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Chapter 2-5

From Preschool Dropout to College Professor: An Unlikely but Positive Path

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Growing up, I never expected to be a teacher. In fact, I did not even know what school was like, because at the age of four, I dropped out of preschool, never to return. Although my teachers were nice, I didn't like preschool. I didn't learn anything. I couldn't sleep during naptime because the other children were noisy. The bus driver was scary. The school nurse tried (and failed) to give me an immunization shot, and the teachers would not let me bring my baby sister for show and tell. Who would have thought? I returned home, happily believing I would never return to a traditional academic setting.

In 1995, my parents decided to homeschool our family due to a variety of reasons. Apart from my preschool teacher's recommendation, the public schools in south Louisiana were neither safe nor highly academic, and the private schools were unaffordable for our swiftly growing family. By then, there were three kids and another one on the way. My dad was against homeschooling at first, saying "Homeschoolers are weird." But after looking into learning resources and groups in the area, my mom had a revelation: "We can homeschool but not be weird." So, my dad agreed to let her try it, and we never returned.

I thrived in homeschooling, thanks to the organization and efficiency with which my mom ran our household. Our education covered all aspects of life. We would start the day with daily Mass, after which, nice elderly parishioners would praise us for good behavior in church and award dollars a couple of times a week to buy cupcakes at the local bakery. At home, I could read as much as I wanted—*Little House on the Prairie*, *American Girl*, *The Boxcar Children*, *Encyclopedia Brown*, and anything else from our weekly trips to the library. My mom gave us each a 10-book limit, yet we would finish these before the week ended and beg for a second trip. We could do art projects daily, sort candies (or laundry, silverware, Legos, or whatever else needed sorting), draw graphs, and

find change for a dollar by pretending to buy things. My mom would read aloud to us about science, weather, history, and religion. Each new era we learned about became a whole cultural experience. For ancient Rome, we would wear togas, bake focaccia bread, and study Latin. For Greece, we learned about the Olympics and read the myths of the gods. For Egypt, we studied hieroglyphics, made pottery, and saw a real mummy at a museum. These formative experiences during my early childhood instilled in me a love for learning.

As our family grew and my mom took on the additional responsibility of running the county homeschool association, she relied more on me to handle my education and assist my siblings. When I was in the sixth grade, my mom gave me textbooks and had me write the lesson plans. Once I started high school, I was on my own. She gave me the textbook catalog and said, “Figure out what you need to take to get into LSU (Louisiana State University).” While this task was daunting, it empowered me to take charge of my education and gave me experience designing my curricula, which would pay off more than I could imagine.

Throughout middle and high school, I tutored my neighbors, children I babysat, and siblings, but it never occurred to me that I might become a teacher. I liked math, Legos, and building things, and I wanted to be an engineer. My dad, an engineer who believed that was the only field worth pursuing, highly favored this option. By high school graduation in 2009, I was sick of being the oldest child. No longer would I have to teach myself and anyone nearby and figure out everything independently; I would be taught by professors who knew all the answers. Since I already knew how to study, college would be easy.

With this naïve view, I started at Louisiana State University, majoring in Mechanical Engineering. I was in for a rude awakening. There I was, in a classroom with up to 700 other freshmen, listening to a teacher and hastily taking notes from slides that flicked by so quickly. Many instructors were nearly impossible to understand. There were instructors whose handwriting could not be deciphered as we squinted at the chalkboard. Some instructors did not hold office hours, would not answer questions, and told us to “just read the book.” There was one professor who would call us “lazy Americans,” one who could not make eye contact and never saw a hand raised, one who played YouTube videos during class and then gave impossible homework, and one who would leave us unattended in the machining lab so he could skip out early for happy hour. This is not to say they were all bad—there were many instructors who did care about us, who wanted us to learn, who were happy to explain things, and whose handwriting was legible. I thank them heartily. But still, my classmates and I were struggling.

I started working at the tutoring center on campus to help underclassmen and make money simultaneously. Realizing I could make twice as much tutoring freelance, I hung flyers in the math and science buildings and soon had many clients. I would help my classmates for free—we were all in this together. Some professors were sure I was destined to become one of them. Several of them mentioned it offhandedly, but I did not believe them. What were they thinking? I was not going to be a teacher! I was going to be an engineer! That is why I came to college!

I had a few internships in the oil and gas industry, where most engineers in the Deep South worked. Although the fieldwork was fun, I did not want it long-term. Thinking I needed an advanced degree to do anything else, I signed up for graduate school at an R1 university (top level research institution) in the mid-south to research robotic prosthetics. I was thrilled—not to leave my family and move nine hours away—but for the chance to design prosthetic legs with a full-ride fellowship. I loved running and building things, and I saw this as an opportunity to help people with limb loss be able to run again. Once again, I was in for a rude awakening.

Suffice it to say that this experience opened my eyes to the darker side of academia. My altruistic vision of research as a way to make the world a better place was shattered. The environment and activities were not what I had expected, I was working around the clock to meet astronomical expectations, and the relationship with my research professor was confusing at best and traumatizing at worst.

Apart from daily Mass and my daily run, my solace during this time was in my teaching assistant position. That was where my boss believed in me, my students appreciated me, and I could unleash my creativity. The teaching professor I assisted, Dr. Tom Withrow, was a godsend. Tom was as big and bright as the sun, full of positive things to say, let me develop course material and teach the senior design prototyping lab, and praised all my efforts. He truly loved teaching and showed me the difference between being a teacher and a professor. He demonstrated that a professor can spout knowledge, but a teacher can bridge the gap between your brain and theirs. That is when I realized that I wanted to follow in his footsteps.

However, the conditions in the research lab worsened, crushing my dreams once again. After completing my master's degree, I began working on my Ph.D. research, or so I thought. But each week, when my research professor and I met to discuss progress, I was met with increasingly hostile comments. This came to a head when, in the midst of discussing a conference paper, he suddenly and unexpectedly announced that I should leave the lab, leave school, and leave the state.

I sank to the ground in shock. *This was not part of the plan. Not at all.* I had to cancel the National Science Foundation (NSF) fellowship. Still, I stayed until the end of the semester to finish my teaching responsibilities and tie up any loose ends with research. My lab mates and others in the department were sorry to see me go. They signed a farewell card and presented me with a bottle of mustard, my favorite condiment.

In April 2017, I started working as a mechanical design engineer for Universal Robotics, a startup that integrates vision systems and artificial intelligence (AI) with robots for materials handling activities. My job was to design claws for the robots, plan the cell layout, and do the math that nobody else wanted to do. My new boss was organized and efficient, my coworkers were intelligent and hardworking, and I once again had the freedom to be creative. As is typical for a startup, we were overworked and underpaid, but the fun we had and the memories we made will last a lifetime. I gained more experience in a year in that role than in the four spent in graduate school.

We often hired graduating seniors from Middle Tennessee State University's (MTSU) Engineering programs, and as an interviewer, I met the capstone instructor, Dr. Brian Slaboch. One day, he called me out of the blue and said, "We just had a professor quit, and the semester's about to start. Would you like to come teach here?" I was stunned and hesitant about another career change. "I just have a master's degree," I told him. "That's fine," he said. "Just come interview. I think you'll like it here." I agreed to come—just to see what it was like.

Brian showed me the labs, explained the newly accredited Mechatronics Engineering program, and discussed the courses I would teach: all classes I liked, plus senior design again, and I would get to develop their first robotics course! I started to get excited. I had not realized I could teach with just a master's degree. Here was a second chance.

I left the interview agonizing over a decision. I loved my current job and still had more to learn. Plus, I did not want to overload my coworkers, as it happened every time somebody left. Back at work, I sat in my car in the parking lot. *God, give me a sign of what I should do*, I prayed. Then I got out and walked into the office. As I stepped inside, my boss said, "the company's running out of money, and you need to find another job." That was my sign. I started at MTSU two weeks later, in September 2018.

Teaching was more fun than I had imagined. I loved stretching my brain with creative course design and intellectual conversations with fellow nerds. MTSU felt like home, full of people with whom I could relate. Serving a large percentage of nontraditional students, we had many veterans, technicians, and second-degree seekers. They were focused, driven, and dedicated, bringing so much to the engineering classroom. At 26 years old, I was younger than a quarter of my students, and they enjoyed having a teacher who was helpful, enthusiastic, and easy to understand. On my course evaluations, they would sing my praises:

"She deeply cares about each and every student."

"Came from industry with good knowledge."

"No matter what you need, she puts down her pencil to focus on you."

"Because of you, I am not a deadbeat."

"She was the best teacher I have ever had at MTSU."

Brian generously supplied me with lecture notes for two courses, and those years of lesson planning and curriculum design from childhood came in handy for the rest. I was surprised to receive minimal guidelines for course content, but what some might see as a hurdle, I saw as an opportunity. I was free to develop my material and teach students what they needed to know, unhindered by rules and regulations that might impede my efficiency or creativity.

After a year, Brian informed me that to teach permanently, I would need a Ph.D. Surely, graduate school would be easier the second time around, because with age comes experience and intellectual maturity. I already had an idea for a project: applying robot claw design techniques that I had used at the robotics company to develop upper limb exoskeletons for stroke survivors.

In the summer of 2020, I enrolled at Vanderbilt University as a graduate student researching under Dr. Eric Barth in Mechanical Engineering. Due to the COVID-19 pandemic, both universities went online, so I could effectively be a teacher at one and a student at another. I thrived in a research environment where my professor wanted me to succeed. Eric had a much more laid-back approach to research than my previous professor, and he gave me the freedom to reach my full potential. As a result, this dissertation project proceeded with far fewer hiccups than the former, and I finished in December 2023 with two hand exoskeletons for stroke survivors.

In contrast to the distaste I developed for traditional learning institutions as a toddler, the joys and challenges I experienced through homeschooling and higher education showed me that (1) there is more than one way to educate, (2) teaching is a talent, and (3) students can reach their full potential when learning is meaningful and others believe in them. Now that I have my Ph.D., I am not tethered to one university. I am qualified to teach anywhere or work for any company. But at MTSU, I have received endless appreciation from my students, support from my department chair, and camaraderie with my favorite coworkers. There is no setting outside of academia in which I would find such fulfillment, use math daily, and see the tangible difference I make in other people's lives. Being an educator is not just a job; it is a privilege. I wake up every day excited to go to work and see the transformation of students into engineers happening before my eyes. I know that God called me to be a teacher, and He called me to MTSU. So, until He calls me somewhere else, I'm here to stay.