic is, then I get your take on it and I get other experts' take on it as well. And so it kind of meshes together as this nice kind of braided piece of knowledge. I've got all these different and it helps, you're right. And we have to see it multiple times and from multiple perspectives, because it's the same thing with kids. I might teach something one way and I think I'm doing great, but maybe another teacher just hearing it one time, in a different way from another teacher also helps. Does that make sense as well?

Christina: Yeah. And you made an excellent point there and that's the reason why I started doing the Virtual Math Summit was because we had all these teachers in Build Math Minds, but I was like, I'm not the only person you guys should be learning from. There's other amazing people out there that we can learn from. And here's someone else's perspective and to get their take on stuff. That's one of the reasons why I love doing the Virtual Math Summit is so we get these different perspectives on things and different people to learn from.

Jill: And it shows that you are always constantly crafting your knowledge as well. You're not staying stagnant with what you know from your program or from your time and teaching. Because that's part of being who you are as well. You're kind of like my point person. And it's a great thing to do, because we don't have that much time. I don't have time to go through. I have all of the books that you reference at home. I pull out Van de Walle sometime, I would like to read Van de Walle from start to finish, I have Kamii at home, but I started it and I'm like, I'm teaching or I'm doing this. I don't have time to sift through it.

Jill: If you've sifted through it and pull that, I trust. I know that you know what you're doing and I know that you're looking at the people that need to be looked at. It helps again, it helps the time crunched professional who wants to continue growing without having to take all this course. You know what I mean? That's the beauty of it. It's kind of just one spot where I can and a person who I trust has done that for me. Does that make sense?

Christina: Yeah, thanks, Jill. You're not going to make me cry or anything here.

Jill: No, I probably can. Do you want me to try? I can probably. But it does help. And I'm not saying that just, but it's true. And that's where I'm a little different than some teachers because I've worked with math educators. Not as a math educator, but I worked with them in projects with parental engagement so I knew who I should be looking at. And then you come along and it's like, oh good, I don't have to take that course because I can't. It helps. It does help. Anyway, I won't make you cry, but it's very helpful.

Christina: It is nice to just know that that's really how I envisioned it. I was fortunate to be in a position where my job was not in a classroom. I was a math specialist and I was learning all of these things, taking it in and that's what I got to focus on. But as an elementary teacher, we don't get that focus. We have to be doing everything and it's hard to learn everything that's out there. The nice part of the internet is that everything's out there. The bad part of the internet is that everything's out there.

Jill: It's the fire hose thing. It's the fire hose thing. It just soaks us.

Christina: Yeah. I'm glad to hear. That was my goal was to take those big things that really moved me and made a difference in my teaching profession, but also my personal life and my personal relationship with mathematics and how I've interacted with my own four kids and helped them interact with mathematics and being able to take all of that. And like I said, condense it down to those big things that really have made a difference so that you don't have to go through everything that's out there and try to figure it out on your own.

Jill: I agree. And we have a lot of that with reading in the foundations of literacy, but not so much the foundations of numeracy. And it's important. And now I see what's really interesting is that I see the use of the concrete representational abstract progression in ELA. They've started in fact, I don't know if you saw, but did you see that Jo Boaler, no it it Joe? Marilyn Burns is having a conversation with a reading expert who is, it's very interesting to merge the literacy foundational work with numeracy foundational work. Because we haven't done that. And so if

you're helping to bring that movement into the lower grades where we need it in the foundational pieces, then yes, you've done an amazing service and you are doing an amazing service.

Christina: Thank you, Jill. Okay, so one question I love hearing though, I appreciate hearing the changes at how things have helped you with your teaching. But the main reason we do what we do is to impact the students and their learning of mathematics. Has there been any specific stories or anything about how student learning and how your students have interacted with mathematics that has changed?

Jill: Yeah. Well actually, sorry, I'm going to move this. It's interesting, mostly, I don't know if it sort of counts for you, but the level of engagement and they look forward to mathematics and kids who have not. And I don't know if I have, I was thinking about that. There's not one specific oh my gosh, they bloom. But it's the idea though, that they ask for me to do math. They come, I have a little girl who she's struggling and she's still struggling, but she has just come alive with the techniques that I use. And she doesn't quite understand that I'm basing it on these pieces from you. But the level of engagement and the number sense kind of focus, I think you've allowed me to sort of go slowly with that so that everyone is being able to learn at their own speed. But she now is making connections that she did not make at the beginning of the year. She's using, we're doing, for instance, we're studying time right now.

Jill: And previously doing this, and we're using the [San Francisco Unified School District](#), because I really like their approach. She is now, she before was not using those landmarks of 5 and 10. She wasn't seeing those connections, but we've done so much work with, it's really come from, I'll have to say, it's come from using a lot of Steve Wyborney's work, but I use it because of the value that you've placed on it and the things that I see. That's one of your recommendations and one of your top three is to use those routines over and over again.

Jill: She's just started making these connections with looking for patterns because looking in patterns and then the hundreds chart that we use for his. I don't know. That's a whole big jumble of stuff and I'm sorry, I jumble things, but she's one of many. She's one of many and they are all, and they talk about how we're developing our number sense so they use the vocabulary, they know what I mean by that. I don't know. Does that answer your?

Christina: Absolutely, Jill. And I just want to circle back to what you said at the very beginning. You're like, I don't know if this will count, does this qualify as a change in student learning? And unfortunately, we feel like it doesn't just because so much focus has been on student achievement is different than student learning. And I think you make a great point right there, but we feel like it doesn't count just because they're enjoying math more and they're more engaged. And that might not guarantee that their achievement scores go higher. But I think we need to get to a point that who cares? And I think teachers are so ready for that point. That the test scores are not end all be all. But unfortunately in education, that's not.

Jill: No, it's not that. But they enjoy it. And they feel like they're mathematicians. They say, and we're reading this daily affirmation at the beginning of every class. I deserve to get this education. I am powerful. I am strong. And part of that also is and I am able to do mathematics and I can see mathematics everywhere. Now they're buying watches so they can tell time. My kid, one of my kids at home has taken out his own personal Judy clock and is like, showing me, "Look Miss B. I can do." That to me, that's you're right. And I don't know why I discount that because that's the kind of person I feel that way too. I think that if education was just a little bit more about where kids are in their learning and how they feel about it, we'd be in a much better place. I feel like I have 16 little mathematicians ready to go.

Jill: We watched a little Catherine Johnson clip from Hidden Figures and I was like, "Let's do that kind of math." And they're like, "Okay, but I don't know." The scene where she's doing that trajectory on the board and figures out exactly where the shuttle's going to land. Of course we're not going to do that, but they are not afraid. And that's the other thing they're not afraid of math. And that's the biggest thing for me too. That's what I think that's where I'm hitting home.

Jill: Maybe we're not, I don't know, and I'm taking it slow. And I feel like I have permission from, I know you always say, we need to build this piece right now, so that they're ready to do the next piece next year. We're taking it very slowly. Just place value we have done, it's taken a long time, but I've done it. And what I feel would be a way that it would be good. It would be okay. We're not doing columns in this. We're doing things that give them experiences and are meaningful. They all have have the...

Christina: Oh, go ahead. No, finish your thought there.

Jill: No, no, no. I was just going to say, instead of doing the classic stuff with place value, we're doing the cards that you have.

Christina: Place value cards. Most people won't see the visual that she's holding up.

Jill: Oh, sorry.

Christina: It's okay. The fact is, we're just having a conversation here. It's hard to remember that they won't really see what we see.

Jill: Sorry. I should have told you I'm very chatty. I'm sorry.

Christina: What Jill was holding up there were what I call [place value cards](#). Some people call them hide zero cards, but it's, you could just Google those, I'll also probably link to them in the podcast notes and stuff for people, but just being able to help kids build that sense of numbers, even if this year. And I don't know if you're testing, a lot of states are starting to get back lash for the testing and I don't even care about the testing, but sometimes I just want to tell people too, that even when you do start this focus on number sense and helping kids build their understanding of place value and numbers, your test scores may not show it. They might. They might, they may not.

Christina: But the overall effect is that long term, these kids will start to become better on their achievement scores long term but too often, we're focused on the short term of let's get them ready for the test. Let's get them ready for the test. Let's line stuff up, teach them how to do the procedures so they can perform on a test. And we get that short term satisfaction of kids performing well on a test.

Christina: But then, you know what? 5 years years down the road, they hate math. They have no sense of numbers. They don't have place value. They still are counting on their fingers for addition and subtraction fact. We see all of these long-term effects that can happen and it's hard to remember in the moment when you're a 2nd grade teacher or kindergarten teacher or even a 4th grade teacher who feels like you don't have the time to slow down and help build this foundation for kids. You may not see the effects of it at your grade level, but you have to think long term about how is this going to impact those kids and the way that they think about math? And for those who aren't listening, Jill has been nodding her head feverishly while I said that.

Jill: I'm sorry. I know. Well, I'm just thinking that we have this thing in reading where we say, you have K - 2 is learning to read and three through everything else is reading to learn, but we don't have anything like that for math. And I think that if we did that for math, then right now they're learning to read the numbers, they're learning to be, is there a word like numerate? Numerliterate. But we don't give them time to do that. All have these textbooks as you well know, put algorithms in second grade. They should not be looking. You I'm telling you, but obviously we don't need the algorithms in 2nd grade for borrowing et cetera. And so if we would just but give them time, as you said, to develop, then I think we'd be okay, but there's no, who does that except for folks like you?

Christina: And you.

Jill: Because the textbooks certainly don't. Well right, which we now we need to grow more people. That's the thing that I really want to ask you, I share with my colleagues, but I would love to be able to get the word out even more. You know what I mean? And that's the thing that so many teachers have mathphobia themselves. Man, there's work to be done, huh?

Christina: Yep. And it just comes from sharing experiences. That's why I like doing these interview style podcasts to hear from the teachers who have learned some new things and are implementing them, putting them into practice and you're starting to see that change because it does inspire people to say, "Well, I want that for my students. How do I do that?" And if instead, we are just handed a new textbook and said, "Here use this." And that textbook may be one that's focused on number sense or whatever. It doesn't happen. That change doesn't happen. We will teach it in our old way. If we get a new resource, we will teach it in our old way, unless something happens to make us think that our old way isn't quite working right. And that happens when you hear stories from others or you have an experienced with math.

Christina Tondevoid: For me, it happened when, what was the exact problem? I can't even remember what it was, but I distinctly remember when I went back and got my Master's degree and in one of the classes they had put up a problem up there and, oh man, I wish I could remember what the problem was. But it was one that it was meant to help us feel like a kid would feel. And so they put the problem up there and I spent the whole time trying to do algorithmic work, step by step procedure that I knew. I know I have learned this and I was trying to bring this back into my brain. And then someone got up there and drew a picture to help them solve that problem. And they had it in five minutes and I spent the entire time that we were given, trying to do some procedure. It was an algebra trig problem or something and I never figured it out.

Christina: And then somebody came up and showed how they drew a picture. And I was like, what? Is that it? I have experience of, oh my gosh, I am making this harder than it needs to be. And it made me really realize that the way that I had learned math was just very much rule following. I knew there was supposed to be a procedure, steps that I should follow to get me to that right answer and I could not remember them. And some people would be like, "Well, you should have been better at memorizing those things." But the fact is, who can remember everything? The idea is that we can empower kids and then as they become adults, that they are problem solvers, not rule followers in mathematics. It's such a big thing.

Jill: It's such a powerful moment. Because then you realize. That happened to me. Right around the time I was, I don't know if I discovered you or someone told me about you. I think I discovered you while trying to research stuff when I was working as a reading and math specialist, because I was much more comfortable with the reading piece. When I had just discovered you at the about the same time, I went to Ruth Parker number talks, workshop, because I worked at University of Arizona with some math people and she was coming down to work at their center for

teaching of math. I went there and I had started figuring out from you how we could envision math differently, how we could show kids how to do the types of techniques and strategies that you see in number talks.

Jill: But I hadn't put it all together. And then I sat in this room with all these people who were math teachers and I was just kind of invited in to just watch. And that's when it started to click for me. It becomes, you can see all those of us who hadn't been able to play as kids, we weren't allowed to explore and we were supposed to remember the rules and I got incredibly frustrated because I'm not. As the problem she put on got harder, then I got more stuck. But then as I started having strategies that came from learning from you, from folks like you, then it became a good game, a game that I could do, because as you said, I didn't have to remember all of the pieces, all of those steps and blah, blah, blah. I could decompose. I could do this. I could add up instead of subtract. That wasn't part of my understanding before. You're right. And then it becomes a whole different world of how do we actually understand what we're doing? And yeah. Anyway, sorry. But I had one of those moments.

Christina: We have touched on a lot here, Jill and I want to be mindful of your time, but to get people started, because we touched on a lot of things in here. But I always like to leave them with a place to go next. If someone was wanting to start making this change and focus more on building number sense and building thinkers in mathematics, not just doers, is there one place that you recommend that they start? What's something that you feel like is...

Jill: Within the world that we're speaking of, Build Math Minds?

Christina: Well just in general, just to try out something in their classroom and give it a go because it's not just about taking my course, as you've said.

Jill: No, no, of course.

Christina: The course helps, but not everybody can do it. Just dipping our toes in, getting started, what do you think has been a big piece for you?

Jill: I'll have to admit it took me, so I don't know I was doing other number sense works and I had always done number talks, but I realized with this group they weren't working. I finally tried [Splat and Esti-mysteries](#). It took me a long time. Esti-mysteries, I did not want to do it for some reason. I was afraid. For some reason, and then this was just this year and doing the Esti-mysteries has opened. They love them. Love them. And it helped. And it's developed. You get so many pieces of numbers sense in one thing. They were okay with Splats. They liked it. But when I saw the beauty of, because it helped me bring together what I was learning in [The Flexibility Formula](#) with something that I can do again and again and again and is engaging for them in class. Does that make sense?

Christina: Absolutely.

Jill: I would say try Esti-mysteries and connect it to what you teach and what we learn in The Flexibility Formula course. Because I think it's a really good way of seeing all of that in action in a short time.

Christina: Okay. To kind of summarize and tell me if I'm incorrect here, but Esti-mysteries and Splat, anything [Steve Wyborney](#) does, I gobble up because he has amazing resources. The hard part is when we get new resources, we'll try him in our class. But then sometimes we don't know what to do with that. We're doing it, but I don't know what questions to ask my kids. Or if I saw my students do this, what is that really telling me about? We kind of still do them in a procedural way. What I'm hearing from you is that yeah, you had some of these resources and then even

as you bring in Steve's resources, the course has just helped you with knowing the power in those resources and the questions to ask and things to look for when your students are talking about what they're seeing, that can then help you decide, where am I going to go next with these kiddos?

Jill: That is it completely. You said it. Yes, I have a hard time being succinct. That is exactly it. And it helped me yes, it helped me bring in everything that I needed to, to make it the most worthwhile experience for them. Yes, that is a wonderful way to summarize it.

Christina: Yeah, so to end our stuff here is go to the show notes page. I don't know which episode this'll be yet, but in the podcast, I'll tell you what the website is and we will link up some of those favorite things, especially Steve Wyborney's site so that you can jump in and start trying those with your students. And then of course, if you want help along the way, you can come join in on the courses as well. But thank you so much, Jill, for sharing your story and helping to inspire so many educators out there.

Jill: You're very welcome. And thank you for the work that you do. You inspire us every day.

Christina: Thank you again, Jill. I loved chatting with her and I hope she has inspired you to celebrate those moments when kids are engaged with and enjoying mathematics. Those are successful learning moments. I'll link up everything Jill mentioned over at [buildmathminds.com/95](https://buildmathminds.com/95). And if you are interested in taking The Flexibility Formula like Jill did, you can learn more about how to make math fun and enjoyable and also rigorous mathematics comes with that. Come on over to [buildmathminds.com/enroll](https://buildmathminds.com/enroll), and don't forget registration closes May 13th.

These episodes are sponsored by the online trainings that I do for elementary educators. Registration for The Flexibility Formula K-2 and 3rd-5th is now open for a limited time. These courses help you understand the foundation of number sense, how number sense builds kids' flexibility with numbers, and how that impacts their ability to become fluent in the mathematics at your grade level. Registration is open but not for long. Go to [buildmathminds.com/enroll](https://buildmathminds.com/enroll) to learn more about each course and get signed up before registration closes.