

My name is Diama Norris and I am a non-engineer member of the Tulsa Fab Lab Development Team who was able to check out the Boston Fab Lab in 2008 and help introduce the concept to Tulsa.

Fablab is the brainchild of Neil Gershenfeld at MIT's Center for Bits and Atoms which is housed in MIT Media Lab. The MIT media lab is where as a graduate student from there describes "as a place where square pegs that can't fit in round holes go."

Surprisingly enough, not everyone here is a scientist. About one-third of the students here are an unusual mix of humanities ranging from psychology and sociology to anthropology. Upon walking in, your senses are immediately blasted by an Ideo-like setting where there are drawers upon drawers of legos and everything you can imagine to build or prototype anything. It's full of color, interesting stations, dimension, and a huge built- to- scale sewn elephant hanging in one corner courtesy of a fablabber abroad. This is a place to create and if you weren't creative before, you can't help but want to dream something up and create it right here. It's a hub of invention. It's exciting and ripe for every kind of possibility. One station is called "Lifelong Kindergarten" whose lifelong goal is to create a world full of playfully creative people, who are constantly inventing new possibilities for themselves and their communities.

Two particular projects of interest include a computer clubhouse after-school center aimed at low-income youth to express themselves creatively through new technologies and the fantastically awesome drawdio which is a pencil that draws music. You draw musical instruments on paper and play them with your fingers. One other thing I should mention of the Media Lab is that we were shown something called a 3-D printer. I was blown away by this, even though my engineer husband tells me this is not new technology and is quite standard prototyping equipment. Still, I thought it was pretty neat and it was new to me. Some of the examples ranged from a small globe of the world, to a gargoyle to a tiny chess piece about a half inch tall. All this technology, all this experience, what could bringing Fab Lab to a community do? If I'd been exposed to this in high school or as a child, my track might have been completely different.

After our visit to the Media Lab, we continued on to the official Boston Fab Lab housed at the South End Technology Center (SETC). Many of the fablabbers are low-income youth that are motivated to make a difference in the community once they have an experience in the Fablab. The lab also sees a rich blend of cultural diversity, people from all walks and ages. The lab itself is basically about 600 square feet and houses about 20 computers as well as some basic prototyping equipment that includes a laser cutter, lathes, CAD/CAM design and programming tools, circuits and microcontrollers, 3-D machines , minimill, vinyl cutter, and molding and casting equipment. It's essentially a factory in a box. After some overview of the rules and the history of this Fab Lab, my colleague and fellow team member, Micah Kordsmeier and I were left to our devices of creating something in the Fablab.

With the help of our wonderful host Sherry Lassiter, program manager for the Center for Bits and Atoms, we were able to design our project from concept to creation. We used some basic drafting software which was surprisingly easy to use, but took some time to perfect our creations because we

were making 3-D creations that required tabbed slots which required detailed measuring – something I like to avoid, but managed. I like to say that I purposely designed the wobble in my 3-D star. After that, we prototyped it on cardboard on the laser cutting machine which is also really easy to use. You're supposed to prototype it at least 2x on cardboard before you move onto acrylic or material of choice. However, whenever you send something to machine you have to watch because there's a slight risk of fire which happened to me at one point. However, it was nothing that a spray bottle couldn't put out. Micah's creation was pretty perfect and he experienced no fires. However, he did have to recut a few times on his acrylic. We, unfortunately, didn't have time to make circuits. Maybe I'll get to do that here someday.

After two hours, the Fablab started to fill up with people. One older woman in particular came down and sat next to me. She was impressed with my creation and wanted to know how she could do it. She had been taking computer classes since June and after learning, was encouraged to teach what she has learned. She's still teaching but wanted to also take advantage of the Fablab. Part of what I haven't mentioned is the Learn 2 Teach, Teach 2 Learn concept which is pretty simple. You teach what you just learned. Currently, the fablab in Boston has had tremendous success with this especially among the youth fablabbers. My next step was to teach this willing student who I had just met what I had just learned. It all happened pretty organically and it was pretty exhilarating. Ultimately, every Fablab looks different for every community. For us, it's cutting out the pattern to see what we can create here.