

## The Musings of a Student in Engineering

So here she was, pacing back and forth in her tiny apartment agonizing over a basic question in her technical communications course. Her professor had assigned the class a proposal on a current engineering issue they were passionate about. What was she passionate about? She had decided on engineering in high school because she loved math, science, and problem solving. But problem solving was not an engineering problem, it was an engineering process. One cannot write a fifteen-page paper on solving the problem of problem solving. Once you decide on engineering, you have to decide what to do with it. She had just realized she had absolutely no answer to that question.

Her dream was always to find joy in her work, maybe even be passionate about it. But when it came to listing passions, none of them seemed related to engineering. She loved food, cooking, and baking – inside in a gas oven and outside on a Coleman stove. She grew up watching her dad bake bread and her grandma throw ingredients together to make something delicious. Sometimes she cooked by recipe, other times by feel. Her mind wandered to a time she was camping on the beach listening to the Pacific Ocean lap the sand and watching the blue flame of the Coleman cook eggs and veggies. By this time, she had quit pacing and was lying on the floor staring at the ceiling. Maybe she should have instead attended Le Cordon Bleu. She peeled herself off the floor to press coffee. *Focus, you have to write this assignment.* But she was no longer thinking about the assignment, she was wondering what she was doing in her major. Unlike other mechanical engineering students, she did not come to UW--Madison to study engineering with the purpose of improving the efficiency of the internal combustion process in turbo-charged V8 engines. So why did she? Wasn't finding the purpose part of the education?

But here she was in her junior year of Mechanical Engineering floundering with that exact question. Maybe the kitchen was where she was supposed to be.

“Mom, I can’t figure this problem out!” All of a sudden she was back in her childhood home doing math homework on the kitchen table while her mom made dinner. Her mom would come over and gently guide her in the right direction towards finding “x.” Her mom always told her that math was awesome because there was only one right answer, no kind-of-right answers. In fact, her mom, an electrical engineer herself, had always been a huge inspiration to her. Her mom had found her path -- what she wanted to do with her major. In fact, that’s how she met her dad. There may be multiple ways to get to the answer, but not multiple answers.

The coffee had steeped and was now in a mug on the wobbly table in her apartment. She sat cross-legged on a chair staring out the window watching the cars go by. Her mind wandered to the upcoming career fair and the questions she would face about what she was looking for in a job. *Engineering experience! Why isn’t that enough?* She popped open the cover of her Macbook to peruse the list of attending companies, only to be overwhelmed. How does someone know which companies to apply to when they themselves do not know what they are looking for? She got up again, this time to start dinner. The handle to the pan was loose, so she snugged it up with her Phillips head while pre-heating the oven: dinner tonight was rice and beans with baked Brussel sprouts. *Life is crazy. All this second-guessing... why can’t I be sure!* She wanted a job that would make money, but she didn’t choose it for the money. She would not have taken differential equations and thermodynamics if she did not want to be an engineer. She had attended engineering camps in middle school and high school and had fallen in love with problem solving. However, the camp challenges were not major issues; they were how to get your LEGO® Mindstorm robot from Point A to Point B.

The smell of her dad's bread radiated from the oven. She had been in the kitchen taking a break from middle school homework and was getting a straw for her water bottle. But the bottle was too tall and the straw kept falling into the bottle. Grabbing a rubber band from the cabinet, she wrapped it around the straw and then wound it around the rim of the water bottle. Her dad chuckled from his post by the oven, "Honey, good thinking!"

Her friend's knock on the apartment door brought her back to reality and her boiling rice. She could not believe she remembered that instance, it had been so minor. "What are you making?" her friend asked, and the conversation slowly slipped from food to math and the career fair to school and the research proposal assignment. While her friend listened patiently, she complained, "I don't even know where to start because I don't have any passions that overlap with engineering!" They sat down with their dinner to watch Chef Lidia Bastianich on Create TV, one of the cooking shows she used to watch growing up. For Christmas three years before, her sister had given her *The Science of Good Cooking*. She read it like novel, learning why bread rises and how best to cook a steak. The show finished and homework started.

After listening intently, her friend stated, "If you are so passionate about food and problem solving, why don't you work for an engineering company that makes kitchen appliances?" The idea was so obvious she could not help bursting into a fit of laughter. *Of course! That was the answer.* She skimmed the list of companies at the career fair again and began browsing websites. With Sub-Zero, it was fascination at first sight.

She applied, she interviewed, and she ultimately was offered and accepted a co-op position with Sub-Zero Design Engineering. Finals came and went, winter break flew by, and in January, she was working at Sub-Zero. After putting in eight hours, she went home, opened up

her cheap apartment freezer, realized her frozen bananas were melting, and moved them nearer the evaporator after turning down the temperature.

Later that year, she and her friend were once again in the kitchen and this time making homemade pizza. While spreading the dough over the baking sheet while the oven pre-heated, she realized she had succeeded. No, she had not graduated, but she had discovered her purpose in graduating. She had found her passion in an engineering job where she had the privilege to perform calculations, run tests in labs, make renowned refrigerators, and work for a company as passionate about food as herself. She suddenly stopped herself before dumping the entire jar of sauce onto the pizza dough. Now *that* is success.

Her friend inquired, “So how’s the job?”

She replied with a grin.

“Nothing more to add?”

She quipped, “I would, but the food would get cold.”

They sat down to eat and watch more of Chef Lidia Bastianich. Lidia’s refrigerator was a Sub-Zero.