



Welcome fellow Recovering Traditionalists to Episode 25, where we are going to get inspiration and information from Carri Naumann-Monti, an Educational Therapist who works with students who have language-based learning differences.

Welcome to Build Math Minds the podcast, where fidelity to your students is greater than fidelity to your textbook. I'm your host, Christina Tondevold, 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.

Christina: Well, in this episode I am pleased to introduce you guys to Carri. Carri, I want you to start off telling us a little bit about you, your journey in education and what you do now.

Carri: Sure, thanks so much for having me. I am an educational therapist in Richmond, Virginia. I have taught in public schools and private schools. I've been an administrator in a private school, and now I am an educational therapist, and I also homeschool. So I've kind of done it all, and even have taught college level courses as well.

Christina: Wow.

Carri: As an educational therapist, I work with students who have language based learning differences, and also students who really have struggled in math being taught the traditional way. So this through Build Math Minds, I have reformed also the way that I see math. Math was the hardest subject for me in school and this journey of teaching it now through Flexibility has really changed, has completely changed me. And I just, I see that, you know, I'm transferring that excitement that I now have about math to my students and to my own children. And it's just really, I can just see differences and the anxiety, you know, it's dissipated and I really enjoy math so much more this way than I ever have before.

Christina: So you've done some stuff through [Build Math Minds](#), but what other professional development have you had along the way? Because you've had a lot of school and schooling and degrees and stuff, so what has influenced your change?

Carri: When I started the route to becoming an educational therapist, I went through NILD's program, National Institute of Learning Development, and had also took one of their courses last summer, RX for math, and through that course learned about you and about many of the amazing researchers who you frequently referenced, like John Vanderwall. I've also had coursework with David Berg, through Making Math Real for teaching the nine lines. And also through Build Math Minds, I've had your [Number Sense 101](#) course, which was just amazing, and most recently the two webinars, Games for 3rd Grade through 5th Grade, where I learned a lot of wonderful logic games that I've already started to implement. And just recently this week, your number sense course, 3rd through 5th grade.

Christina: Oh, awesome. So you took some of the [mini courses](#) that just happened too.

Carri: Correct.

Christina: Yeah.

Carri: Mini courses.

Christina: Yeah. So before you had all of that professional development, what was the teaching of math like for you?

Carri: Oh gosh, it's something I don't want to go back and remember.

Christina: None of us do. Back, Oh my gosh, what did I do to those students?

Carri: And just, you know, it was, it was very rote, oh this is what we're doing today, let's work on these steps. And I will say procedures for me are sort of my kryptonite. So sequencing and procedures, and that's something that I've, you know, been working on for my own kind of self, especially in recent years, as an educational therapist, because that's what I do is cognitively guided. So it was just my teaching before was okay, here's the lesson of the day, let's build this number with the blocks. And so I knew sort of what to do and what activities maybe to go along with it. But the big takeaway here is I didn't understand why I didn't understand the holistic reasoning why I needed to do that.

Carri: I couldn't see like the big picture. Okay, I need this because this is part of building the number sense and then I have the next step. And then all of that encompasses the number sense. And so I didn't understand what you mentioned in your courses is the cognitively guided instruction, that was the big missing piece. And now I can say, okay, I understand. Children need to learn how to subitize, and I'll say my children, my own children and my students. You know, they need to understand how to subitize, because that's important because then then the facts come, the facts are part of that progression. So that is the big, I taught the way I learned it and I wouldn't wish that on anyone.

Christina: I know it feels, you know, we made it through, right? And we had, as Mike Flynn calls it, the illusion of understanding. Like I always felt like I was good at math, because I was good at following those procedures. I was a good rule follower as a kid.

Carri: Yeah.

Christina: And I thought that that's what math was supposed to be like. And then when you get your eyes open to, wow, there's actually some understanding and reason why this works.

Carri: Right.

Christina: It's like a whole new world opens up, and once you see that world you want everybody to be able to see that world about mathematics.

Carri: Absolutely. And I was sort of the inverse. I am sure you are great with your facts as well, but I was great with the facts, but it's just putting them into the sequential order and using that working memory piece of it and

understanding, okay now what do I do? And then when I would see it on the test, it was almost like, I don't, did we do this? I don't remember how I even started this. What was this again? You know? If there were several different algorithms to solve, I would inevitably confuse them. So that is definitely something that has changed, is just understanding, building the fluency through the flexibility. It's very different now. That's where I see, let's take this from the ground up, and I think then everything will easier fall into place later on, if we make those connections from the ground up as opposed to going back now. For example, in my adulthood going back now and sort of fortifying them to build everything on top of it.

Christina: That's true. So what has changed when you are working with your students and in your own personal child? How have you made it different?

Carri: So math used to have one, in my paradigm, it used to have one right answer and was what I would've considered a rigid subject. But now, I'm teaching students to see the many different ways that numbers are comprised. So fluency for example, is no longer a timed test measure, like I used to give my child. Okay, let's work on your subtraction facts, I hope you enjoy math, here you go. I'm going to time you for three minutes and let's see how well you do. What do you mean you don't want to do it today? Really? So that that is a thing of the past. Fluency for me is no longer a time to test measure, but rather it's the ability to gauge flexibility through the numbers.

Carri: And it really also kind of parallels how I teach reading. Fluency, it's not the timed repeated reading, there's, there's more to it going into that. And I see the same thing with math. Like if we can build that number sense then fluency is just going to be a byproduct of having that strong number sense.

Christina: Absolutely.

Carri: And the [MathRack](#). Oh my gosh, the MathRack, the rekenrek. That has a huge aid and seeing the relationships between 5 and 10. I love the colors. I love how you can just, we toggle between sort of the 10 frames and the math rack with my students, or looking at how can we build this in different ways. So that they can kind of see, they can come up with their own connections. It's so much more meaningful when the child kind of can construct that learning, while being explicitly guided to it. But just when they can kind of see those connections themselves, as opposed to here's the connection, the brain is pattern seeking. So ultimately the teaching supports that.

Carri: So in speaking which, I incorporate the math talk so my student can share those connections, maybe he sees it one way and I see it another, yet we're both correct. As opposed to, okay, right answer, wrong answer. And I now definitely have that conceptual understanding of the progression for catching numbers sense, and now I'm just trying to build it in AB Initio, as opposed to going back years later and trying to build it in. So henceforth, from the ground up, we're working on that number sense. I'm so happy I have a 5 year old right now. I'm like, okay, you can get this, we can start it now, as opposed to going back and repairing things later. And they love the activities. It's just nice to see that mathxiety, I guess you, if you wanted to create a word, just dissipate, because we're building an authentic understanding of math, that are prescriptive to where the child needs those activities.

Christina: It's exactly what it should be, right?

Carri: Yes.

Christina: Like to me, I look back and think of my own education too, and it was great, but I didn't have that from the beginning and trying to come back as an adult basically and learn that stuff, was difficult and it was hard to persevere sometimes. Thinking like, man I should know this stuff, right?

Carri: Right.

Christina: It's very difficult and our students start to feel that way too. And so if we can do it from the beginning, it just makes, I mean, we all know it's better to start a great foundation than trying to come back and repair things afterwards.

Carri: Sure.

Christina: Right?

Carri: One of the reasons I really respect your work so much is that, you have said in courses, you give me an algorithm and I can solve it. So if you could solve it, it's kind of like, if it's not broke, don't fix it. But you have and you've gone back and you've created this the amazing [Build Math Minds](#) site, where you, really you, even though you knew how to solve the algorithm, the big part of it, you just really need to know how to have the students catch that number sense.

Christina: Yup. It's been a passion of mine. One of the things that struck me early on when you were talking about understanding the why.

Carri: Right.

Christina: There's a great book by Simon Sinek about, [Start With Why](#), and it's meant for this.

Carri: I love Simon Sinek.

Christina: Yeah, it's meant for business people, but it's so true in education. We need to understand why we're making these changes, why we're having kids do things this way. And I think that's been one of the hardest parts. And even helping parents with understanding the changes, we're showing them what we're doing, but we're not talking about why we are making this change.

Carri: That is absolutely, that encompasses everything I do as an educational therapist. If I don't have the understanding of why I'm doing something then I shouldn't be doing it, truly. The why is the biggest piece of why I'm an educational therapist. It's based on, it's looking at the cognitive skills and where the strengths are, where the challenges are and the academic skills and trying to bridge them together and build those pathways.

Christina: Absolutely.

Carri: Absolutely, why is huge.

Christina: Yup. Yup. One of the pieces I like to hear is if you have like a story of how this change in your teaching has impacted student learning.

Carri: Absolutely. Well as I mentioned about the worksheets, you know, they're becoming a thing of the past. So worksheets definitely becoming a thing of the past. And I sort of take the sneaky teaching approach to subtraction, now where we're using the Tenzi dice. [Tenzi](#) just great, you can do so many things with Tenzi. Using your games, I have this, I wish I had that. Or using, splat for example, or war from the Tenzi dice.

Christina: Yeah.

Carri: To build those connections, rather than assigning those fluency drills. So that's something that's definitely changed and I just see that as affect change so much. Kids love playing games with dice. Actually.

Christina: Well, even adults do.

Carri: Oh, they do! Grace Mutzabaugh, who created NILD, I had heard that she would always carry around dice in her pocket and in fact it was so funny, one of the mini courses I recently did, I think we were in a chat room doing one of the activities together. And I said, I always have Tenzi with me in the car whenever we're at dance, and I'll pull out the die, we'll do some activities in the hallway while we're waiting for the older sister, and then sure enough, one of the participants held up the Tenzi game. And so just having those right there, the speed of it, it just it works so well with helping to build the processing, helping to target visual discriminations.

Carri: Subitizing, is being able to, to see those dots and recognize immediately that 5 dots is 5. In fact, I love the word in itself, because in Italian a subito though means immediate. So we subitize, we take the "ize", and we add it to subito and then there you go, you have the immediate, you know, being able to immediately see that 6, 3 and 3, 6 or however the dots are configured.

Carri: So I love the dice game. So I just, that's definitely, just can see the excitement with the kids and they're doing math, and just trying to, sort of no stigma, no more. I guess that that could be my mantra. No more stigma. No stigma, no more with math. Just because there are so many beneficial ways, you know, with those activities to improve the operations.

Christina: Absolutely. I agree.

Carri: And cards.

Christina: Making it fun.

Carri: Card games, my students can tell you about the card games. I love them.

Christina: Yeah. When it's fun we want to do more of it, right?

Carri: Yes.

Christina: I mean even as adults. Just think of what it's like as an adult. If you don't enjoy doing something, you don't want to do it anymore. And so if we can make math enjoyable.

Carri: Yes.

Christina: Then we get more kids wanting to it.

Carri: Exactly. We need to remove that frustration. I don't want any child to feel- Steven Krashen is a researcher that I followed for years when I started out as a foreign language teacher and ESL as well, and he talks about that I plus one, and we want to reach kids at their level, but maybe one little step, just one little step above their head. And that's one of the beautiful benefits of being able to work with kids one on one, is that I can do that and now understanding the why of the activities. And definitely that I plus one is huge, because we don't want, if it's I plus 30, the frustration is going to be there, absolutely. But you want to push them to, not to work and to kind of help them see those connections but removing the frustration from the equation. No pun intended.

Christina: Oh that's awesome. So, all right, let's move into our last thing.

Carri: Sure.

Christina: We like to end with one piece of advice. One thing that you would suggest people try, or change, or do if they're wanting to make a change in their teaching.

Carri: Okay. 3 words, take your course. Take your course. Take it, take the course. I did [K-2 Number Sense](#). I can't wait for [3rd-5th. Number Sense](#), and the Fractions, offered this fall. The [mini courses](#) that were just offered were also absolutely fantastic. Repeat the mantra, number sense isn't taught, it's caught. And once you can sort of see, what you talked about in your courses that, progression of learning that see cognitively guided instruction progression, then the teaching practices will become reflective and that huge component of why, will be tacked in place. So it's just the number sense, building that number sense, it needs to come before the algorithms, that comes later. But first let's just target and number sense. And it really will make everything else make more sense and make it more obvious and conceptual for the kids.

Christina: Yeah. Number sense, I mean that's why, one of the reasons I created the course, like I'm not paying her to say that. But, one of the reasons I created that course was because it was so foundational. The number sense piece is the piece that if you don't have it right, then everything else just kind of falls apart, right?

Carri: Right, absolutely.

Christina: That solid base.

Carri: Yes. Yes. And the kids need to interact with the manipulatives. And the teachers need to know how to use the manipulatives too, which you, I know you have on your newsletter, you just published something or you republished it with how to use the [manipulatives](#).

Carri: And which ones do you recommend. And absolutely, the teachers need to sort of understand what, okay, great manipulatives, how can I use this most effectively?

Christina: Yeah, absolutely. So Carri has dropped a lot of great references and resources in this little session here and I will put everything on the show notes for this page, like links to Tenzi, information about the course. Most likely I'm probably going to release this podcast around the time the course is opening since you just gave a plug for the course, Carri. And people are going to want to be taking it, so we will have links to all of that, or the free

webinars that we do, if you can't take a full course, we always offer some free trainings as well. So we will link everything to the show notes.

Christina: And Carri, I just want to thank you so much for giving your insight into how this has impacted your own learning and your teaching, so thank you very much.

Carri: Thank you. It was such an honor to be here.

Christina: As I mentioned, all the links to things Carri mentioned are over at the show notes page, which is buildmathminds.com/25. One thing I did want you to know, is that Carri mentioned my number sense courses. I only opened up registration once a year, and it will be coming in October. Registration is open only for 2 weeks, so if you are at all interested in taking the course, you can join the wait list to be the first to be notified. You can find out information at buildmathminds.com/courses, and I'll also link to it at the show notes, buildmathminds.com/25.

Christina: These episodes are sponsored by the online trainings that I do for elementary educators. Each fall, I open up my number sense courses. I have one for PreK to 2nd grade teachers, and one for 3rd-5th grade teachers. These courses help you understand the foundation of number sense and how to help your students build their number sense. I'll be having a free training on number sense coming soon, and if you want to be notified when registration for the free training opens up, head on over to buildmathminds.com/numbersense.

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