

Balance: A Critical Variable in the Equation of Life

Why would an accomplished biomedical engineer at the height of her promising career decide to teach high school math? As a rising high school freshman getting ready to embrace STEM classes, I was intrigued. In late December, I sat down with the effervescent Dr. Subhadra Srinivasan who graciously agreed to share her journey with me.

Subhadra was educated in the highly competitive academic arena of India, where she earned her highly-coveted engineering degree in a male-dominated field. For Subhadra, this was a moment of accomplishment and pride after years of hard work and perseverance. In fact, for any girl aspiring to become an engineer or a doctor in a society where the bar is set really high from a very young age, it is no doubt a monumental achievement. Yet it wasn't until Subhadra immigrated to this country and became a mother that she realized she was missing one important variable to feel successful. Little did she know that she would walk away from her position as an Assistant Professor of Engineering at the prestigious Thayer School of Engineering to become a popular high school mathematics teacher. Subhadra's journey to strike a balance is a theme many contemporary women will identify with, especially those pursuing careers in STEM.

As a young girl growing up in southern India, Subhadra was surrounded by her parents and female teachers who encouraged and nurtured her love and passion for mathematics, which led her to pursue engineering and advanced math in college. There, she recognized that it was difficult to find female role models and mentors at the post-secondary level. "Apart from women being a minority in the field of engineering, especially in India, many did not have a work-life balance," she observed. Furthermore, she realized that there was a misconception that 'women are not as smart as the men are in mathematics,' but "my peers learned pretty quickly that I was good at what I did!" she recalls with amusement. After earning her bachelors degree in engineering, most graduates in India would code for a software company. Despite receiving a job offer from one of these companies, she chose to deviate from this traditional path to further her education. Subhadra applied and was accepted for the Ph.D program at Dartmouth's Thayer School of Engineering.

One of the first courses she took at Thayer was mathematical approximations and modeling. This course mapped her path for the next decade. “The professor who taught that class was highly demanding and the course was extremely challenging, but it was one of the best courses I ever took.” Inspired by the rigor of the class, Subhadra’s research naturally gravitated into the field of mathematical modeling, which explored different imaging techniques used to diagnose breast cancer. She secured her Ph.D. in Biomedical Engineering and decided to establish her career in the same field of research. Soon, she had her own lab, managed research assistants, and lectured at various conferences as an invited speaker. As her career flourished, Subhadra struggled within to find that perfect balance. She came to a realization that her job simply wasn’t fulfilling anymore because her sense of balance in her life had tipped. The variable which disrupted the equation was her newly-minted role as a mother. Her yearning to embrace motherhood was louder than her calling for the accolades of biomedical engineering.

Subhadra’s career path veered off again as she searched for that elusive balance in the equation of life. After leaving her faculty position at Thayer, Subhadra explored a variety of her interests before landing an opportunity to teach math at a local community college. Shortly after, Subhadra’s journey ends at her current position as a high school math teacher in Hanover, NH. She reminisces how she felt intimidated on her first day as she stepped into the auditorium filled with adolescent excitement. Subhadra did not ever think that she would be a teacher, since she had always thought she lacked the patience required to deal with teenagers. She was soon set at ease in the classroom and her search for balance was realized. “Once I started teaching math, everything else was fine. Math brings everyone together. We all know this language and it’s how I know my students, everyday through their work.”

Despite discovering that perfect balance Subhadra had been searching for all these years, she still laments that the hardest part of being a teacher was leaving her job at Thayer because she had met so many wonderful people there. Her parents in India who once supported her to pursue engineering have also struggled with her decision to teach and leave behind all that she had achieved in her career as an engineer. “They were definitely not happy when I quit my job as a researcher because they felt it was prestigious and that I already have a Ph.D. Teaching is one of the best things that has happened to me.”

Now in her sixth year as a math teacher, Subhadra does not regret leaving her research position behind. “If you go towards what calls you, eventually you’ll get wherever you want to end up and you will have fun in the process.” Although she left her career as an engineer behind, “engineering influences my teaching today. I teach mathematics not only for the beauty of it, but also its relevance in our lives.” Having been introduced to a STEM career at an early age, Subhadra recognizes that it afforded her an opportunity of independence, discovery, and most of all, time and flexibility she desired later in life. Subhadra Srinivasan’s career journey is a story of a contemporary female mathematician and a scientist who sought to strike a balance in her equation of life.

Saia Patel is an 8th grader at Crossroads Academy in Lyme, NH. Her favorite subjects are math, science, and humanities. She enjoys participating in math competitions, including MATHCOUNTS, AMC-8, and Mathleague. Saia has been invited to join the American Junior Academy of Science and will be inducted this year at its annual conference in Austin, Texas. Her writing has also been published multiple times in the *Valley News* through Young Writers Project. Her original poem was recognized and performed by the Vermont Stage for the annual Winter Tales show in Burlington, Vermont. Saia enjoys other activities such as reading, playing her flute, working towards her black belt in karate, and perfecting her Spanish speaking skills.