

# FROM STUDENT TO TEACHER— A FULL CIRCLE MATH STORY

by Dianne Talbot



*Diane is a GED instructor for the EASTCONN Adult Education Program. She has a Masters Degree in Education and is an alumna of the same program where she now teaches. Diane was named 2016 Educator of the Year by the Connecticut Association for Adult and Continuing Education (CAACE).*

Math was never a subject that came easy to me. I had to work hard to understand what was being taught. Many times I failed terribly, other times I would excel. As a child, I would try my best but would often get confused, discouraged, and give up. These struggles lasted through high school, so in my senior year I stopped out. I was convinced that would not be the end of my educational journey, but I didn't have a clear vision of where my desire to continue my education would lead.

After getting over that disappointment of not completing high school, I enrolled at our local adult education program, but I never got past the first class I attended. There was just a feel to the environment that was not right for me. A few years later, I signed up again for classes but it still didn't feel like the right fit. Looking back, I'm not sure why I persisted but I enrolled a third time at EASTCONN. This time I felt welcomed, comfortable, and a few months later I earned my GED credentials. My dreams now swirled around thoughts of enrolling in college, but by this time in my life, I was the mother of four children and I still had one child home full time.

A few years later, my youngest child was off to 1st grade and my phone rang. It was my GED teacher asking me if I was ready yet! She wanted me to come in and meet with their transition coach. I agreed it was time—time to continue my story. Community college was the first step in my plan of eventually getting a degree in education. I was not sure that it would really happen. I still had some work to do building my self-confidence. I had failed once and I was not sure that I could finish college.

I was advised to major in one of the core subjects, since it would be easier to meet all state board requirements for teacher certification. My first thought was to stay as far away from math as possible, so I settled on history. During my journey through college, as I took the classes required to meet the State Board requirements for certification, I did only the minimum requirements for mathematics.

I entered grad school just as Common Core was rolling out. During all of my methods classes, only Common Core methods were taught. I was shocked at the learning that was taking place in those classes. For the first

time in my educational journey, I was learning math conceptually in a way that math began to make sense to me. Not only was I learning it, I was learning how to teach it! I learned that math could be taught in a non-traditional way, using problem solving skills, hands on activities, and visual models. I could actually see the math happen! I began to realize that the confusion I had experienced as a child was grounded in the way mathematics had been presented to me: as procedures to memorize without understanding why the procedures work. Learning conceptually why the procedures work, by doing things like playing with manipulatives, helped me understand that there is more than one way to solve a problem. It changed my relationship with math. Now I was able to understand the whys and hows of procedures. I learned more about mathematics than I ever thought possible.

I completed my master's degree in education and was excited to use all of the problem-solving strategies that I had learned. I had done student teaching in a 3rd grade classroom and though I had received great reviews during my time there, I left unsure that elementary teaching was a good fit for me. I thought long and hard on where I wanted to go and what I wanted to do next before I made another decision. During that period of time, I reflected on my math journey and it brought me around to where I started.

By that time, EASTCONN was looking for a reading teacher for the upcoming school year, so I applied. During the interview I was asked if I liked math. My reply was, "I don't do it for fun." I had no intention of teaching math. However, a few months later I was teaching math. I knew I had the education and skills to teach math, but all of my training was for elementary and middle school and I wasn't sure how those problem solving techniques that I had learned would play out in an adult education class. To add to that, I did not see visual models, manipulatives, or the other strategies I had learned being used in any adult education classes.

Fortunately, during the first several years of teaching I was able to attend several workshops facilitated by Connie Rivera, (who currently serves as the Region 1 Representative for ANN). At those workshops, I learned that the skills and knowledge that I had learned about teaching math in a nontraditional way, using student centered problem solving strategies, works just as well in the adult education classroom as it works with the students I had taught formally in grade school. Connie introduced resources like the *EMPower* series and activities from websites that were geared towards adults. I was happy to see other teachers embracing the methods of Common Core and was excited to bring it into our adult education program.

My students responded very well to this way of learning. Students were out of their seats and learning math in hands on ways, working at math stations, using manipulatives, and best of all, tapping into their own intuition to approach problem solving in creative ways. Not everyone thinks or learns the same way, so I made sure the classroom was filled with many options. At first, some students would work independently on computers in the classroom while others would work through books, but the majority of students chose the active learning style. As time wore on, and the independent learners had time to observe the active learners, more and more students chose to join groups that were collaboratively working on problems. More seasoned

students would mentor students who needed some coaching. I was able to take a step back and observe as my classroom became more and more student centered. My math classes were really blossoming—then COVID came.

COVID has been a time of change for all. EASTCONN has had all of their classes online for almost a year now and we're finding ways to make it work. Math class for my students is still filled with options. They can pick up work packets or we can mail them out, they can follow along in my online Google Site Classroom, they can attend Zoom meetings several times a week, or they may choose to participate in all of those learning opportunities (most choose this last option). I'm still spending time helping my students to have opportunities to learn that math problems can be solved in many different ways. I want them to learn how flexible math can be and that it is okay to find the way that works best for them. The live Zoom classes are student directed where students ask and answer each other's questions. They are learning how to think through questions that other students ask. Often, I will remain quiet and let them all talk to each other about a problem. I give them time to think through these questions and when I hear them collaborating and reasoning together it is music to my ears because I know true learning and understanding is happening. When they are stuck I try to ask questions that get at what students are thinking. Often I find that students already have the means to solve the problem themselves, if I just ask the right questions. It almost always works.

This past year has certainly had its challenges, but it has also been a great learning experience for both myself and my students. How quickly we all learn and adapt to a "new" way of learning is amazing. At the end of the first full semester of learning online, a group of students felt confident enough to take the next step by signing up for the official test and they all passed!

I have always told my students to never give up and never stop learning, because I know how they feel. I tell them, "If I could do it then you can do it." It makes me so happy to see my students having fun in math class, making sense of math problems, and reaching their goal of getting their GED credentials just like I did. I feel like in some ways I've come full circle, having received my GED credentials here at EASTCONN and now helping other students to prepare for the GED exam in this same building. Even so, my math journey is far from complete. I know I have much more to learn and I'm excited about the opportunity to share my new learning with future students.

### **Are you part of AskANN?**

AskANN is a private discussion group for ANN members, hosted by the Literacy Information and Communication System (LINCS). ANN members use this discussion group to collaborate, share resources, ask questions, talk about math problems, and more. Visit <https://adultnumeracynetwork.org/Ask-ANN> for information about joining.