Learning to Lose Control: How We Failed Face First in a Participatory Change Model that Actually Works

By Danielle Clemmer, Katharine Clemmer, Cara Esposito, Katie Laskasky, Robert Sheffield

Capacity. Agency. Self-determination. And, above all, ownership: the grails of systems change most sought after by social innovators and change agents eager for true and lasting impact. But the philanthropists, officials, experts, and leaders on the frontiers of our most urgent public problems well know how painfully elusive and fleeting each inch of progress can be. And, that any sorely won step forward is even more challenging to sustain.

Systems are intransigent. Built to last. Durably engineered to do what they do. And, happy to weather any change effort. And the most broken systems are the most obdurate of all. They endure our most earnest and best-intentioned change efforts with their values and operations intact.

And so sustainability and ownership have become our watchwords. The reality of our most entrenched problems demands problem-solving methods explicitly focused on advancing these twin tenets of change; methods capable of addressing complexity and which permeate change beyond the leadership rungs, equipping every individual in a system to own and carry solutions forward through their work and values.

We've been working our entire careers to fix math education—and we think we just might have hit upon something promising. Everything started to click once we embraced a participatory problem-solving approach, ushering in a new level of collaborative progress, both with the educators we serve and in our grantee-grantmaker relationship.

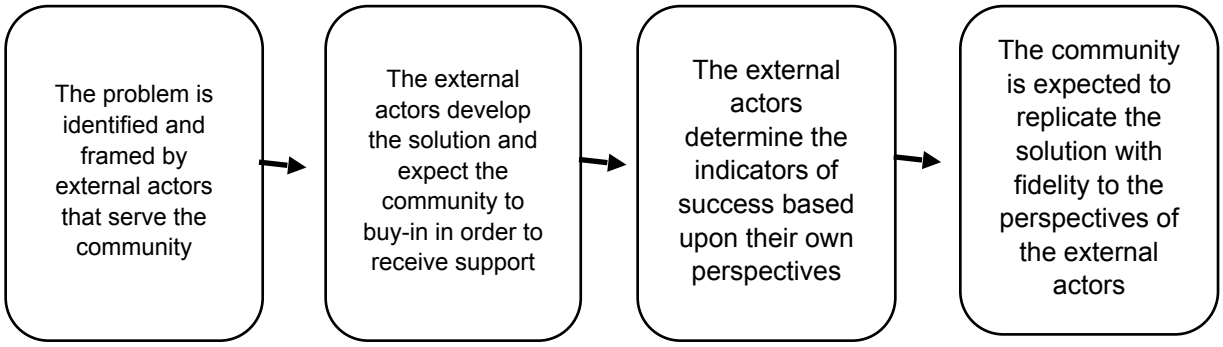
In this article, we'll explore how our small but mighty team of school-based educators, university-based teacher preparation experts, non-profit consultants, and a small family foundation, over seven years, failed face forward, shifting from a flawed top-down, hierarchical approach to a promising problem-solving model called Collaborative Solution Discovery—a model originally developed by NASA/Lockheed Martin systems engineer Dr. William Cutler over the course of a career solving complex problems in aerospace engineering, including leading work on the International Space Station.

The heart of Collaborative Solution Discovery is participatory problem-solving in a way that fosters the ownership of every individual involved. And in the school systems where we've been working, that sense of ownership is translating to impact, and most importantly sustainability.

We're excited to share our story because this problem approach, forged from the engineering mind and tempered in the education landscape, is yielding lessons that we believe translate across silos and fields with applicability to a range of complex systems problems. Our hope is to shorten the learning curve by laying our mistakes on the table.

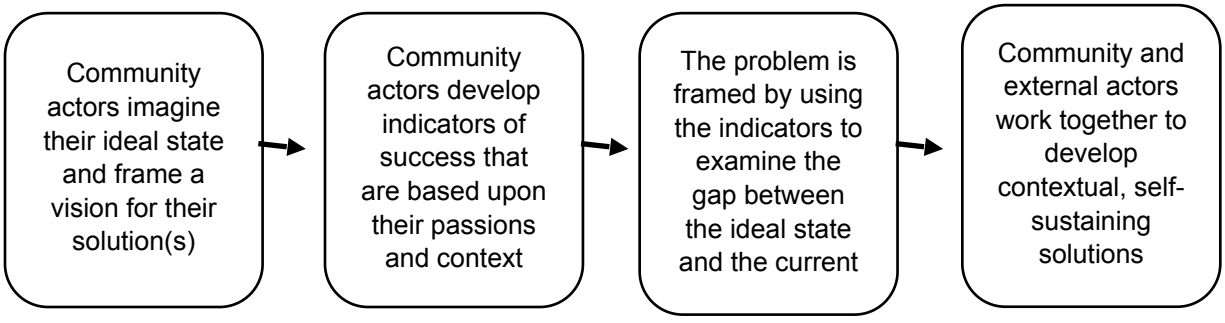
The lessons learned and shared here are anchored in one core epiphany: **we simply can't solve the complex problems of the communities we serve through top-down, externally driven solutions**. Decades of false progress has taught us that well. We, like so many other external change agents, drew on our research and expertise to bestow on communities solutions they could replicate… but not solutions that were authentically their own, informed by their own unique goals, pain points, and contexts. In our past work, we followed the all-too-typical model:

Externally-Driven Change Model



Our epiphany led us to a new paradigm: one that leverages human interactivity and creativity while reimagining problem- and solution-ownership. The Collaborative Solution Discovery problem-solving approach accounts for and embraces the ambiguity and uncertainty inherent to complex public problems. It seeks contextual, diverse pathways to solutions that are grounded in the wisdom of the community implementing them. Most importantly, it equalizes the power dynamic between the community and the external change agent exemplifying the "with not to" ethic, by fundamentally reengineering how the two interact with one another and the problem itself.

Collaborative Solution Discovery Change Approach



As you read this article keep in mind two key principles of adopting a participatory problem-solving approach. To succeed at this it's vital to:

1. Do the hard work necessary to develop community-owned solutions that represent a local vision of success
2. Develop problem-solving routines, steeped in the values of participatory models, to embed the process into the communities served

Our Context, Our Problem

We've devoted ourselves to righting one of the most widespread problems in US public education: stubbornly low K-12 public school math performance and achievement.

Improving math teaching and learning in the United States is a complex challenge with no clear path forward. Despite countless improvement efforts and transformational change initiatives, no one has really made a dent—as evidenced by the United States' performance on national and international mathematics assessments. US students continue to score in the middle of the pack among countries tested on the National Assessment of Educational Progress (NAEP, 2019), the Program for International Student Assessment (PISA) (Organization for Economic Co-operation and Development (OECD), 2015), and Trends in International Mathematics and Science Study (TIMSS) (Provasnik et al., 2016). Most approaches focus on boosting funding and implementing yet another new externally driven intervention or solution to nudge growth. This route often works for a time, temporarily shifting outcomes and kindling cautious hope, but once the funding or program ends, the success ends, too. We're just not seeing the sustainability vital to actual impact.

In our years of capacity-building work with school-based educators, we hear all too often—especially among teachers and school administrators—doubt that their voices and wisdom are actually informing key instructional initiatives and decisions to improve the quality of teaching and learning. The obvious result is a lack of buy-in, let alone ownership, of whatever comes down the pike. Often these professionals are unfairly maligned as "apathetic". It should surprise no one that this dynamic leads to failed sustainability of improvement. And like so many other teacher developers, we too have long fallen short of producing sustainable change.

That failure and frustration is what spurred us to question the traditional dynamic of top-down, externally driven change and to rethink our interactions with teachers. We learned that our expertise needs to be repositioned. Our failures have led us to conclude that participatory structures, processes, and routines are ideal vehicles for surfacing sustainable, community-owned solutions. Participatory structures ensure that voices are actually heard, channeled, and acted upon. Where once there was counterproductive lip service, now there is additive

contribution. This shift requires capacity builders to divest power to the community, interact as equals, and foster the conditions necessary for the community to self-determine its own pathways to solutions.

Philanthropic leaders have an especially important role to play. In philanthropy, "participatory grantmaking is both a power-shifting ethos and a process that places the communities a foundation aims to serve at the center" (Gibson, 2018). Gibson (2018) goes on to say, "Participation isn't just a means to a particular end; it's an outcome itself. By engaging in a participatory grantmaking process, peers have the opportunity to increase their knowledge and leadership about issues, build relationships with others, and ultimately, deepen their sense of agency to determine the priorities of their lives" (pg. 12). And from our experience, we've learned that process and routine are often the critical missing ingredients in participatory endeavors that fail to thrive. Developing and prototyping participatory processes and routines stands out to us as a promising opportunity for future philanthropic investment strategies.

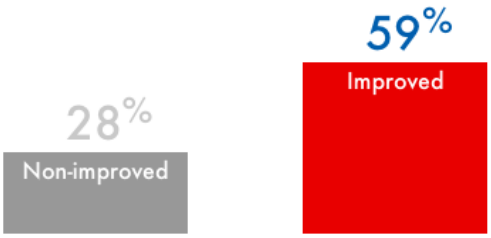
Our Road to Success and Failure

It's human nature to seek out quick fixes. And quick fixes in our sector usually means shiny, one-size-fits-all solutions adopted unilaterally by senior leadership to bandage over the problem. These short-term solutions provide quick gratification but struggle to hold up to the inevitable fluctuations and incongruities of a complex system. In education, this often looks like teachers asking for curriculum materials like textbooks or professional development to address a problem. Administrators can then approve a quick acquisition to satisfy the request instead of addressing the deeper, systemic issues causing the problem in the first place. However, continuing to fund piecemeal requests is expensive and, with short-lived results, not sustainable.

When we began our math capacity-building effort in 2013, leaders from a local K-12 school district came to us for help supporting teachers as they learned to design, implement, and assess instruction to meet the recently adopted Common Core State Standards for mathematics. The standards were new to teachers, and the district administrators worried about current math achievement scores dropping even lower across the system. In response, we implemented a K-12 math initiative: a district-mandated solution that taught teachers a math teaching and learning framework grounded in best practices for math instruction. Our approach was teacher professional development and instructional coaching while fostering a culture of continuous improvement across the system.

The initiative included a rigorous impact study by an outside evaluator to analyze the student achievement growth attributable to our intervention. After three years in that district—from

2013-to 2016—our work showed a demonstrable impact, yielding the student math learning growth we sought. We measured student achievement data on state standardized tests and teacher practice to report impact and progress. Results showed great success in overall achievement as well as with closing the achievement and gender gaps. Data showed students' math achievement improved in classes taught by teachers who improved their math instruction by successfully implementing research-supported teaching practices. 59% of students taught by these teachers met or exceeded the math state standards. In classes where teachers did not improve their instruction, only 28% of students met/exceeded standards (SmartStart Evaluation & Research, 2016). However, after we left the school district that growth evaporated. There was no sustained impact on teacher practice, collaboration, and student learning at any grade level.



We learned that with our help, teachers could change practice in ways that led to higher student achievement, but that without our sustained presence, the system would default back to producing its predictable outcomes. Sustainability eluded us.

As we focused on the problem of sustainability, we finally recognized what was obscured by our own lens of expertise. Sustainable change processes are inherently participatory. We quickly recognized that we needed to deepen the participation of teachers and school administrators. We were familiar with models like Sherry Arnstein's Ladder of Citizen Participation and recognized that our initiative's model bordered on stakeholder tokenism or even nonparticipation. After a hard look at our work, we set a non-negotiable goal of attaining genuine ownership, or "Citizen Control," as Arnstein called it (Arnstein, 1969). Now we just had to figure out how to get there.

Through trial, error, and perseverance, we identified a participatory model with the potential to address our sustainability problem. Collaborative Solution Discovery (CSD) is a participatory problem-solving approach that provides a roadmap for untangling complexity to find solutions that actually work, accommodate unexpected change, and benefit from stakeholder ownership, and thereby affecting sustainable solutions (Cutler, 2019). While originally conceived of as a systems engineering problem-solving approach by NASA/Lockheed Martin aerospace systems engineer Dr. William Cutler, we partnered with Dr. Cutler to adapt CSD for education contexts. To ensure complete stakeholder contribution with movement towards team ownership, our problem-solving collaborations follow this process:

1. **Imagine the Ideal**: Suspend reality and describe individual ideals and immediate needs. Contribute passions/joys within research recommendations to refine collective ideal for system
2. **Determine the Gap:** Compare ideal to current reality across the system to identify problem focus
3. **Develop Solution Options**: Seek, analyze, and select options based on local context
4. **Make Real-time adjustments**: Use multiple perspectives, unintended consequences and interaction data

(Laskasky, Clemmer, K., & Clemmer, D., 2020)

Our discovery of CSD sparked a sea change in how we see our work with school-based educators. Instead of directing every stakeholder across the system to follow a single approach, we embraced the mindset that everyone is a leader of their own contexts and classrooms. We posited that to build capacity, we needed to provide a roadmap for stakeholders to contribute to and own their success regardless of the context or role of the individual. That gave us a theoretical process that exemplified participatory values, but we still needed sustainable routines to operationalize it.

Developing Participatory Routines

In the fall of 2017, we partnered with a diverse 25,000-student urban southern California school district to develop and pilot routines to model, replicate and sustain the Collaborative Solution Discovery process. After three years of working together, the district stakeholders are now fully driving the change process using CSD, and so far our external evaluation shows that the impact appears to be sustaining (Laskasky, Clemmer, K., & Clemmer, D., 2020). We're stepping back and things are holding together. At four of the district's schools, teacher-administrator teams have fully embraced the problem-solving mindset core to CSD and are self-sustaining their change efforts within their existing school structures, without any support from us or others. Seventeen other schools are on track to do the same by June 2021.

At the heart of this success was developing, testing, and refining well-articulated, straightforward routines for the three phases of CSD that our school and district partners could put into action.

Routine 1: Imagine the Ideal

The first routine is focused on eliciting the interests, concerns, values, priorities, fears and aspirations of each stakeholder. The key output which, when satisfied, would constitute resolution of the issue in question for that stakeholder. From stakeholder input, a collective definition of success is constructed which, in aggregate, expresses the qualities of outcome to

be delivered by any acceptable solution. These qualities guide the design process for the various solution options and provide the basis for selection criteria of a solution.

Routine 2: Determine the Gap

A common mistake is to take someone else's definition of success as the "right problem" to solve. Perhaps just as frequently, the qualities of outcome from various stakeholders will be in conflict. Resolving those conflicts by various creative means is the real meat of CSD. To identify the right problem, co-construct a complete and accurate description of what we want the system to do, and not do, in order to address the problem. Analyze real world data and explore the extremes of "What if?" in all directions. Discover the qualities of outcome that have been missed entirely yet turn out to be important once they are discovered as the process moves forward. The definition of success is a living document, to be continually updated throughout the process.

Routine 3: Develop Solution Options

We next determine the method of searching for solution options based on the local context that will create a menu of solutions with high certainty to yield success. This sets up the creative process within the CSD that produces the solution. A menu of solution options can be reasonably presumed to contain at least one effective solution; better, the menu contains several and is reasonably concise so the selection process can be conducted expeditiously. An effective solution is one that solves for the needed outcome, is adaptable within the local context, and endures because it enjoys harmonious stakeholder support.

Routine 4: Make Real-time Adjustments

The final routine establishes a method of solution evaluation and refinement that will lead to selection of the preferred solution from the menu of options. Criteria for evaluation of options are derived from the definition of success. The possibility of improvements should be examined. Individual options may be improved by making modifications to them, or the possibility of new ones by mixing contributions from various options on the menu to create better options. Individuals select a preferred solution and make additional improvements in response to stakeholder unintended consequences to ensure its effectiveness.

(Laskasky, Clemmer, K., & Clemmer, D., 2020)

Applying CSD to Other Social Change Contexts

In our success, we see an opportunity. It’s convinced us that not only should the public education sector more urgently embrace participatory models, but that the broader social change ecosystem ought to as well. And many sectors have already rightly embraced

participatory engagement, at least in name. But talking and walking aren't the same thing. Not to mention, real-deal participatory engagement is unintuitive, challenging, and nebulous.

For those considering the applicability of participatory engagement, or Collaborative Solution Discovery specifically, to their context and their problems, consider carefully the foundational principles we set down earlier. To succeed at this it's vital to:

1. Do the hard work necessary to develop community-owned solutions that represent a local vision of success
2. Develop problem-solving routines, steeped in the values of participatory models, to embed the process into the communities served

The ultimate goal of this type of social innovation is to develop a community's self-sustaining capacity, empowering them to solve their own unique challenges themselves. As we like to say, our job is to put ourselves out of a job.

It's critical for external change agents to consider the constraints of local contexts when developing and implementing solutions. This requires us to deeply value the perspectives of communities and to keep them central through the process by using them as the blueprint during the design phase. We recommend that external change agents keep three conditions in mind if they are to use this type of problem-solving approach to address a community's complex problem:

- Recognize that local context matters
- Seek community partners that are interested in solving their own complex problem
- Seek community partners that are willing to address their problem from a systems perspective

Each community's context is unique. CSD does not set out to alter the context or its structures and resources, but rather to strengthen collaboration between community stakeholders so that they can better understand and solve their own complex systems problems. Prior to starting the problem-solving process, it is vital to identify, recruit, and engage a key leader or a cross-functional group of stakeholders around a clear, discrete problem. For us, it was stubbornly low math achievement.

Engaging community stakeholders from the get-go and throughout the entire process is the cardinal tenet of CSD. Faithful participatory engagement is the single most critical strategy for both arriving at an effective solution and ensuring that the solution will enjoy support. The core team of external change agents is responsible for establishing structure and process, which

gives the community stakeholders the strong foundation they need to correctly grasp the problem, surface effective solution options, and then execute.

It's also important that everyone involved, internal and external, be willing to adopt a systems thinking perspective. This is critical considering that a system is defined by its degree of interconnectedness and the interrelationships of individuals within that system (Ghate, 2016). Focusing on a single set of data, or a single community stakeholder, like the most senior leader is not effective when solving complex problems. Take a look at the routines above and note that the ideal and gap routines are all about building a view of the entire system by pulling together many perspectives and setting them on equal footing.

Reframing ownership of the problem is also important. It's human nature to lay blame on people. We're instinctively preoccupied with individual responsibility and culpability. But in CSD the system owns the problem, not one individual or group. The obverse is also true. We tend not to take singular ownership of big solutions, considering them instead an amorphous team effort. But in CSD it's the individual that must own and drive the solution. That's the heart of ownership, after all.

Finally, let us not forget the whole point of our big shift: sustainability. In our experience, for a community to go from problem-solving to problem-solving mindset they must be focussed on seeking long-term, sustainable solutions and have embraced a participatory approach for finding and solving their own systems problems. Some communities may struggle to transcend quick-fix thinking which leads neither to actual problem solving or sustainable solutions. To be successful community stakeholders must be comfortable with ambiguity and able to pivot in real-time, adapting nimbly to ever-shifting contexts. With this, interactions between actors become interconnected across the system in a way that values empathy, courage, wisdom, knowledge, grit, and creativity.

Conclusion

Over our years of traditional education intervention work, we found that, with our help, teachers could shift practice and grow student achievement. But, without our sustained presence, the system would quickly regress to producing the same old outcomes as before. We learned that a "to not with" approach would never yield sustainable change.

In leading change through a participatory approach like CSD, community stakeholders learn to interact differently with and within their system. As seen in the "participatory grantmaking process, peers have the opportunity to increase their knowledge and leadership about issues, build relationships with others, and ultimately, deepen their sense of agency to determine the

priorities of their lives" (Gibson, 2018, p. 12). A big part of the CSD process is centered on growing community stakeholders' individual agency and collective efficacy. With agency, they have the capacity to direct their own growth. With collective efficacy, the community comes to believe that they can meaningfully impact the conditions in which they live and work, finding the courage to challenge the problems they previously were resigned to endure. Through CSD, we are proving that external change agents can partner—in the true sense of the word—with communities to develop and sustain adaptive problem-solving approaches capable of addressing complex social issues through solutions that are surfaced and owned by communities themselves.

Thinking about giving it a shot? We'd love to talk.

References

Cutler, W. H. (2019). *Collaborative Solution Discovery: Beyond fumbling, muddling, wrangling and bungling in the new millennium*. Retrieved from https://muddlebuster.com

Ghate, D. (2016) . From programs to systems: Deploying implementation science and practice for sustained real world effectiveness in services for children and families. *Journal of Clinical Child & Adolescent Psychology, 45*(6), 812–826.

Laskasky, K., Clemmer, K., & Clemmer, D. *Collaborative Solution Discovery: A participatory improvement process*. Paper presentation at the annual conference of the American Educational Research Association (AERA) Annual Meeting, San Francisco, CA, April 2020.

National Center for Education Statistics. (2019). NAEP Report Card: Mathematics*. National Assessment of Educational Progress*. Retrieved from https://www.nationsreportcard.gov/

Organisation for Economic Co-operation and Development (OECD). (2015). *Programme for International Student Assessment (PISA) Results from PISA 2015.* Retrieved from https://nces.ed.gov/

Provasnik, S., Malley, L., Stephens, M., Landeros, K., Perkins, R., & Tang, J.H. (2016). *Highlights from TIMSS and TIMSS Advanced 2015: Mathematics and science achievement of U.S. students in grades 4 and 8 and in advanced courses at the end of high school in an international context* (NCES 2017-002). Washington, DC: U.S. Department of Education, National Center for Education Statistics. Retrieved from http://nces.ed.gov/

SmartStart Evaluation & Research. (2016). MLC impact data: Student learning success. *Math Leadership Corps*. Retrieved from http://mathleadershipcorps.org/