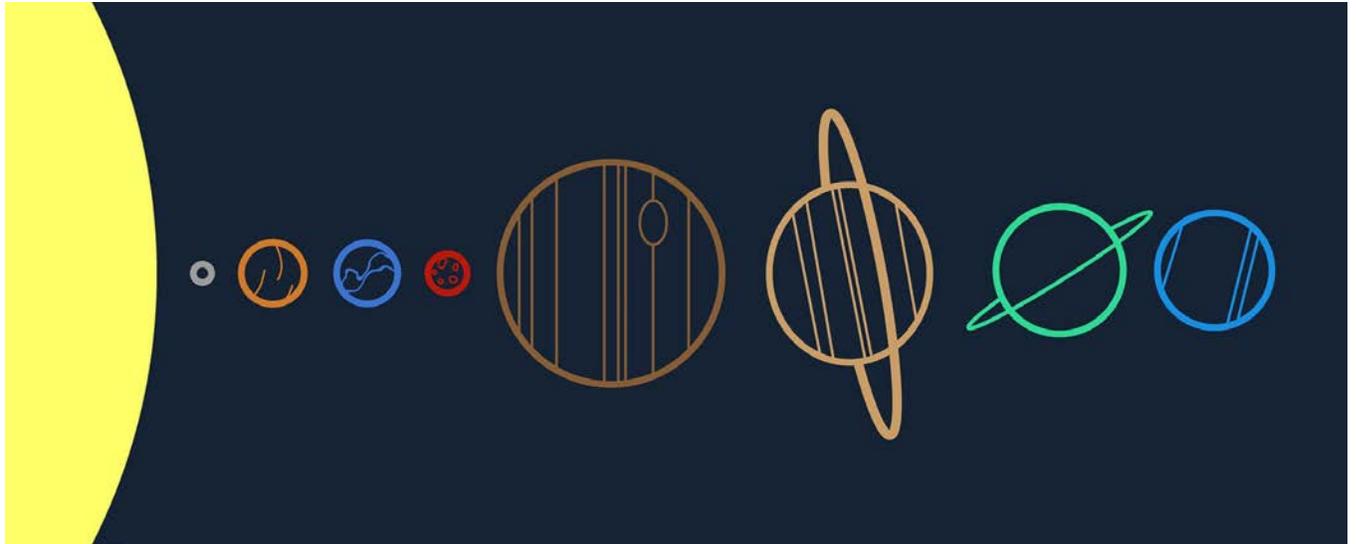


Beyond Design Thinking: Why Education Entrepreneurs Need to Think in Systems

By [Amy Ahearn \(Columnist\)](#)

Dec 22, 2017



[Jeffrey R. Young](#) · Feb 28, 2018

For the last few years, design thinking has been in vogue. I've worked for three years as a member of the team designing and running +Acumen courses. In 2013, we launched an ["Introduction to Human-Centered Design course"](#) with IDEO.org which has since enrolled over 100,000 people.

Yet, we're also increasingly seeing a complementary methodology—[systems thinking](#)—gain traction among educators, entrepreneurs and investors. Systems thinking offers a necessary antidote to some of design thinking's blind spots by taking a holistic view of complex social challenges—rather than just building new solutions that address symptoms of a problem, but not root causes.

Side-by-Side:

Design Thinking & Systems Thinking

Design Thinking

USER-FOCUSED: prioritizes deeply understanding the problems of a core group of users

SOLUTION-ORIENTED: culminates in a prototype for a solution that can be tested with real people

ASPIRES FOR DELIGHT and USE: works to build solutions that meet the needs of real users

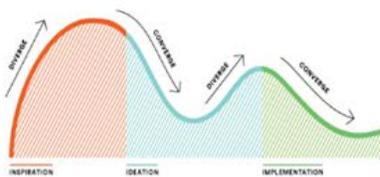


Image Credit: IDEO.org

BOTH!

THOUGHTFUL: both emphasize understanding problems before building solutions

NON-LINEAR: both prioritize gaining input from people and then iterating upon your ideas in a cyclical fashion

INNOVATIVE: both look for new approaches based on previously undetected needs or patterns

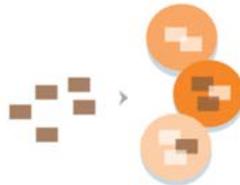


Image Credit: The Omidyar Group

Systems Thinking

SYSTEM-FOCUSED: prioritizes understanding the factors and dynamics that make up a complex problem

PROBLEM-ORIENTED: focuses on developing a nuanced understanding of a problem through the creation of a systems map

ASPIRES FOR HEALTH: works to build solutions that do not create unintended consequences but instead foster healthy dynamics

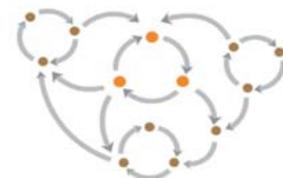


Image Credit: The Omidyar Group

Chart by Amy Ahearn

In 2017, +Acumen co-developed a new online course on [Systems Practice](#) with The Omidyar Group. After observing over 7,000 people work through the course over the last few months, I've come to sense that the education sector is ripe for these methods. Any entrepreneur or funder working in education can tell you that designing solutions that actually work and gain traction with teachers and schools can be incredibly complicated. If you don't tread carefully, you can introduce new apps, tools or programs that have unintended consequences—or worse, exacerbate a problem you intended to solve.

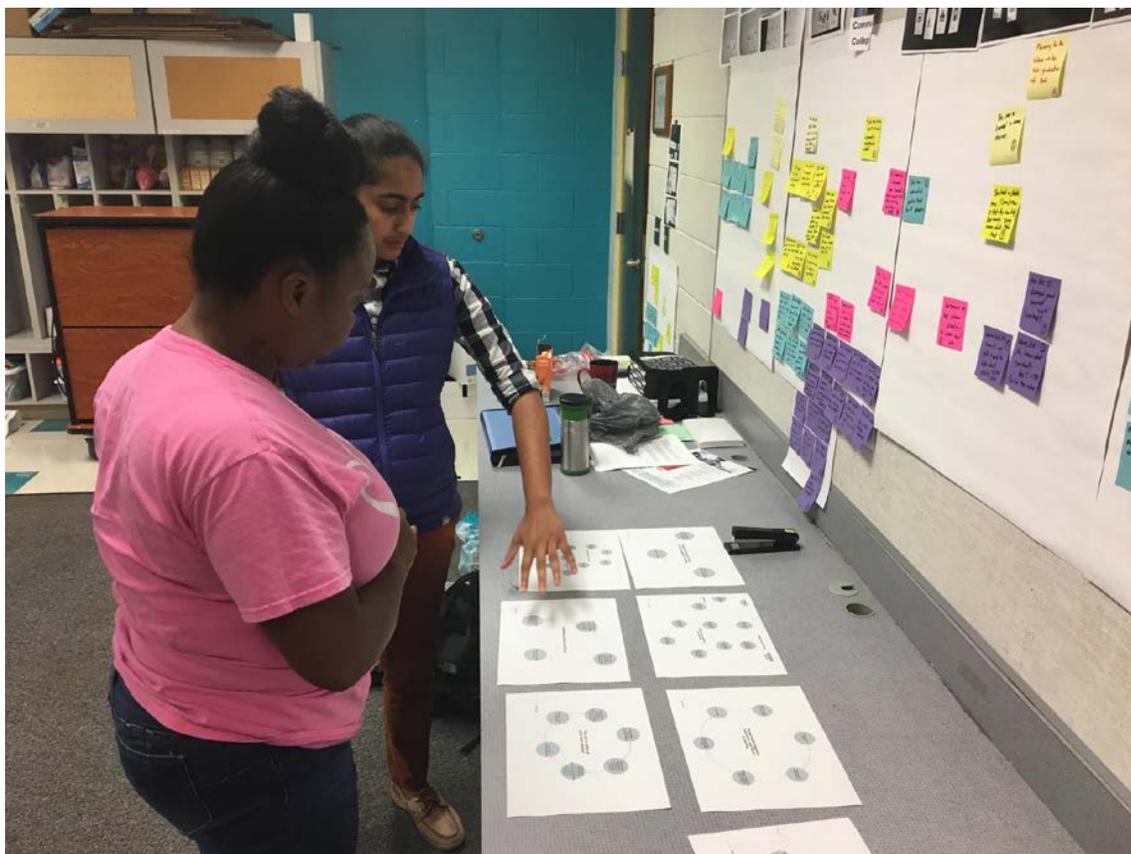
Take the case of the [One Laptop Per Child](#) project that shipped sturdy laptops to schools around the world, but failed to address other dynamics—like the need to train teachers, create locally relevant curricula, and address electricity shortages in rural schools.

Systems thinking is not a silver bullet to prevent these kinds of flops, but it is an approach that can help educators, funders and entrepreneurs think more strategically and holistically about the challenges they're treading into from the outset. It's a participatory method for developing a collective and nuanced articulation of how factors come together to create persistent problems—so that people can better identify the right opportunities for well-designed solutions.

Using Systems Thinking to Address Early Childhood Trauma in Rural North Carolina

Vichi Jagannathan and Seth Saeugling are two former teachers who recently founded [Rural Opportunity Institute](#), a social innovation lab to design solutions for families who have untreated trauma in rural eastern North Carolina.

As Teach for America corp members, Vichi and Seth saw that many of the challenges their students faced stemmed from deeper issues of poverty, abuse, and drug addiction. They shared a desire to do something more to address the adverse effects of trauma that followed their students into early adulthood.



Jagannathan shares initial “loops” with a local parent and gets feedback on what assumptions are incorrect and what stories are missing.

After working with Microsoft and the Tipping Point Foundation in the Bay Area, they raised seed funding, networked with other educators and nonprofits, and returned to eastern North Carolina, landing in Edgecombe County thanks to the public school district's openness to innovation. The pair spent two months doing a design sprint where they interviewed more than 50 parents and childcare providers. These interviews led to useful insights about the challenges parents faced, but Vichi and Seth sensed a need to go a level deeper.

"We believed in the human-centered design process and had seen positive results in the past, but we sensed the outcome could easily become a 'touchpoint solution' that might address a particular facet of trauma, but wouldn't take into account the deeper reasons why these problems existed," Seth explained.

"We are lucky to have support to do this crucial research & development work to understand our local context deeply before we have to 'build' solutions. We understand how rare this is, and feel a sense of responsibility. Most organizations, especially nonprofits, are stuck in a grant cycle that does not allow for the time and resources to really understand root causes," Jagannathan said.

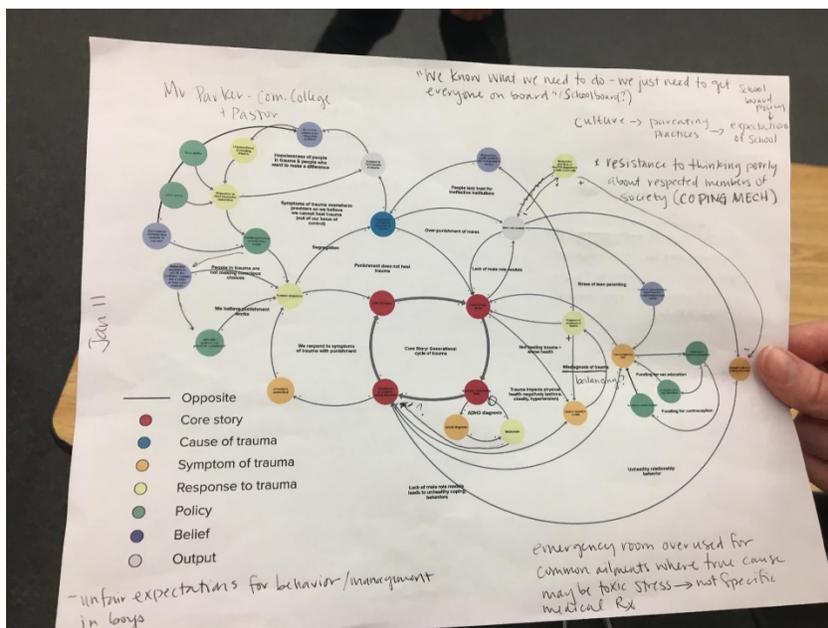
Vichi and Seth held multiple community workshops where they collectively mapped the factors involved in perpetuating cycles of intergenerational trauma in rural communities. They brought together everyone from the local school principal to the sheriff to pastors to grandparents to gain a more complete picture of all the dynamics that sustained intergenerational trauma.



Saeugling sharing context with the local "design team." Over 45 community members showed up to the most recent meeting to give their input on the rough draft of the systems map.

“Through this work, we saw that a vicious cycle was emerging where the community was over-punishing people in trauma—specifically young males,” Seth found, “Systems thinking helped us understand that trauma is literally showing up everywhere in our rural community. Parents in trauma have a really hard time building a strong, secure attachment with young kids. Then preschool kids who experience trauma and toxic stress end up showing signs of what appears to be ADHD but is not when they get to school. Kids in K-12 have problems with executive functioning and lack the skills to be strong learners. As teenagers, kids who have experienced trauma have higher stress levels and so turn to negative coping behaviors like drugs, gang activities, and sex in attempts to lower those stress levels. These coping behaviors are actually solutions to unaddressed trauma. So trauma becomes interwoven into so many of the health and educational challenges that people in our community face.”

All of this may sound logical, but pulling these factors together into a nuanced narrative that a diverse array of people agree on is no small feat. Importantly, a systems thinking process is anchored by the design of a visual systems map, which everyone involved can react to and use as a launchpad for conversation—rather than pointing at people in the room and attributing blame, they can point to factors on the map to tell a more complex and accurate story of how well-intentioned actions sometimes perpetuate negative results.



A rough first draft of their systems map, oriented around the “core story” of intergenerational trauma.

Ultimately, Vichi and Seth will use the map to identify “bright spots” in their system where positive change is already occurring, or where small interventions could have the most significant potential to change dynamics. For example, two pilots they’re considering are a restorative justice program that could be implemented with the local sheriff’s office, or a new screening program for students who seem to suffer from ADHD, but might in fact have experienced trauma. Seth Saeugling

Systems thinking helped us understand that trauma is literally showing up everywhere in our rural community. *Seth Saeugling*



Community members, including parents and community college students, reacting and responding to a rough draft of the systems map.

“If we just used design thinking from the outset, we could have built a new program and new services and improved them indefinitely,” Seth explains, “We would have crossed our fingers and hoped they would lead to long-term changes and improvements. Instead, systems thinking is helping us put a thoughtful, intentional, and rigorous strategy around our work to attack a complex problem that shows up in a lot of different places in a lot of different ways.”



Jagannathan leading an “upstream/downstream strategic analysis” where community members identify the root causes and impacts of different themes that were identified during interviews. Above, for example, Jagannathan is talking through the generational cycle of teen pregnancy.

Systems thinking is not an easy process. It requires patiently collecting input from stakeholders and time to synthesize how individual factors tie together into larger dynamics. Many organizations and entrepreneurs might feel like having the time and energy to step back and engage in this big picture work is a luxury they can't afford. Ultimately, however, to unlock solutions to some of education's thorniest challenges like segregation, inequity, and digital divides, it may pay off to find new methods to work not just harder, but smarter, from the outset.

Amy Ahearn ([@amyahearn11](#)) is an Online Learning Manager for +Acumen and a graduate of Stanford's Learning, Design and Technology Masters program.