Dan Hoekstra
CEP 817: Learning Technology Through Design
Michigan State University
May 1, 2016

The following is a fictional story about how the Stanford Design model can solve an educational problem. While my wife is indeed smart and my students are sometimes bored, all characters appearing in this work are fictitious. Any resemblance to real persons, living or dead, is purely coincidental.

<p style="text-align:center">When the Teacher Becomes the Learner</p>

The sun was setting as I finally pulled into the driveway. I parked on autopilot and dragged myself inside - every inch of my body was tired. As I tossed my keys on the counter, I was greeted by my wife. "How was your day honey?" she asked. I shook my head and replied "I just don't get it! No matter what I do, my student just are not interested! They talk with each other, text on their phone, or fall asleep. Even the ones that try to listen and follow directions look bored! I don't know what to do. Maybe I'm just not cut out to teach." My wife looked at me and what she said changed my world. "Well, have you asked your students what they think?" Uh, say what? Ask my students what they think? Get their opinion? What a simple idea. No, what a brilliant idea! I didn't know it at the time but that was the day that I became a designer.

EMPATHY: *"Could a greater miracle take place than for us to look through each other's eye for an instant?"* - Henry David Thoreau

The next day, I watched my students closely. I mean I really watched them. What were they saying to each other? What was being communicated through their body language? What made them more animated? It was like I had never actually seen my students before! Throughout the rest of the week, I ventured into the rest of the school. I peeked into classrooms. I sat in the lunchroom, I squeezed through the hallways during passing time. Walking in my students shoes was not a natural process for me but regardless, it was an eye-opening experience. I was finally beginning to understand what my students were feeling and experiencing in my classroom and in school in general. However, I still hadn't directly spoken to my students about their experiences. I decided to start by asking them to complete a brief survey. It mostly included questions regarding their schedule, their activity level at school and how they learn best. I followed this up by sitting down with several of my students and discussing what a day at school felt like. We also dreamed about what a day at school could feel like.

I was excited to share all my newly discovered findings with my wife - after all, this was all her idea. However, after I spent nearly an hour spewing forth my immense understanding of my students, she said "That is great honey but….what does it all mean?" I felt myself deflate a bit and I just stared at her. She went on "I mean, have you figured out the problem? What do your students need and how are you going to provide it?" Hum. At first I wanted to tell her to mind her own business but I quickly realized she was right - yes, again. While I was making progress, I wasn't there yet. It was now time to deeply examine the problem.

DEFINE: *"Most controversies would soon be ended, if those engaged in them would first accurately define their terms, and then adhere to their definitions."* - Tryon Edwards

A day later, I sat down with my observation notes, survey results, and interview transcripts and reflected on what I had learned. I wanted to make sure that I was beginning to really understand my students and what school meant for them. It was time to focus my empathy findings and to figure out what was at the heart of the problem. Perfect! Except that it wasn't - I just kept rereading my notes and I wasn't sure what to do next. That evening over dinner I updated my wife on my (lack of) progress in defining my problem. After thinking for a minute or two, she filled me in on an activity that her boss had her use on a project a while back. It was called "The 5 Whys". Basically, this involves just asking the question "why" in regards to your situation. Then, you keep asking it again and again - yup, around five times - to dig to a deeper level. Again, so simple yet so effective! I found myself looking at my wife in a new light. These ideas were so good yet so simple! I was having trouble deciding if I had married a genius or if perhaps I was just a bit dim to not think of these ideas first. Probably both are true. We started "The 5 Why" during dessert. "Why do my students hate school so much?" seemed like a good place to begin and we worked from there. After several "whys", the root causes of my problem began to emerge. Now I was cookin'! There was just one issue. Now that I knew the problem, I needed to come up with a solution.

IDEATE: *"Nothing is original. Steal from anywhere that resonates with inspiration or fuels your imagination."* - Jim Jarmusch

I was all over this task - wife's brain not needed! I would just brainstorm some ideas! After all, I have my students brainstorm sometimes. However, since my classroom brainstorming sessions are not always the most helpful, I decided to Google "brainstorming" to see what information is out there. Immediately, I got some good advice. I found that for brainstorming, quantity trumped quality. The idea is to get out as many ideas - both good and bad - as possible. There is no right and wrong at this point. Perfect for me! I also read that while brainstorming, it is good to be visual. Therefore, my list of ideas turned into a mind mapping activity. I had color-coded circles and lines everywhere! It was very impressive.

I wanted to show my wife that I have some good ideas too so I strutted over to the couch to share my brainstorming sketches. I had even highlighted a few possible solutions. Maybe I was a genius too! She looked over my notes and solutions and gave me the required "Great job honey!" but I could tell she wanted to say more. With a sigh, I said, "Ok, out with it." My wife continued, "Well, you did a nice job coming up with ideas but you haven't given it much time." I looked at her like she was crazy. I couldn't help it. What was she talking about? I just spent like an hour on this! She went on, "What I mean is that you need to let these ideas incubate. Let your mind unconsciously work for you." I didn't really know what to say. All I could think about was a chicken sitting on an egg - how is that helpful? However, my wife hadn't lead me astray yet so I tried to give her the benefit of the doubt. "Oh" I said, "Good idea." I immediately returned to Google and searched "Incubation." To my defense, I found a lot of talk about chickens and eggs. However, I also found this on Wikipedia: "Incubation is defined as a process of unconscious recombination of thought elements that were stimulated through conscious work at one point in time, resulting in novel ideas at some later point in time." Ok. At least this settled one thing: my

wife really is a genius. Over the next few days, I did some more brainstorming (this time with a few coworkers) and I let my ideas incubate. Sure enough, thoughts, ideas and connections popped into my mind at the strangest times! In the shower, during the middle of the night, while I was teaching. I started carrying around a little notebook so that I could capture these inspirations. By the end of the week, I had a lot of good ideas (and a few pretty bad ones)! However, a few possible solutions shone brighter than the rest.

PROTOTYPE: *"Whatever good things we build end up building us."* - Jim Rohn

It didn't take a genius to know what to do next (so I left my wife out of it for a moment). I knew that I now needed to put my best solutions into practice. I needed to create a lesson that would have my students engaged, interested and eager to learn more. So I got to work. I sat down with all my notes and sketches that had accumulated over past week or two and I began to create my next lesson. After all these days thinking, I was excited to finally make something more concrete. I just knew that I would soon create the perfect lesson. However, after working for a bit, I got stuck. Luck would have it that my wife walked in as I was reclining in my desk chair gazing up at the ceiling. Not wanting her to know that my creative genius had ground to a halt, I informed her that I was just letting things incubate some more. While I'm not sure she believed me, she let it slide. When she saw what I was working on, she exclaimed, "Nice! Your prototype is looking great!" I thought, "A prototype? That sounds pretty cool!" but instead said "Yeah, it's a start but it isn't perfect and I need to get this thing right! This is a lot of pressure." Once again, my wife came to my rescue. "A prototype doesn't need to be perfect. You just have to jump in and start

doing. Don't worry if things aren't as polished as you would like - there will be time to make changes later. Think of your prototype as a rough draft." Sure enough, that did the trick. Instantly, the prototype process seemed less intimidating and the pressure was off. As a result, my prototype started coming together faster than ever. Before I knew it, my prototype was done. But was it any good?

TEST: *"I have not failed. I've just found 10,000 ways that won't work."* - Thomas A. Edison

The day had finally come to test out my new lesson. I was a bit nervous that it would be a total flop and to be honest, I was quite sure that it would have some major issues. Regardless, I was looking forward to finally getting some feedback. I felt that my new lesson went pretty well and my students seemed more engaged than usual. Over the next few days, I talked with several of my students about the lesson. While they liked many parts of it (and seemed appreciative that I was really trying to help them), they also had suggestions. A lot of suggestions. At first, I had a bit of trouble accepting their advice as I felt pretty protective of my lesson. However, after hearing similar suggestions, time and time again, I began to accept them. After all, I truly wanted to improve my teaching. I wanted to succeed. Even with some criticism flowing in, I felt that things were heading in the right direction. I was becoming a better teacher.

CONCLUSION:

I would love to say that now my students come frolicing into my classroom each day. However, I cannot say that. What I can say is that things are better. My students are more engaged, other teachers are watching what I am doing and I am once again happy to be a teacher. But, there is still room to improve. I continue to talk with my students so that I can understand them better and I continue revise and test my lesson prototypes. Usually, each one is a bit better than the one before it. Sometimes, it misses the mark. Will I ever reach the final version? Will I ever create the perfect lesson? Will I ever be the best teacher I can be? I would like to think so but my wife says no. There is always more to learn. There are always ways to improve. So I will.