

## When We Design for Disability We All Benefit

by ted.com

I'll never forget the sound of laughing with my friends. I'll never forget the sound of my mother's voice right before I fell asleep. And I'll never forget the comforting sound of water trickling down a stream. Imagine my fear, pure fear, when, at the age of 10, I was told I was going to lose my hearing. And over the next five years, it progressed until I was classified as profoundly deaf.

But I believe that losing my hearing was one of the greatest gifts I've ever received. You see, I get to experience the world in a unique way. And I believe that these unique experiences that people with disabilities have is what's going to help us make and design a better world for everyone -- both for people with and without disabilities.

I used to be a disability rights lawyer, and I spent a lot of my time focused on enforcing the law, ensuring that accommodations were made. And then I had to quickly learn international policy, because I was asked to work on the UN Convention that protects people with disabilities. As the leader of the NGO there, I spent most of my energy trying to convince people about the capabilities of people with disabilities. But somewhere along the way, and after many career transitions that my parents weren't so happy about --

I stumbled upon a solution that I believe may be an even more powerful tool to solve some of the world's greatest problems, disability or not. And that tool is called design thinking.

Design thinking is a process for innovation and problem solving. There are five steps. The first is defining the problem and understanding its constraints. The second is observing people in real-life situations and empathizing with them. Third, throwing out hundreds of ideas -- the more the better, the wilder the better. Fourth, prototyping: gathering whatever you can, whatever you can find, to mimic your solution, to test it and to refine it. And finally, implementation: ensuring that the solution you came up with is sustainable.

Warren Berger says that design thinking teaches us to look sideways, to reframe, to refine, to experiment and, probably most importantly, ask those stupid questions. Design thinkers believe that everyone is creative. They believe in bringing people from multiple disciplines together, because they want to share multiple perspectives and bring them together and ultimately merge them to form something new.

Design thinking is such a successful and versatile tool that it has been applied in almost every industry. I saw the potential that it had for the issues I faced, so I decided to go

back to school and get my master's in social design. This looks at how to use design to create positive change in the world. While I was there, I fell in love with woodworking. But what I quickly realized was that I was missing out on something. As you're working with a tool, right before it's about to kick back at you -- which means the piece or the tool jumps back at you -- it makes a sound. And I couldn't hear this sound. So I decided, why not try and solve it? My solution was a pair of safety glasses that were engineered to visually alert the user to pitch changes in the tool, before the human ear could pick it up. Why hadn't tool designers thought of this before?

(Laughter)

Two reasons: one, I was a beginner. I wasn't weighed down by expertise or conventional wisdom. The second is: I was Deaf. My unique experience of the world helped inform my solution.

And as I went on, I kept running into more and more solutions that were originally made for people with disabilities, and that ended up being picked up, embraced and loved by the mainstream, disability or not. This is an OXO potato peeler. It was originally designed for people with arthritis, but it was so comfortable, everybody loved it. Text messaging: that was originally designed for people who are Deaf. And as you know, everybody loves that, too.

(Laughter)

I started thinking: What if we changed our mindset? What if we started designing for disability first -- not the norm? As you see, when we design for disability first, we often stumble upon solutions that are not only inclusive, but also are often better than when we design for the norm.

And this excites me, because this means that the energy it takes to accommodate someone with a disability can be leveraged, molded and played with as a force for creativity and innovation. This moves us from the mindset of trying to change the hearts and the deficiency mindset of tolerance, to becoming an alchemist, the type of magician that this world so desperately needs to solve some of its greatest problems.

Now, I also believe that people with disabilities have great potential to be designers within this design-thinking process. Without knowing it, from a very early age, I've been a design thinker, fine-tuning my skills. Design thinkers are, by nature, problem solvers. So imagine listening to a conversation and only understanding 50 percent of what is said. You can't ask them to repeat every single word. They would just get frustrated with you. So without even realizing it, my solution was to take the muffled sound I heard, that was the beat, and turn it into a rhythm and place it with the lips I read. Years later, someone commented that my writing had a rhythm to it. Well, this is because I experience conversations as rhythms. I also became really, really good at failing.

(Laughter)

Quite literally. My first semester in Spanish, I got a D. But what I learned was that when I picked myself up and changed a few things around, eventually, I succeeded. Similarly, design thinking encourages people to fail and fail often, because eventually, you will succeed. Very few great innovations in this world have come from someone succeeding on the first try.

I also experienced this lesson in sports. I'll never forget my coach saying to my mom, "If she just didn't have her hearing loss, she would be on the national team." But what my coach, and what I didn't even know at the time, was that my hearing loss actually helped me excel at sports. You see, when you lose your hearing, not only do you adapt your behavior, but you also adapt your physical senses. One example of this is that my visual attention span increased. Imagine a soccer player, coming down the left flank. Imagine being goalkeeper, like I was, and the ball is coming down the left flank. A person with normal hearing would have the visual perspective of this. I had the benefit of a spectrum this wide. So I picked up the players over here, that were moving about and coming down the field. And I picked them up quicker, so that if the ball was passed, I could reposition myself and be ready for that shot.

So as you can see, I've been a design thinker for nearly all my life. My observation skills have been honed so that I pick up on things that others would never pick up on. My constant need to adapt has made me a great ideator and problem solver. And I've often had to do this within limitations and constraints. This is something that designers also have to deal with frequently.

My work most recently took me to Haiti. Design thinkers often seek out extreme situations, because that often informs some of their best designs. And Haiti -- it was like a perfect storm.

I lived and worked with 300 Deaf individuals that were relocated after the 2010 earthquake. But five and a half years later, there still was no electricity; there still was no safe drinking water; there were still no job opportunities; there was still rampant crime, and it went unpunished. International aid organizations came one by one. But they came with pre-determined solutions. They didn't come ready to observe and to adapt based on the community's needs. One organization gave them goats and chickens. But they didn't realize that there was so much hunger in that community, that when the Deaf went to sleep at night and couldn't hear, people broke into their yards and their homes and stole these chickens and goats, and eventually they were all gone.

Now, if that organization had taken the time to observe Deaf people, to observe the community, they would have realized their problem and perhaps they would have come up with a solution, something like a solar light, lighting up a secure pen to put them in at night to ensure their safety.

You don't have to be a design thinker to insert the ideas I've shared with you today. You are creative. You are a designer -- everyone is. Let people like me help you. Let people with disabilities help you look sideways, and in the process, solve some of the greatest problems.

That's it. Thank you.