



Conversation 2: Marilyn's Math Story

Length: 5:00

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[OPENING]

Patty: I'm Patty Clark. And this is the *Welcome to Math Class* podcast. I'm here with Marilyn Burns. Marilyn is a renowned mathematics educator, the founder of Math Solutions, and the author of more than two dozen books, all focused on improving math instruction in the classroom and improving the lives of students through math.

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Patty: Marilyn, tell us about your math story. How you became a teacher, and how you got to where you are today.

Marilyn: I became a teacher because when I went to college, which was a privilege of my generation that my parents didn't have, my mother said, "You can take whatever you want in college. You just have to graduate a teacher." She said, "You'll always have something to fall back on if you have to work for a living." And at the same time, I was always told I'm going to have to work for a living. So, it was kind of a confusing message. So, I'm off to college to become a teacher. Which probably I would say 75, 80, 90 percent of the women in school were there to become a teacher, a social worker or a nurse. And I became a teacher.

No particular rhyme or reason, but I obviously liked school enough to go to college. So, school seemed like fun, and I loved school supplies. I'm thinking there's a good side to this. I will be a teacher. I'll have access to construction paper of every color, pens, pencils, crayons, markers. It was sounding like, "OK, I'll do it." So, there I am becoming a teacher.

Patty: Why did you decide to become a *math* teacher?

Marilyn: Well, the other side of my story was that I was never somebody drawn to writing. I was a reader. I read and read and read but writing was very laborious for me. So, I said, "Huh, I'll take more math because you don't have to write all those papers. You just have to work the problems." So, I said, "OK, I'll be a math teacher." So, I can say to my mom, "I'm going to be a teacher. I'll be a math teacher." And I can say to my grandmother (who was thinking I should become an accountant, I don't know why), "I'll be a math teacher. I'm going to study math," like that would somehow please her. So, I'm into pleasing everybody. So here I am, I became a math teacher.

Patty: Marilyn, what was it like for you as a learner of mathematics?

Marilyn: I wasn't very good at learning math. I had been fine in school, but I realized once I hit my wall—my mathematical wall was calculus—it's like, "What is this about?" I had no idea. Calculus nearly did me in. But I didn't give up. I earned a degree in mathematics. And I think that the many experiences I had sitting in math classes in college while the professor filled up the board, I knew what it felt like—to feel really dumb. I had no idea; I'd copy everything down and then I would have to go back and try and make sense out of it.

I was using my usual strategy of "if it didn't make sense, just memorize it." I memorized theorems, corollaries, lemmas. So much of what I did, I had no real understanding of. But what I did have an understanding of is what it feels like to be unsuccessful, feel like I'm not

smart enough. What it felt like to be that way as a student in a class, which I hadn't experienced in elementary and high school. So, I made a vow. OK, I'm going to be a teacher. OK, I'm going to teach math. Please my mother, please my grandmother. And no student in my class is going to ever be made to feel like this. And can I do it? So that's sort of what launched my career.

Patty: So, what are some of the things that have changed for you?

Marilyn: So, I've had to change a lot of the way I think about teaching. So, it's not all driven by my telling them where to go next. But by them leading me as to where they might go next. My teaching has shifted a lot. I think that most teachers begin teaching the way we were taught. Because here I was teaching this ninth grade Algebra class. My whole class, I was talking, and I was writing on the board and once I said, "I don't know this feels like when I was in college and the professor was talking and writing on the board. Why do I think that just 'cause I'm young and friendly and smiling at them that it's any better?" So, I got really curious about how do I get kids to be the stars in the classroom rather than me being the star in the classroom?

So, everything shifted for me from, "How do I make myself the most important person in the room?" To making the students the most important people in the room. Knowing that I have a responsibility, I'm in charge. Like "I'm going to run this thing so we can all exist as a community together." But basically, it's all about how kids are thinking and reasoning and making sense. And then I became more and more curious. So even though I started my teaching career at the secondary level, I had so many kids who were so completely confused. Here I am, trying to teach Algebra, but they didn't really have a good sense of number and they got mixed up in doing this and they were always trying to figure out what I wanted them to do. And so, I kept going, curious about kids younger and younger and younger. Seeing, where does the problem start? And then I got very interested in about how younger kids think. And that has really changed my whole teaching career.

When I've told people I'm a math teacher, they always say, "Oh, you must be smart." There's something about math that has a mystery to it. That if you understand mathematics, you must be smart. I'm trying to break down that notion so that every student I teach feels that he or she has access to math.

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For more information, follow Marilyn on Twitter @mburnsmath and visit the Marilyn Burns math blog. You can follow Math Solutions at mathsolutions.com and on Facebook and Twitter.

This episode is part of a series inspired by Marilyn's book, *Welcome to Math Class*.

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