

Math Autobiography

By Noelle

**all names and identifiers have been masked/changed to retain anonymity.*

I was only in 5th grade when I started to spend my weekends at a tutoring center in order to get admission to a “good” middle school. Through thousands of questions, I was getting trained to ace multiple-choice tests on math, science and language arts. I was told that was the only way to have a better life. My mom and dad, both elementary school graduates, wanted me to go to college. Although they were unable to help with my school work beyond fifth grade, they did their best to support me financially and emotionally.

School life in Turkey was all about competition and passing exams to get in the next “good school”. My journey between schools and tutoring centers continued during middle school. Standards were higher and the pacing was faster. Teachers did not bother building conceptual understanding via proofs or at least giving us opportunities to explore math concepts. The cost of failure was high and I was always afraid to make mistakes in class. One math teacher I had in eighth grade, Mr. O, changed my perspective about school math. His lessons were very organized, structured, and to the point. He showed us the reasons why certain rules and algorithms always worked. I was an average math student until I met him. After having him I started helping out my friends on math and build confidence towards math.

The test-taking marathon didn’t end for me. Next and the hardest challenge was the 3-hour college acceptance exam that students could only take once a year. I had a dream to go to the best teacher training college but I had to rank in the top 1% among 1.5 million students. I had to study even harder and made it to my dream college, [masked] to major in Teaching Middle School Mathematics. [sentence removed].

I had to deal with a lot of advanced math courses during my college years. Having them in English was another challenge. I failed a math course for the first time in my life and it was a very discouraging experience. I asked for tutoring from several upperclassmen, attended the extra problem solving sessions led by graduate assistants and finally passed calculus I. My first math

class in college caused real anxiety that helped me to relate some of my students that may be having the same feelings towards math. However, having enough practice and not giving up was the cure for my anxiety. I realized that I was getting better every day and finally passed my class. That experience taught me a lot about having a growth mindset and not giving up.

I had two years of student teaching experience during my junior and senior years in college. The first year was heavily on observations and writing reflection papers, whereas during the second year, I also had teaching responsibilities.

After graduating from college in 2005, I moved to the US with my husband and started tutoring at an urban public school in [masked]. After tutoring and coordinating tutoring activities for three years, I was hired as a full-time math teacher. Tutoring experience helped me a lot as I was able to try and meet the need of individual students rather than teaching to the middle.

After completing my 4th year of teaching we relocated to [masked] because of my husband's new job. I started to work for a private school in [masked]. I taught a wide range of course from fifth-grade math to AP Calculus. Though I was hesitant in the beginning, (re) learning calculus for teaching helped me build confidence and changed my attitudes toward math.

Before the Common Core State Standards in Mathematics (CCSSM), teaching mathematics was more procedural than conceptual for me. I used to give steps to solve a problem and give several examples until students memorize or imitate the steps. I didn't ask questions about why or how I just introduced the steps and the answer. The focus was more on the results not on the process. However, memorization and imitation were no longer effective because it was almost impossible to answer questions in Partnership for Assessment of Readiness for College and Careers (PARCC) exam without understanding the concepts. I was in need of learning new strategies so that my students would be successful. I started searching for new techniques and professional development opportunities which helped me shift my understanding of teaching mathematics throughout the time.

I met with Carol Dweck's growth mindset theory through some readings and workshops that I attended and that made me believe that everybody can be a math person regardless of their math background and ability. I started to believe that as long as we create the need to solve a math

problem through real-life connections everybody will start thinking, trying and eventually they will come up with a solution.

Another opportunity that helped me change my way of teaching math was the [masked] Math workshop in the summer of 2018. I attended a session on building algebraic fluency through tape diagrams. That helped me understand the applications of tape diagrams to solve complicated word problems.

Dear Mr. O,

Thank you for making me believe that I can succeed in math as long as I do not give up and believe in myself. Also for not rushing us through problems and helping us understand why and how we did use certain rules and formulas.