Teacher to Scientist and Back Again

Rachel E. Rigsby

Photo Credit: Sam Simpkins, Belmont University

Early Life

I always wanted to be a teacher. I remember as a young girl arming myself with chalk, an old-fashioned easel-style chalkboard, various books and supplies, and even a stick to use as a pointer and heading to my playhouse to teach imaginary students the basics of reading and math. I adored my elementary schoolteachers and couldn't imagine doing anything else. Summer was always too long; I was inevitably ready to go back to school by July. Long days were filled with reading, mostly mysteries,

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although any series had to be read to completion—classics like *The Boxcar Children*, Nancy Drew mysteries, and even books about the nurse Cherry Ames kept me entertained. I read short stories aloud to invisible ears, asking follow-up questions about characters and events. It was an enjoyable way to grow up in my rural Kentucky home.

I had many role models growing up. Definitely my parents were supportive and impactful. They worked hard and raised my brother and me without the help of grandparents or extended family. They taught me to pursue my dreams no matter what and that no amount of money could substitute for a satisfying career. Many of my teachers encouraged me as well. Early in elementary school, my teachers encouraged my love of reading. My first grade teacher chose more advanced books like *Charlotte's Web* for me from the school library because she recognized that I needed to be challenged. When I was a bit older, another teacher asked me to read to her class some days after lunch. While I'm sure it was a much-needed break for her, it allowed me to gain confidence in a leadership role. I of course idolized my teachers and wanted to be an elementary schoolteacher for several years.

Everything changed my sophomore year of high school. I walked into my chemistry class and sat in the back of the room (being a shy introvert who didn't like being called on in class), and I can clearly recall my teacher's first words. He claimed that he could assign course grades right then—those in the front would get As, and those in the back, well, wouldn't fare so well. I thought to myself, "Mister, I am going to prove you wrong!" And I did. I got an A and never looked back. I took AP chemistry and then physics with the same teacher, and I decided to pursue a chemistry major in college due in part to his inspiration. I had no concrete plans on what I would do with the degree. Originally from central Kentucky, I chose to attend Kentucky Wesleyan College in Owensboro, Kentucky. It is a small, Christian college not far from where I grew up, and, for a first-generation college student, it felt very safe. My life was profoundly affected by the caring faculty there, both in the sciences and in other areas. It was definitely the right place for me.

During my freshman year, I really questioned my decision to be a chemistry major—chemistry was hard, and it really wasn't as much fun as I thought it would be. I remember thinking, "Why exactly am I a chemistry major?" I was taking biology courses as well, and for a while, I considered a career in medicine.

My sophomore year of college was again a transition point for me. I knew I couldn't stand the sight of blood but started volunteering at the local hospital anyway. Passing out after watching an IV insertion procedure put thoughts of a medical career out of my mind. Additionally, I found myself enjoying my organic chemistry course. It was challenging, but I had always enjoyed solving puzzles, and it was exciting to see how chemical reactions worked. I found it very engaging to try to understand something I couldn't see. My questions felt answered. This was why I was a chemistry major. I finished my last biology course and felt good about continuing my chemistry major.

In my junior year of college, I discovered biochemistry. Studying the complexity of biological processes, especially enzymes and the reactions they catalyzed, was

awe-inspiring. I thought, "*This* is why I'm a chemistry major!" I was hooked. It was chemistry or bust. However, I didn't know what to do with my major.

When my professors started talking about graduate school, I didn't really know what that meant. I didn't know anyone who had continued their education after college, but my professors explained that I wouldn't have to pay for it due to the availability of graduate teaching and research fellowships. I began to consider applying to some graduate programs.

One of my professors, Dr. W. L. Magnuson, had a significant impact on my decision to pursue an advanced chemistry degree. He was a "tough love" kind of guy. One day he asked me if I had applied to any summer research programs; when I responded that I hadn't thought about it, he bluntly told me he would "kick my butt" if I didn't. Not wanting to disappoint, I applied for and was accepted to a National Science Foundation Research Experience for Undergraduates program at the University of Louisville. That experience taught me that I could do graduate research, but I didn't really want to live in a city like Louisville.

After returning to Kentucky Wesleyan College in the fall for my senior year, I took the GRE and looked at graduate programs in chemistry at the University of Kentucky and Vanderbilt University. Ultimately I was accepted to the chemistry program at Vanderbilt and moved to Nashville after receiving my bachelor's degree. During my final year of college, I served as a lab assistant for organic chemistry. Through these courses, I learned about managing students in the lab as well as how to grade with a rubric. Many of these experiences shaped the foundation of my own teaching career.

From Graduate School to a Career

At Vanderbilt, I joined the lab of Richard Armstrong, a renowned enzymologist, and worked diligently my first year to balance coursework and time in the lab. It was very challenging, but I felt academically prepared to succeed in my courses.

I met my future husband in my second year of graduate school. We decided to get married quickly rather than waiting until I finished school, partly because unlike undergraduate degrees, a graduate degree in chemistry didn't have a set time endpoint. We got married in August as I was starting my third year. At that point, I was finished with my coursework and was working full-time in the lab. This was helpful because it felt less intense than the grind of homework and studying, and I was able to build flexibility into my work schedule to be able to spend time with my husband. It was challenging, though, and took an understanding spouse to deal with some really long days and weekends in the lab when experiments were just not going the way I wanted them to. Overall, it was a very good decision to be married during graduate school.

I became focused on a desire to return to teaching and decided to pursue a career as a college professor. I was fortunate that my graduate advisor valued teaching and was himself one of the best teachers I had ever experienced. He allowed me to

participate in a Future Faculty Preparation Program offered through Vanderbilt's Center for Teaching. This program was invaluable and gave me opportunities to learn about teaching and faculty life. Experiences ranging from attending a Vanderbilt Faculty Senate meeting, sitting in on classes, and interviewing faculty at other local universities to being introduced to ideas of teaching gurus such as Ken Bain were instrumental in my decision to pursue a career in higher education.

As I finished graduate school and began looking at career options, I was fortunate to apply for several positions in the Nashville area. I was offered a job teaching general and biochemistry at Belmont University, which I happily accepted. The first few years were grueling but very fulfilling. I enjoyed being in the classroom, supervising undergraduate research, and most of the things that went along with being a college professor.

Becoming a Mom

My husband and I decided to wait to start our family until after graduate school and getting a full-time position. Around the end of my second year at Belmont, my husband and I started thinking about starting a family. Here we hit a roadblock. I didn't get pregnant and discovered some undiagnosed health issues.

We moved into a different area fairly quickly—adoption. After attending initial adoption seminars, we felt that domestic adoption was the right choice for us. We were open to the race and gender of our child, and after filling out a mountain of paperwork, getting background checks, and having our home inspected, the wait began. This was a very challenging time—often being sad or frustrated in my personal life but moving on professionally.

Thankfully, our wait was short, just over a year, and we drove to Mississippi to adopt the sweetest little African American boy you have ever seen! He was the perfect addition to our family, and as a preemie who at two and a half months old at adoption didn't weigh quite 8 pounds, he was a handful (Fig. 1).

I'm glad we didn't have our son until I had been teaching for a few years—the first few years were brutal! I would not have been able to survive new course preps and service expectations during those first few years had I had a little one.

Adoption presented obvious challenges in my personal life as I transitioned to being a working mother, but it also brought a unique challenge to my professional life. Colleagues I knew who were having babies typically planned a semester of leave and stayed home. As I learned, there was no planning with adoption. I had hoped for an ideal situation—getting placement in May so I could have the entire summer off with my new baby. What a dream!

It was not to be. We received the call that we had been chosen to adopt our son James on a Friday, drove to Mississippi the next Wednesday, and came home on Saturday. It was the third week of January, just after the start of the term, in my mind the worst possible time. So, I didn't take any time off, and my husband decided to initially stay at home. If I could change anything, it would be to take time off the first

Fig. 1 Rachel with James, the new addition to her family

few months with James. As difficult as it would have been to arrange to have my classes covered, I should have found a way to do it.

Thankfully, I had great colleagues who picked up a lot of departmental duties that first semester so I could focus on teaching my classes (12 hours' worth, a full load) and then go home. In truth, the semester was a blur as I adjusted to life as a working mom. As with many professional moms, James often came to Belmont as my husband and I juggled work and childcare. We handed him off many days in the hallway as I finished class or lab and headed home. I appreciated that my position did allow a lot of flexibility in my schedule so I could come and go as needed.

In future semesters, we had a variety of childcare situations. In the first year, we arranged a nanny share with a friend and had a nanny 2 days a week. For the next 2 years, James was in childcare not far from Belmont. Then, he moved to a preschool in the area. We periodically evaluated our childcare situation and made changes as James grew.

Making It Work

My work/life balance really shifted after we had our son. I found myself taking advantage of time management strategies and being as productive as possible at work so I could focus on being a mom at home. I kept an ongoing "to do" list on my desk so that even 10–15-minute chunks of time were used effectively. I rolled off of some nonessential committees and limited my time on email. One thing that helped with email was getting a smartphone—this allowed me to scan emails quickly on the go and delete unimportant ones so that when I did sit down at my desk, I could focus on what needed to be done.

Achieving a sense of balance was a struggle. I have found it helpful to set boundaries, as otherwise I feel constantly torn between home and work

responsibilities and not doing well at either. Currently, I make every effort to not check email or do any work between 5 and 8 pm when I am home preparing dinner and going through the evening routine. After James goes to bed, I try to catch up on anything urgent, mostly email and grading. My time spent working on weekends is also limited. I am often up early on Saturday morning preparing lectures or writing exams, but I have learned that relaxing and spending time with my family help me be rested and ready for work again on Monday.

I would say I have been lucky to not have experienced many of the obstacles I've seen others experience. Working at a liberal arts college and having the focus be on teaching rather than research are huge. I have a reasonably flexible schedule and don't have the pressure to pursue research funding. I have used resources from our teaching center and the support of a writing group to successfully complete publications. Also, we have many female faculty in the sciences at Belmont, and our chemistry department faculty ratio is 4:2 (female/male)! The environment is definitely family friendly.

One of the most surprising things I've experienced as a working mother in academia is the challenge of transitions, especially the transition from working mom to stay-at-home mom. This happens every May as I am off contract for 2 months. Every summer we pulled our son from day care/preschool, and I stayed home. It was hard! I needed the routine of work and a schedule to (honestly) not feel crazy, so I learned to add routine to our life at home during the summers. For me, it has always been easier to shift back into "working-mom mode" in August, but the transition at the end of May remains difficult every year. I think this is partly because every summer is so different—in the first summer, our son was still tiny and took two naps each day. In the next summer, it was only one nap, and by the third summer, naps were nearly gone—no more personal time during the day! On the bright side, though, no naps meant it was easier to plan day-trips without worrying about missing nap time. Now that James is in school, the summer is a much-needed break, and we enjoy going to the zoo or heading downtown to the library and eating ice cream at our favorite shop (Mike's Ice Cream) (Fig. 2).

Reflections and Conclusions

Being a mother is the most rewarding experience I have ever had. It is also by far the most challenging. A close-knit group of colleagues and the strong support of my husband make it possible for me to continue working. As a mother working in academia, I enjoy the flexibility of being able to stay at home during the summer. My working schedule is flexible so I can volunteer in my son's classroom and participate in a variety of activities with him. Having achieved tenure and promotion to professor, I feel successful professionally. If I could do one thing differently, I would have figured out how to take maternity leave. The first few months as a mom were much too stressful!!

Fig. 2 Rachel with her husband and son. Photo Credit: Tiana Lee

I feel very fortunate to have landed where I did. For others, especially those very early in their career path, I would recommend that you start early with planning—consider what type of institution you want to end up at (research vs. teaching focused) and where geographically you want to end up. If it's important to you to be near your family when you have children, that may take considerable planning. Think about research vs. teaching postdoctoral avenues and how to make yourself a great candidate for your dream job. Talk with your spouse about both of your career plans and how those will fit in with having a family. Finally, consider options for taking a break. I know women who have taken untraditional routes—one PhD biologist taught high school for a few years and then took a few years off while her children were very small. She began teaching night classes at a community college before moving back into a full-time position. Anything is possible with enough planning.

A career in academia is certainly full of challenges. Being a working mother adds another layer of complexity but also many, many rewards. I am very happy to enjoy the life of a "Mom the Chemistry Professor."

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About the Author

Education and Professional Career

2000	BA Chemistry, Kentucky Wesleyan College, Owensboro, KY
2005	PhD Chemistry, Vanderbilt University, Nashville, TN
2005–present	Professor of Chemistry, Department of Chemistry and Physics, Belmont University, Nashville, TN

Honors and Awards (Selected)

2012 Belmont Student-Athlete Advisory Committee 2011–2012 Inspiration Award

Rachel is a member of the American Chemical Society (ACS) and an active member of the Tennessee Academy of Science (TAS). The Belmont University ACS Student Chapter, which she serves as a faculty co-advisor, has received chapter awards since 2008. Rachel also serves on the TAS Executive Committee as the managing editor of the *Journal of the Tennessee Academy of Science*.