

# unboxed

JOURNAL OF ADULT  
LEARNING IN SCHOOLS

Issue 18  
Winter 2020





*Alec Patton*   **X**   WELCOME

**X**   GLOSSARY

*Stacey Caillier*   **X**   advice  
TEN LESSONS LEARNED ABOUT  
BUILDING IMPROVEMENT  
NETWORKS THAT WORK

*Julie Holmes*   **XX**   theory in practice  
BRINGING CONTINUOUS  
IMPROVEMENT TO TEACHER  
INDUCTION

*Julie Ruble*   **XX**   reflection  
CONTINUOUS IMPROVEMENT: A  
TEACHER'S PERSPECTIVE

*Julie Ruble*   **XX**   reflection  
PDSA REPORTS

*Julie Ruble*   **XX**   method  
QUICK JOTS TO SUPPORT  
INDEPENDENT READING

*Michelle Pledger*   **XX**   insight  
CULTURALLY RESPONSIVE  
CONTINUOUS IMPROVEMENT

**XX**   PROJECT CARDS

*Ben Daley*   **XX**   theory in practice  
IMPROVING FAFSA COMPLETION

*Adriana Lepe-Ramirez*   **XX**   interview  
WE'RE ABOUT ALL KIDS, AND ALL  
KIDS BEING SUCCESSFUL

*Katerina Milvidskaia,  
Daisy Sharrock,  
Curtis Taylor*   **XX**   panel discussion  
DOING LESSON STUDY IN MATH

# Welcome

Welcome to the Winter 2020 issue of *Unboxed*, which focuses on “Continuous Improvement” in education. We chose to re-launch *Unboxed* with this topic, because at The High Tech High Graduate School of Education (HTH GSE), we have become increasingly excited about the potential of Continuous Improvement as a tool for identifying problems and developing solutions across education, from individual classrooms to entire school systems.

First, we need to define “Continuous Improvement.”

“Continuous Improvement” is a phrase with a long history, and multiple interpretations (much like “project-based learning,” as it happens). Here is our definition:

“Continuous Improvement” is a process in which one seeks positive changes by first gaining a deep understanding of the problem they are trying to solve, then answering three questions:

1. What are you trying to accomplish, for whom, by when?
2. How will you know that a change is an improvement?
3. What are you going to try in order to achieve your goal?<sup>1</sup>

---

<sup>1</sup> These three questions are adapted from Langley, G. L., Moen, R., Nolan, K. M., Nolan T. W., Norman C. L., & Provost L. P.(2009). *The Improvement Guide: A Practical Approach to Enhancing Organizational Performance*. Jossey-Bass Publishers.

Once you have answered those three questions, you try something out, collect data that lets you know in what ways it is and is not an improvement, tweak it, try again, study what happened, and repeat again.

You will come out of this with concrete changes that you feel confident will, at least, go some way towards solving your problem. You may make a series of small steps, mostly in the right direction, or you may achieve a breakthrough in which multiple improvements seem to happen at once.

The other critical component is that you are doing this work alongside other people who are tackling the same problem in their own contexts, so you can all share ideas (and commiserate in frustration) with each other.

There's a lot more to it, obviously, but everything else is scaffolding that increases the effectiveness of the core processes.

In this issue you'll read about a range of educators working on various continuous improvement projects and reflecting on the processes and their results. Julie Holmes explains how the High Tech High Teacher Center has integrated continuous improvement into their credentialing program, Julie Ruble describes how she used continuous improvement to change reading instruction in her classroom, Michelle Pledger describes her experience combining culturally responsive pedagogy with continuous improvement, Ben Daley outlines findings from the HTH GSE's facilitation of a state-wide network of high schools using continuous improvement to help more students of color and students from low-income families attend college, and Rodrigo Arancibia and Cesar Fernandez interview Escondido High School principal Adriana Lepe-Ramirez about her experience with this work. Finally, Daisy Sharrock, Katerina Milvidskaia, and Curtis Taylor illuminate the stories behind their current work with networks of teachers and administrators combining "lesson study" with continuous improvement.

We also included a glossary on pages six.

Enjoy!

Dr. Alec Patton  
*Editor*

# Glossary

*This issue contains a certain amount of language that's specific to the world of "continuous improvement." With this in mind, we are including a glossary for this issue.*

*Note: Definitions without a source indicated were written by the Unboxed editorial team.*

## **Change Idea**

An alteration to a system or process that is to be tested through a Plan-Do-Study-Act (PDSA) cycle to examine its efficacy in improving some driver(s) in working theory of improvement (Carnegie).

## **Change Package**

A set of changes developed over the course of several Plan-Do-Study-Act (PDSA) cycles, written up so other practitioners can benefit from the team's insights (Carnegie).

## **Content Commentator**

Observer who attends a lesson study, then gives feedback afterwards on how the subject-specific content of the lesson was taught and learned.

## **Continuous Improvement**

Improvement research that involves multiple iterative cycles of activity over extended time periods (Carnegie).

### **Culturally Responsive Teaching**

The process of using familiar cultural information and processes to scaffold learning. Emphasizes communal orientation. Focused on relationships, cognitive scaffolding, and critical social awareness (Hammond & Jackson, 2015).

### **Dilemma Consultancy**

A structured conversation in which a presenter brings a current challenge they are facing (the “dilemma”) to a small group of colleagues (or students, in the case of a teacher) in order to collaborate on ideas to address it.

### **Diversity**

Cultivating communities that represent a wide range of visible and invisible identities while honoring the backgrounds, expertise and genius of each and every person (High Tech High, 2020).

### **Effort/Impact Chart**

A four-quadrant chart that plots “effort required” on the x-axis and “possible impact” on the y-axis, leading to the following quadrants:

1. Low effort/low impact
2. Low effort/high impact
3. High effort/low impact
4. High effort/high impact

The Effort/Impact Chart is used to identify which change ideas have potential to lead to the greatest impact with the least effort.

### **Empathy Interview**

A one-on-one interview in which the interviewer tries to gain insights into the interviewee’s perspective on an issue by asking open-ended questions and listening without judgment.

### **Equity**

Ensuring each and every person gets what they need to develop their full academic and social potential through liberatory practices that disrupt predictable patterns of success and failure (High Tech High, 2020).

### **Equity Commentator**

Observer who attends a lesson study, then gives feedback afterwards on the lesson in relation to the group’s equity goals (see above), as well as noting the social dynamics taking place within the lesson.

**Exit Card**

A piece of paper (usually an index card) or digital form that students complete at the end of a class to give feedback and/or demonstrate proficiency in a learning goal.

**Fishbone Diagram**

A tool that visually represents a group's causal systems analysis (sometimes known as a cause-and-effect diagram or an Ishikawa diagram) (see photo on page \_\_) (Carnegie).

**Induction**

A teacher-training and mentorship program for new teachers in California. Teachers must complete induction in order to be fully credentialed.

**Integration**

Fostering communities that value and leverage diversity by ensuring each and every person can be their authentic self, feel a strong sense of belonging and meaningfully contribute to shared leadership and decision-making (High Tech High, 2020).

**Interrelationship Digraph**

A diagram used to chart out which of the “causes” identified in a fishbone diagram will have the greatest impact if they are addressed (see photo on page \_\_).

**Lesson Study**

At its simplest, a lesson with an audience. Normally, some of the people observing the lesson also take part in planning, and all take part in discussing it with the teacher afterwards.

**Plan-Do-Study-Act (PDSA) Cycle**

A pragmatic scientific method for iterative testing of changes in complex systems. Each cycle is essentially a mini-experiment where observed outcomes are compared to predictions and discrepancies between the two become a major source of learning (Carnegie).

**Problem Statement**

A concise description of the issue that will be addressed through a series of Plan-Do-Study-Act (PDSA) cycles.

## References

Carnegie Foundation for the Advancement of Teaching. Learning to Improve Glossary. <https://www.carnegiefoundation.org/resources/learning-to-improve-glossary/>

Hammond, Z., & Jackson, Y. (2015). Culturally responsive teaching and the brain: Promoting authentic engagement and rigor among culturally and linguistically diverse students. Corwin.

Ferlazzo, L. (2015, July 8). 'Culturally responsive teaching': An interview with Zaretta Hammond. Edweek. [https://blogs.edweek.org/teachers/classroom\\_qa\\_with\\_larry\\_ferlazzo/2015/07/culturally\\_responsive\\_teaching\\_an\\_interview\\_with\\_zaretta\\_hammond.html](https://blogs.edweek.org/teachers/classroom_qa_with_larry_ferlazzo/2015/07/culturally_responsive_teaching_an_interview_with_zaretta_hammond.html)

High Tech High Graduate School of Education and Teacher Center. (2020). *Statement on diversity, equity, and integration* [Unpublished work in progress].



# Ten Lessons Learned about Building Improvement Networks that Work

*Dr. Stacey Caillier  
High Tech High Graduate School of Education*

*Not everything that is faced can be changed, but nothing can be changed until it is faced.*

*—James Baldwin*

**I**n the midst of a national reckoning with centuries of racial injustice, where Covid-19 has laid bare and exacerbated systemic inequities in health, wealth, and education, schools and districts across our country are facing into their systems and asking themselves a fundamental question: How do we get better at getting better?

Many educational leaders are embracing continuous improvement as a methodology for tackling our most intractable problems (Bryk, 2020). At the core of continuous improvement are three simple, yet profound questions: What are we trying to accomplish? How will we know if a change is an improvement? What changes might we introduce, and why? (Langley et al., 2009). At its best, continuous improvement supports educators to better understand where and how our systems are failing Black and Brown children, set ambitious goals that press us toward more equitable outcomes, redesign our systems to achieve these goals, and learn our way into more just practices grounded in evidence.

By pursuing improvement in the context of a network, schools are able to learn from variation and from each other, accelerating our collective learning and spreading good ideas across diverse systems. Yet, just because we are engaged in continuous improvement does not mean we will improve, or achieve greater equity.

Indeed, if you talk to leaders of this work, the same questions often emerge: How do we help people rally behind a common problem and shared purpose? How do we create networks where people are learning from each other, so we are better than the sum of our parts? How do we support people to see their systems from multiple perspectives—as they are and as they could be—so we can work together toward liberation? How do we design for distributed leadership and sustained change, not just temporary improvement?

Over the past five years, as we have participated in multiple improvement efforts and led many of our own, we have grappled with these same questions. We have facilitated—or served as the “hub”—for improvement networks focused on abolishing the phrase “I’m not a math person,” improving literacy through culturally responsive pedagogy, and increasing college access for students who are BIPOC or from low-income backgrounds. We have supported improvement efforts in individual schools ranging from reducing chronic absenteeism to improving equitable group work. Along the way, we have learned some important lessons (often the hard way) about how to support equity-focused improvement in schools. We offer them below in the hope that they will support others to get going faster, and avoid some common pitfalls.

## 1. Put Equity at the Center (Really)

People bring different definitions of equity to this work (Becerra & Weissglass, 2004). For some, equity is about access and outcomes; if we are working to address inequitable access or outcomes, we are engaged in equity work. Others argue that real, systemic change will only occur if we meaningfully address people’s beliefs, bias, and values and attend to the interpersonal dynamics within teams and organizations. And still others observe that since the institutions and systems within which we work were themselves designed to bolster white supremacy, we must dismantle and redesign them through policy and pedagogy (Kendi, 2019; Hammond, 2015; Love, 2019, Muhammad, 2020).

Like so many things in education (and life) it’s not an either/or. We’ve learned from Lindsay Hill, Victor Cary and many other amazing

educators of color that we need to be *weavers*<sup>1</sup> attending to outcomes, identity, relationships and systems—and be explicit about why each aspect matters. We need to support people to do the inside work *and* interrogate their systems. We need to provide time and scaffolds for people to engage across difference in reflective, honest dialogue about inequities, and work together to design more liberatory systems. We need to face into our disaggregated data, stop setting goals for “all students,” and get clear about the students—the groups and the individuals—we need to serve better. We need to relentlessly ask “What is working for whom, under what conditions?” (Bryk et. al., 2011) to ensure our learning and next steps are focused on those students and families. We need to find ways in our networks to decentralize whiteness and elevate the voices and experiences of people of color. And white friends, we need to help each other manage our white fragility (DiAngelo, 2018) and avoid white savior complex, so that we can respond with curiosity, compassion, and courage, rather than defensiveness or distancing, and be true co-conspirators in the work (Love, 2019).

## 2. Design for Broader Impact and Sustainability From the Beginning

Several of the improvement networks we have participated in (or led) have been a seemingly random assortment of schools, rather than a strategic slice of a system. And few have effectively engaged system leaders. As a result, pockets of improvement emerge, but it’s hard for the work to gain traction and make a large impact. We’ve learned the importance of being strategic about spread from the beginning—having a clear aim and participation expectations, recruiting diverse teams with these in mind, engaging vertical wedges (teachers, school and district leaders, county offices, higher ed, nonprofits from a particular district/region) where possible—so we can learn and expand across a system, tap into existing networks, and work with leaders and policymakers to remove obstacles. We believe this intentionality helps ensure the work doesn’t stop where it starts, and heightens our collective impact. It’s also really hard to do. Teams change. Leaders leave. It can be tough to get system leaders and policy makers in the room, even when the work aligns with their priorities.

We’ve learned to think differently about the ways we engage and communicate with leaders, and design for their unique needs. For example, we’ve found it more effective to invite systems leaders

---

1 This “Solidarity is...” framework developed by Deepa Iyer with the Building Movement Project is a helpful way of envisioning the various roles people can play in an ecosystem focused on social change: <https://buildingmovement.org/our-work/movement-building/social-change-ecosystem-map/>

to shared learning experiences (i.e. visiting Cincinnati Children's Hospital, Strive Partnership, or Georgia State so we can learn together from organizations using continuous improvement and collective impact for systems change) rather than expecting them to join school teams during network convenings. During convenings, we design special sessions or role-a-like groupings where school leaders can share dilemmas and learn from each other. We've also found it essential to cultivate multiple champions for the work so that it is sustained if a key person departs. This has required us to understand each school/district/system well enough to make sure the right people are in the room, on the team, and in the know. And it has continuously reminded us that while some of this work may feel technical and strategic, it is at its heart deeply relational.

### **3. Build a Network, not a Wheel**

We've participated in networks that functioned more like spokes in a wheel, where each team was strongly connected to the hub, but not to each other. This is a natural place to start; teams need to trust the network leaders to get going. But every time that we were a "spoke" we found ourselves hungry to learn from the other schools and frustrated by the pace of our collective learning and progress. When we started launching our own networks, we wanted to create less hierarchical and more liberatory relationships across the network. We worked to consciously build relationships between the various teams/participants so that they saw each other as resources in their learning. In our networks, we pair schools together in "buddy school" partnerships during convenings; we coach them in pairs on biweekly calls and they provide feedback to each other on their ongoing work. We work toward shared leadership by spotlighting the expertise of diverse network members and engaging them to co-design and facilitate portions of our convenings. By building trust among teams and developing their capacity to lead for improvement, we accelerate our collective learning and ensure that schools/districts are not reliant on the hub alone to continue the work.

### **4. Start With a Clear, Narrow Aim**

We learned this one the hard way. We launched our first college access network with an aim (or goal) that was deliberately broad and unfortunately imprecise. Then we supported each team to pursue their own unique aim, many of which were only tangentially related to our broader aim. We soon discovered that this breadth is problematic if you want to function as a network and actually improve something for a specific group of students. For example, it was difficult to establish a common set of measures to assess our overall progress and impact, and

few schools had the data structure in place to track disaggregated data relevant to their aim. Furthermore, there was no authentic reason for teams to share their work or learning.

In contrast, when we launched our second college access network three years later, we had a clear aim: increasing the percent of students who are African American, Latinx, Indigenous or from low-income backgrounds who enroll in colleges from which they are likely to graduate. The network would focus on four critical drivers of college matriculation: sense of belonging, financial access, the college application and enrollment process, and reducing summer melt (the number of students who are admitted, but fail to enroll in college after graduation from high school). The first year, we all focused on increasing FAFSA/Dream Act completion and Cal Grant awardance (which provides up to \$50,000 in tuition relief for qualified students). With teams working toward shared, focused, and measurable aims—and using common data to assess their progress—there were authentic opportunities for sharing and adapting successful practices across teams. Most important, there was evidence that our collective efforts were leading to improved financial access for the students who needed it most. In the last two years, we improved FAFSA and Dream Act Completion by 11 percentage points. In our first year alone, 103 more students received a Cal Grant, which meant up to \$5 million more dollars in aid that our students didn't have to pay back. We have learned that if you choose a compelling and clearly defined problem of practice from the beginning, you will attract the teams/people who want to take on that challenge, and you will get further faster.

## **5. Give People a Place to Start and Celebrate the Early Wins**

We love design thinking. We appreciate the focus on empathizing with users, and the energy and enthusiasm generated through the design thinking process. Having said that, early on we realized that people didn't always want to dream it up themselves, or have time to cull through the research for promising practices. As network leaders, we took responsibility for identifying high-leverage practices that were grounded in research, addressed key root causes, and had already been adapted successfully across diverse contexts. We launched our math network and our current college access network with a concrete aim, key drivers, and a preliminary change package (i.e. a set of research/evidence-based practices for the network to iterate on). We then supported teams to engage in their own root cause analysis and better understand their systems so that they could adapt these practices for their own contexts. By providing a clear direction and a place to start, we could get moving quickly and accelerate the learning.

To be clear, we are not advocating for launching a network with a bunch of top-down directives that rob educators of their agency and creativity. And this didn't mean that novel ideas were off the table. It just meant that every team was also testing, adapting, and refining some common high-leverage practices.<sup>2</sup> This facilitated authentic opportunities for sharing and learning from variation. It also helped to generate early wins, which are empowering and crucial to building a high-functioning network. Publicly celebrating these wins helped us spread effective practices/adaptations and maintain momentum when the work was tough.

## 6. Lead With the Why, not the Tools

We love empathy interviews, fishbones, interrelationship digraphs, process maps, and driver diagrams. However, if we are focused on the tools without grounding them in our collective purpose, they rarely generate the moments of insight we are after. Equitable access to college, abolishing the phrase “I’m not a math person,” ensuring kids learn to read and love to read, building belonging and reducing the disproportionality of suspensions. These are the issues educators care about. It’s what brought them to the work. Every member of our networks can identify particular students who they hope their work impacts. Ideally, when we are digging into root causes and generating change ideas we will have students in the room with us. If not, we have people pair-share about them, bring pictures of them to put in the center of their tables, interview them to surface their felt needs, analyze samples of their work to surface moments of brilliance and confusion—anything to keep students at the center. When we introduce an improvement tool, we do so in service of doing better by *those* students. As the hub, we continually return participants to the “why” behind the work, while also revisiting our “what” (i.e. our aim and theory of action) and equipping them with the “how” to achieve it (i.e. tools, protocols, change packages). And we’ve found that there is no better way to get grounded in the “why” than having people conduct empathy interviews or shadow the students on their minds.

## 7. Provide Protocols—and Practice—to Build Team Excellence

As noted above, there are lots of tools people can use in continuous improvement work. The tools are important, but not enough on their own. For this work to be liberatory and transformative, we need to attend to relational dynamics and help people construct their

---

2 When assessing change ideas, we love using an “effort-impact chart” (for more on this see Julie Ruble’s description on page \_\_)

thinking together. We also need to consciously return to the ways in which our systems are inequitable by design, and hone our abilities (and willingness) to ask tough questions of ourselves and others, seek diverse perspectives, and engage in crucial conversations about race and systemic oppression. This requires more than good intentions. We've found that protocols designed for equity are essential for helping teams engage with the tools of continuous improvement, while also reflecting on their own assumptions and engaging with each other in more inclusive, purposeful ways.<sup>3</sup> Without the intentionality that structured protocols and norms provide, the tools of continuous improvement can feel like a hollow exercise and fall flat. Or worse, they can reproduce the inequities we aim to address.

Here's an example: picture a cause-and-effect diagram (or fishbone diagram) unpacking the root causes contributing to a problem that focuses primarily on the ways students and families are perceived to be deficient. Now, by contrast, picture a fishbone diagram that highlights the ways in which our own beliefs, practices, and processes as educators are contributing to the problem (many of which are actionable and within our locus of control).

Here's another example: imagine a team mapping their school's process for supporting SAT registration where the two white men in the group do most of the talking, versus a team where everyone's perspectives are included and authentically explored (and perhaps where the people of color and those who were/are first generation college students themselves are viewed as experts with the most to contribute). Not only would this team's understanding of the process be richer and more nuanced, they would have generated some shared understanding and ownership to make change. In this way, protocols designed for equity help build teams' conversational capacity and improvement capacity, so the work can be sustained by the team, not borne by individuals alone.

## 8. Build Your Brightspotting Muscles

A key principle of improvement is to be problem-focused. However, if we are always focused on the problems, people can become paralyzed. Seeing the problem more clearly doesn't necessarily lead to action. Or as my colleague Dr. Michelle Pledger likes to say, "You can be woke, but still laying in bed." In *Switch* (2010), Chip & Dan Heath suggest asking, "'What's working, and how can we do more of it?'" Sounds

---

<sup>3</sup> For some good examples of protocols for equity, check out the High Tech High GSE protocol library: <https://hthgse.edu/research-center/protocol-library/>

simple, doesn't it? Yet, in the real world, this obvious question is almost never asked. Instead, the question we ask is more problem focused: 'What's broken, and how do we fix it?'" (2010, p. 45). And yet, in every system, there are people who are working differently, challenging the status quo, and achieving results that push back against the common excuses—often by tapping into the brilliance and indigenous knowledge of the students and families they serve.

As a hub, our goal is to be *reality facers* and *systematic bright spotters*, and to cultivate these dispositions across our network. We have developed routines for regularly assessing where teams are and getting into the weeds with them, so we are learning together what is working for whom under what conditions, and what is not. When we learn about a high-leverage practice or even a small detail that has made a big difference—like holding the first FAFSA parent night a month earlier, providing think time before a pair-share, or responding to students' questions with a question instead of an answer—we call it out, give them a mic, and share it with the network. We want people to know that solving tough problems is about addressing root causes and about getting inspired and building on what is working (somewhere).

## 9. Push People to Redesign Their Processes Instead of Doing the Same Thing Harder

Don Berwick (1996), President Emeritus of the Institute for Healthcare Improvement, has argued that one of the main factors preventing systems change is that people operate as if improved performance was an effort issue rather than a design issue. There is a strong tendency to do what we've always done, only more of it. We've seen many schools muscle their way to improvement, but it's hard to sustain the work over time and teams end up exhausted. A saner path (that may feel less comfortable initially) is to support teams in mapping and unpacking their current processes so they can identify potential breakdowns as well as under-utilized resources. They can then redesign their process to integrate possible solutions. This is tough. As Heifetz and Linsky (2002) have noted, change is loss. People are often reluctant to let go of the practices and processes they have in place, even if they are burdensome, ineffective, and inequitable.

The questions we return to, as a hub and with our teams, are: *Are our aims ambitious enough that they require us to redesign our processes and work in new ways? How can we reengineer our systems to better serve those students our schools have traditionally failed?* For example, let's say we want to improve FAFSA/Cal Grant rates by 10% in one year for our Latinx students. Hosting more parent workshops is not going to get us there. We may also need to improve the parent

workshops we offer, develop routines for looking at data to determine who has completed and who has not, and find ways to support those students who still need to complete. We may need to start earlier in the year, push into Senior classes, pull small groups during the school day, and leverage additional faculty and their relationships to provide personalized support to students with especially complex situations. This would represent a shift not just in what the work looks like and how it gets done, but in our beliefs about students, families, and our role in supporting them. If we see financial aid completion as *our* responsibility, we are not just offering information and seeing who comes to us. We are reaching out to provide targeted support and to ensure completion.

For this work to be sustainable, however, we cannot improve through addition alone. Sutton and Rao, in their excellent book *Scaling Up Excellence* (2014), discuss the dangers of breaching people's "cognitive load"—of adding so many new tasks, responsibilities and priorities that people lose the capacity to devote sufficient attention to what matters most and as a result, end up doing many things poorly rather than a few things well. When I was teaching in schools, I experienced this as "innovation overload." The result was not only individual fatigue, but also system incoherence and confusion. To combat this, Sutton and Rao encourage organizations to play the "subtraction game" and to ask "*What can we stop doing?*" By letting go, we can create space and energy for leaning into new processes (and mindsets) that work better for those we serve, and ultimately for us too. Letting go can also take the form of broadening the team and engaging underutilized people in the system—such as students, parents, coaches, tutors, etc.—as collaborators. The above questions encourage us to think differently, to mind the gaps, and to be more focused and strategic in our next steps.

## 10. Design Convenings to Make the Most of Action Periods

We used to think that the action happened at network convenings. We would put the bulk of our energy into designing memorable, thought-provoking experiences when we convened the network together. Then we would cross our fingers and hope that we had inspired each other enough that the work (learning from users, conducting inquiry cycles, looking at data to guide next steps, etc.) would continue after teams left us. In some cases it did. In many other cases, the work got overtaken by other priorities, and the myriad daily demands of educating young people in schools. Of course, as Paul Batalden and other brilliant thinkers have noted, every system is perfectly designed to get the results it gets. So we started to ask ourselves what real supports or scaffolds we were providing to ensure that teams were able to sustain the work

and reflect on their progress between convenings. The answer: very little.

Now we design the arc of the year with the action periods in mind. When we sit down to plan convenings we first figure out what we want teams to do in the next action period and we backwards plan. This question, initially posed by my colleague Ryan Gallagher, has been particularly helpful: When teams get back to their sites, what do we hope they are doing differently next week? This has helped us better prioritize what needs to happen at convenings (i.e. What is going to set teams up best to engage in the action period work?) and articulate more clear work streams/tasks, as well as more clear roles and expectations for team members, during these action periods. It's reminded us to build substantial team planning time into convenings, giving teams the "chew" and "do" time they need to execute well on their ideas and next steps. And it's encouraged us to think strategically about our coaching calls and site visits, so that we are anticipating where teams may get stuck or lose momentum, and providing the needed support to keep the work moving. Which brings us to a bonus lesson...

## 11. Embrace The Stories

We dismiss the power of story at our peril. When people share their stories—their histories, their identities, their purpose and passions—as well as the learnings and successes they are experiencing in the work, the network shifts from “theirs” to “ours.” Stories bring learning to life in vivid detail, and help good ideas spread across a network better than any change package, statistic, or powerpoint presentation. And it puts the participants at the center and on the stage, rather than the hub (see lesson #3). Sharing our personal stories builds a sense of deep belonging, where people feel seen and known. When we build networks where all participants feel they can bring their whole selves to the work, systemic and sustained improvement for equity is possible.

## CODA

A couple years ago, my team had the good fortune of meeting Dr. Uma Kotagal from Cincinnati Children's Hospital. She is an improvement force to be reckoned with and is fond of saying, with loving impatience, “You have to start before you're ready. Because you're never ready.” We all have much to learn. And the only way to keep learning is to get going, before we have it all figured out. Our students are waiting.

## References

Becerra, A. & Weissglass, J. (2004). *Take It Up: Leading for Educational Equity*. The National Coalition for Equity in Education.

Berwick, D. (1996). A primer on leading the improvement of systems. *The BMJ*, 312, pp. 619-622.

Bryk, T. (2020). *Improvement in action: Advancing quality in America's schools*. Harvard Education Press.

DiAngelo, R. (2018). *White fragility: Why it's so hard for white people to talk about racism*. Beacon Press.

Hammond, Z. (2015). *Culturally relevant teaching and the brain: Promoting authentic engagement and rigor for culturally and linguistically diverse students*. Corwin.

Heath, C., & Heath, D. (2010). *Switch: How to change things when change is hard*. Random House Canada.

Heifetz, R. and Linsky, M. (2002). *Leadership on the line: Staying alive through the dangers of leading*. Harvard Business Review Press.

Kendi, Ibram X. (2019). *How to be an antiracist*. One World.

Langley, G.L., Moen, R., Nolan, K.M., Norman, C.L. & Provost, L.P. (2009). *The improvement guide: A practical approach to enhancing organizational performance*. Jossey-Bass Publishers.

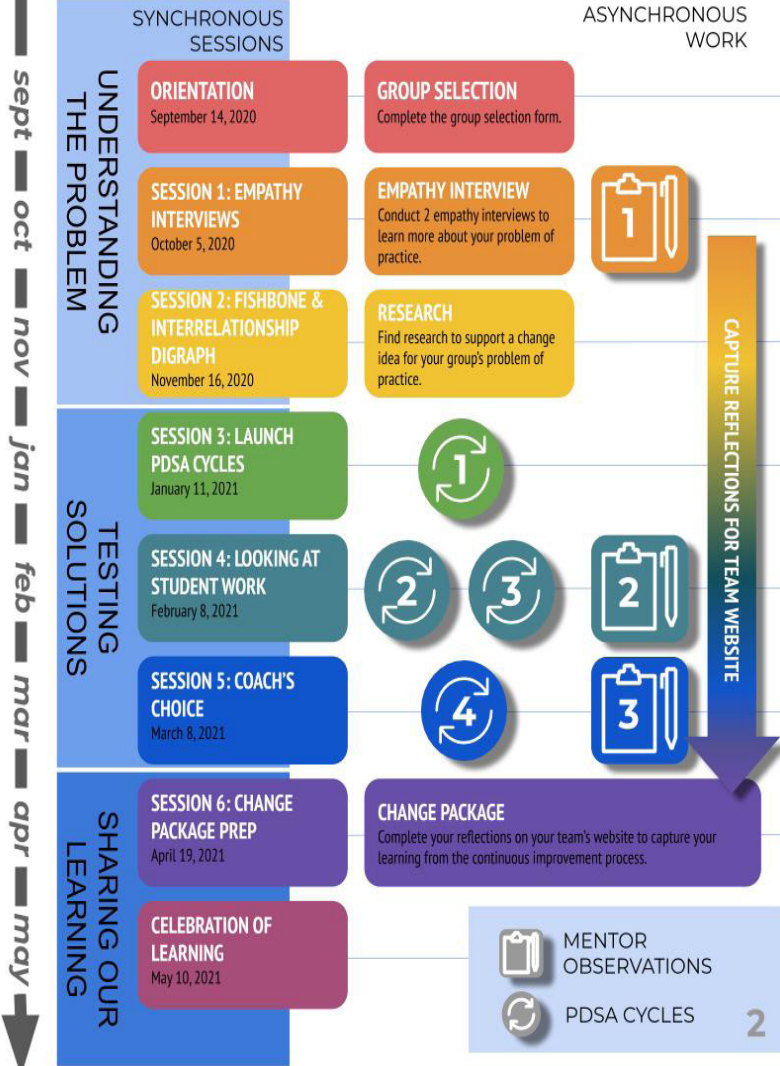
Love, B. (2019). *We want to do more than survive: Abolitionist teaching and the pursuit of educational freedom*. Beacon Press.

Muhammad, Ghodly (2020). *Cultivating Genius: An Equity Framework for Culturally and Historically Responsive Literacy*. Scholastic Teaching Resources.

Sutton, R. & Rao, H. (2014). *Scaling up excellence: Getting to more without settling for less*. Crown Business.

*Special thanks to Alicia Grunow and Sandra Park for pushing us on, to Becky Margiotta and Joe McCannon for inspiring this piece with their own synthesis of lessons learned, and to Ben Daley and the whole CREI team for learning and churning alongside me.*

# CALENDAR



# Bringing Continuous Improvement to High Tech High's Teacher Induction Program

*Julie Holmes  
High Tech High Teacher Center*

*As Director of Credential Operations at the High Tech High Teacher Center, Julie Holmes coordinates High Tech High's teacher credentialing programs. As such, she worked on the team transformation of High Tech High's Teacher Induction program, which she describes here.*

*This is an edited excerpt from “Continuous Improvement: Teacher Induction” on the High Tech High Unboxed Podcast (Season 1, Episode 14).*

California's credentialing structure is a two-step approach. First, you undertake a teacher preparation program, and if you complete that, you receive a preliminary credential. At this point you can get hired as a teacher, but once you're hired you need to “clear” your credential within the first couple years, and that happens through what California calls “induction.”

Induction came about in 1988, because teachers were leaving the profession in droves. They would get their credential, start working, and within a few years they would quit—and they weren't just quitting their school, they were quitting the profession. Induction was meant to

be a mentoring program, supporting people in the field so that more people would stay. And there's evidence that high quality induction programs do in fact increase teacher retention (Podolsky et al., 2016).

But, to be blunt, induction was a little dry. There were lots of boilerplate templates that teachers had to fill out—it was very “one size fits all.” So, teachers were trying to fill out these template forms that didn't apply to their setting, or their placement, or the students they were working with, and it was very frustrating. So even though the point of the program was to support teachers so they would stay in the profession, many teachers were frustrated by it.

Then, in 2016, the Commission on Teacher Credentialing radically changed induction. The pendulum swung from over-designed template forms, to a focus on working with your mentor, getting individual support, and identifying what you, the teacher, need to be better in your practice. This meant that the High Tech High Teacher Center suddenly could redesign the entire induction program. It was very exciting, but it was also daunting, because we'd had this set curriculum to teach from, and now that was out the window and it was up to us to make sure that we were providing the best program to teachers.

So, we redesigned the whole program. We knew that teachers in the program would create and follow what's called an “individualized learning plan” and that they would work with a mentor through school for the course of the year. Those were still state requirements. Everything else was wide open, we talked to teachers about what sounded useful and interesting to them.

Then Stacey Caillier and Ryan Gallagher, who work at the High Tech High Graduate School of Education, came over to discuss how “continuous improvement” could mesh with the induction program. At first, it sounded like it could be a nice supplement to our induction program, but I didn't fully understand at the time how beautifully it would just blend together. It is now the foundation of our induction program.

A teacher's first year is overwhelming: there are so many things to think about, your students all need something different from you, you're figuring out how to plan, how to assess, and that means most people don't have the opportunity to pause and reflect on what they're doing (and how they could do it differently). Induction programs can provide space and structure for reflection. We already knew that teachers would be meeting eight times during the year, so that provided the space. Continuous improvement provided the structure we were looking for. Specifically, there are two major components: small groups

with a shared goal and a year-long improvement process.

### **Component One: Small Groups with a Shared Goal**

There are over 100 teachers in the High Tech High induction program, so we split the cohort into groups of ten people or less, each led by a veteran teacher who served as an “improvement coach.” Each improvement coach proposes a focus area (for example, “Authentic assessment,” “equitable group work,” or “culturally responsive pedagogy in math”).

During the orientation session that launches the induction program, new teachers have a chance to talk to coaches about their focus areas. They then choose the focus areas that most interest them and get divided accordingly.

New teachers spend the rest of the induction program primarily in their improvement groups, working together to develop and refine their own “change ideas” within the focus area.

### **Component Two: A Year-long Improvement Process**

Over the course of the year, every improvement group follows the same sequence of sessions which fit into three steps: Understanding the Problem, Testing Solutions, and Sharing Your Learning.

You can see a graphic representation of the year-long cycle on page \_\_

## Step 1: Understanding the Problem

### Session 0: Orientation

#### Session 1: Empathy Interviews

- Read an article by a researcher and/or practitioner that addresses the group's focus area.
- Write a "problem statement" that sets out the problem that every member of the group will be addressing.
- Set an "aim," using three questions: "What do we want to achieve? For whom? By when?"
- Plan to conduct two empathy interviews with students.

#### Session 2: Fishbone Diagram and Interrelationship Digraph

- Revise the group's problem statement and aim based on what members learned from their empathy interviews.
- Create a fishbone diagram in order to identify the factors that are causing to the problem.
- Create an interrelationship digraph in order to identify which of the causes is having the greatest impact.

## Step 2: Testing Solutions

#### Session 3: Launch Plan-Do-Study-Act (PDSA) Cycles

- Come up with change ideas inspired by existing research.
- Plot change ideas on an effort/impact chart.
- Plan first PDSA cycle.

#### Session 4: Looking at Student Work

- Share examples of student work created during the first PDSA cycle, and analyze your colleagues' work samples, looking for insights that they provide into the problem, and potential solutions.
- Plan next two PDSA cycles.

#### Session 5: Coach's Choice

- Groups either analyze a second set of student work, go through a dilemma consultancy, or do something completely different, depending what they need at that point.

## Step 3: Sharing Your Learning

#### Session 6: Change Package Preparation

- Prepare the change package.

#### Session 7: Celebration of Learning

- Present the findings contained in the change package.

## References

- Podolsky, A., Kini, T., Bishop, J., & Darling-Hammond, L. (2016). *Solving the teacher shortage: how to attract and retain excellent educators*. Learning Policy Institute. <https://learningpolicyinstitute.org/product/solving-teacher-shortage>.

# What It's Like to be a Teacher in High Tech High's Induction Program

*Julie Ruble (as told to Alec Patton)  
High Tech Middle Media Arts*

*Julie Ruble teaches 6<sup>th</sup> grade Humanities at High Tech Middle Media Arts. In the 2018–19 school year she went through High Tech High's Induction Program. She had already been teaching for over a decade, but most of that was outside California, so the state credentialing service required her to complete Induction. Here, Julie describes the experience of doing a "Continuous Improvement" induction program.*

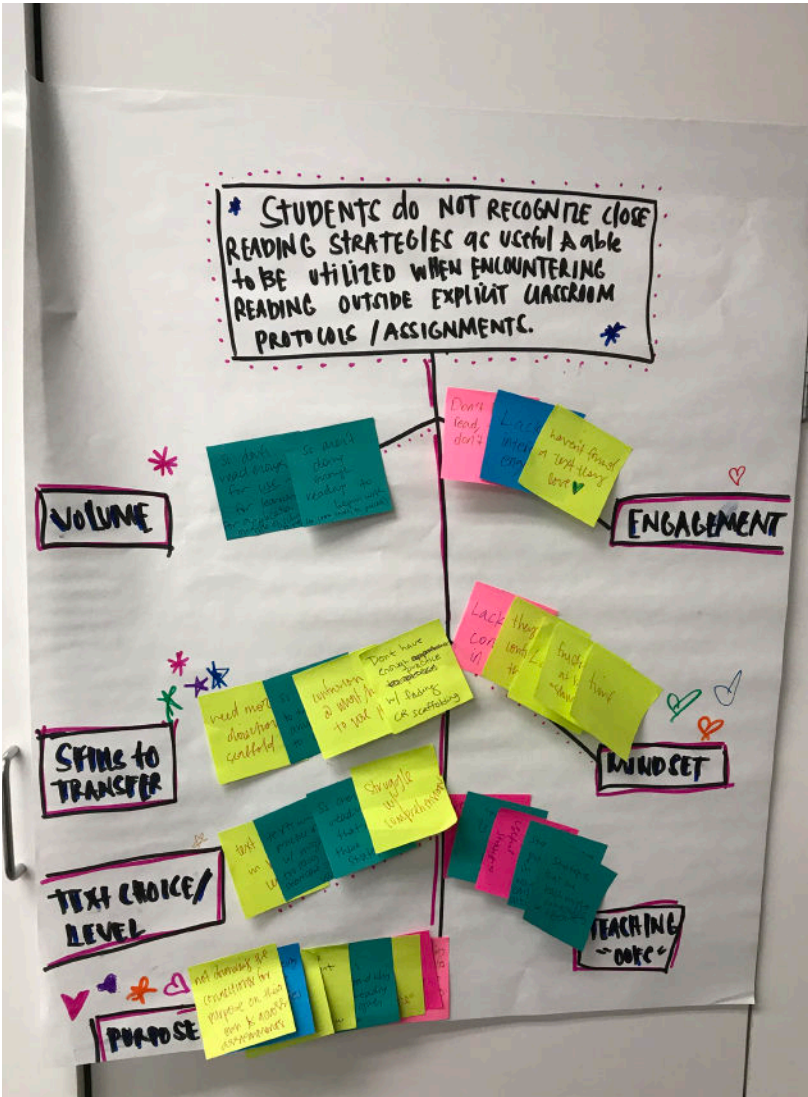
*This is an edited excerpt from "Continuous Improvement: Teacher Induction" on the High Tech High Unboxed Podcast (Season 1, Episode 14). Text in italics is adapted from the narration.*

Our improvement group first met in October. Our topic was "close reading," and when we were sharing strategies that were working for us, we started to realize that there were a lot of strategies just in the room (regardless of grade level, actually) and when people were sharing strategies and challenges, I realized the number one thing induction is going to give me is this environment of educators who are working together to improve. We try to do this in so many ways at High Tech High, but literally sitting in a classroom together once a month and checking in was really useful for that. It was just very concentrated. In that October meeting we set our aim for the year. Here was our group's aim:

By May, all our students will recognize when to use a reading strategy, know what strategy to use, know they are capable of using it, and actually choose to use it.

Between October and November, I interviewed three of my students in order to get a sense of what reading in my class was like from their perspective. Then, in November, it was time to work out the root causes of the problem. So, we started with a “fishbone diagram” (see Figure 1). I love a fishbone. It’s a buffer against your assumptions and I really like that, because *I make assumptions*.

Figure 1: Fishbone Diagram

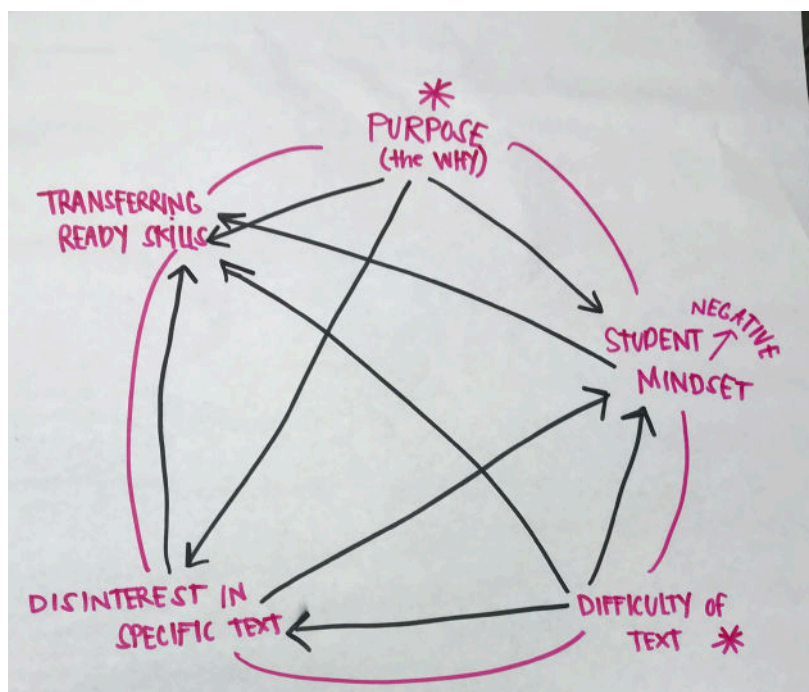


On the fishbone, you put your “problem” where the head would be. Our problem was “kids are not approaching texts with confidence and motivation.” Then everyone writes down what you think is driving your problem on post-its. We did a ton of post-its and then we had rounds of categorizing the post-its. The bones of the fish are the categories that we realized we had come up with.

After we’ve identified some causes in the fishbone diagram, we can, in a very systematic way, try to identify which cause might affect most of the other causes. And the one that affects the others has the highest leverage—that is, if we were to influence it we might really make a difference in a lot of the other causes.

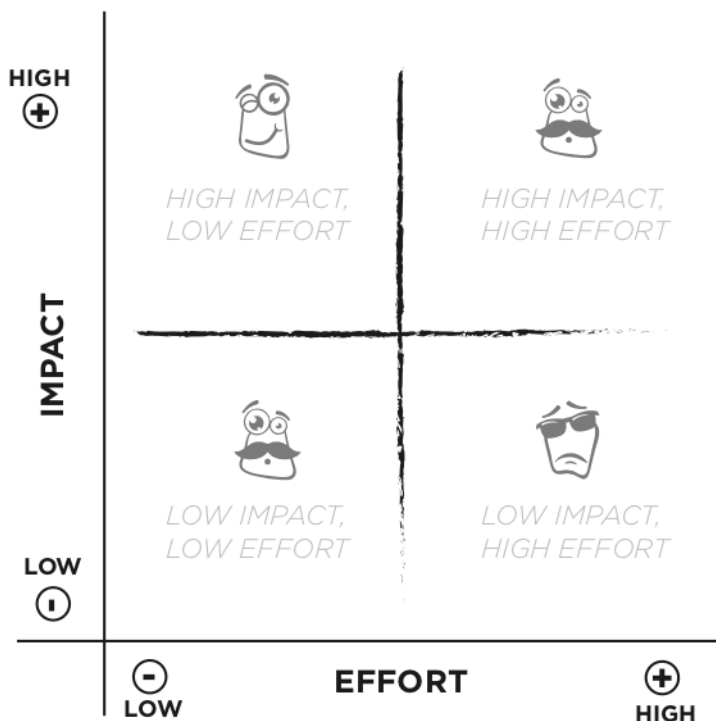
You figure out that high-leverage cause using an “interrelationship digraph” (see Figure 2). Now, the interrelationship digraph blows my mind because I always have a preconception of the cause of a problem that’s probably informed by my race, my gender, my first language and my experience in the classroom. All of these things might inform the way I’m seeing reading in my classroom and I just have to pick that apart.

*Figure 2: Interrelationship Digraph*



*In December there's no meeting, because so many educators are busy with work related to the end of the semester and Project-based Learning exhibitions. In the January meeting, teachers look at existing research and identify possible solutions, so we write them down on post-its (of course) and put them on an "effort-impact chart" (see Figure 3) so we're asking "Will this take a lot of effort? and "Will this have a big impact?"*

Figure 3: Effort-Impact Chart



One of the things I love about looking at impact versus effort is that as a teacher, sometimes I'll think of a change that I know would be a slam dunk for students. I know if I did it, it would make such a big impact. So, I'll get started on it and it will be so high-effort that I never actually put it into effect. And I'll harbor a lot of guilt, which will create other problems in my teaching. And if I just took a moment to think about how much effort it was going to take versus how much impact it might have, I'd be so much more likely to choose a quick change that I could put into effect right away.

It just makes a lot of sense to organize things this way. We're all about doing the biggest thing, but there are some small things we can do that we actually *will* do because they're accessible.

*At the end of the January session, every teacher chooses a change idea to try. Then they decide what data they're going to collect to see whether it works or not. Over the next month they'll test it out, collect the data and write up what actually happened. This process is called a PDSA cycle, which stands for "plan, do, study, act." The teacher writes up their PDSA on a single PowerPoint slide and during the spring they do four PDSA cycles.*

*Julie focused all her PDSAs on "quick jots." That is, brief notes that students jot down in their notebooks when they're done reading in class.*

*For her first change idea, Julie gave students a specific focus for their quick jots. For example, one day she gave a mini lesson on character development and then instructed students to focus on character development in their quick jots for data.*

*So, she checked the notebooks with students she'd chosen to focus on and found that a few of her students weren't just confused about character development, they weren't writing quick jots at all. But she didn't focus her second PDSA on these students, because she was trying to work out a more efficient means of checking her students' quick jots. So, Julie had her students mark the quick jots they wanted her to read with post-it flags when they handed in their notebooks.*

My question for the second PDSA was "Will the post-it flags help me check this faster and easier?" And the answer's no, FYI. The flags fall off, and I'm looking through pages and pages to figure out where their post-it flags are and I don't know if they fell off or if I've just missed it. This was just a fail, and I really needed to adapt it.

So, I realized "OK, that supposedly efficient checking system is just not going to work, and the priority right now is that three kids aren't doing it at all. I'm not going to try to figure out another checking system until I address these three kids.

*For PDSA three, Julie tried providing a worksheet to scaffold the activity for the three kids who weren't jotting. Two kids started doing their quick jots, but the other student still wasn't doing it.*

Okay, so now two kids are back in the system where we're all reading together and for that one kid, that kid is telling me "This isn't working for me." That kid actually went into a book club with another student where they were reading aloud to one another because that was what their attention required to track a book at that time. So, it turned out I needed to keep trying stuff until it was clear that they needed this level of support. So, it was still good data.

I think if I were doing this in sort of the casual way I did before, I would not have necessarily picked up on that one kid and changed the structure as quickly. I would have, you know, half-heartedly tried a bunch of different things and then been like, "Well, there's always one." But that's not okay! And so, it's really good to systematize it to where I'm like, "Yes, there is one and now another structure supports them."

And not only that, but every successful tweak I came up with in these PDSAs, I am still using today: I'm using the worksheet accommodation for kids who struggle setting it up in their notebook. I'm using the book club for kids who struggled even still with a worksheet accommodation. And we haven't even talked about the final PDSA, about kids not getting their books out quickly enough for independent reading, but I'm still using the "walk around and tap the desk" instead of verbal reminders, and it's really neat to see that. It's not like I thought, "Oh, these are the results of my PDSA, let me put them in my plan." It's just that they taught me something and I use what I learned.

What I realized doing "Continuous Improvement" is that to an extent it's what I was already doing as a teacher: I was already noticing a problem, trying out this quick tweak and collecting data. But naming all of the steps and doing them in a more formalized way helps me to check where before I was doing it in too informal a way to catch my unexamined, oppressive assumptions. Data collection is a good example of this. I'm collecting data all the time in my classroom, but when I'm formally doing Continuous Improvement, I have to stop and ask myself, "Does the data I'm collecting actually match the interpretations I'm making, and is it unbiased data, or am I using assumptions about what's happening in my classroom?" Just that tweak of thinking that way is a good reminder so that as I'm doing it now, I'm not just using my assumptions as data, but I'm instead thinking, "Okay, how do I know that each of my students is getting what they need?"

# Julie Ruble's PDSA Reports

During Induction, participants complete four PDSA cycles, and complete a one-page report about each.

In order to illuminate this process, on the following pages are Julie Ruble's four PDSA reports:

# Julie Ruble PDSA 1

<b>Date:</b>	1/7/19	<b>Name(s): Julie Ruble</b>
<b>What are you going to try?</b>	Vary jots by skill and then having students flag quick jots for me to see their thinking	
<b>Plan Details:</b> <i>What</i> do you need to do to get ready? <i>When</i> will you test the idea?	Mini-lesson about another skill that builds on summary, character transformation, etc.	

<b>Questions:</b> What do we want to learn from this cycle?	<b>Data:</b> What data will we collect to answer our questions?	<b>Predictions:</b> What do we think will happen?	<b>Results:</b> What were the results? What did we learn? ( <i>completed after implementation</i> )
Are students grasping plot, character, etc.? Can they identify the elements of fiction in a story?	Checking in over a few quick jots.	I think most students will grasp character transformation but that a few of them will have vague explanations of it.	The quick jots show all but a small handful of students are understanding their free reading books. I spotted fake reading in a few nonsensical quick jots and this allowed me to confer with those kids to offer preview stacks of more appropriate books.

## Julie Ruble PDSA 2

<b>Date:</b>	2/11/19	<b>Name(s):</b> Julie Ruble
<b>What are you going to try?</b>	Implement a post-it flagging system for students to turn in their best jots to be checked.	
<b>Plan Details:</b> <i>What</i> do you need to do to get ready? <i>When</i> will you test the idea?	I need post-it flags, a plan for modeling this under the doc cam. I'll test this over the next two weeks.	

<b>Questions:</b> What do we want to learn from this cycle?	<b>Data:</b> What data will we collect to answer our questions?	<b>Predictions:</b> What do we think will happen?	<b>Results:</b> What were the results? What did we learn? <i>(completed after implementation)</i>
Are students grasping plot, character, etc.? Can they identify the elements of fiction in a story?	Students' flagged quick jots.	I think it will be easier to assess every kid's comprehension instead of just spot checking a few. I think I'll have a better grasp of their work.	We got the flags done, but I never looked back at the notebooks. It just felt like there was no time. I think I learned that this system right now isn't systematic enough. I also noticed some kids were not jotting, which throws off the system.

## Julie Ruble PDSA 3

<b>Date:</b>	3/11/19	<b>Name(s):</b> Julie Ruble
<b>What are you going to try?</b>	Implement a worksheet-based accommodation for kids who have not gotten the hang of jotting (just 3 kids), requiring them to show me their jots during exit procedure or have to jot during break the following day.	
<b>Plan Details:</b> <i>What</i> do you need to do to get ready? <i>When</i> will you test the idea?	Jot worksheets	

<b>Questions:</b> What do we want to learn from this cycle?	<b>Data:</b> What data will we collect to answer our questions?	<b>Predictions:</b> What do we think will happen?	<b>Results:</b> What were the results? What did we learn? ( <i>completed after implementation</i> )
Are the three students who aren't jotting able to jot if they have a separate sheet and daily accountability?	Students' jots during exit procedure and how quickly they can get weaned back to their notebook.	I think some kids will need to jot during break as an accountability procedure before they get the hang of it.	Yes, two students was able to jot more effectively with this accommodation. The other student is still not jotting effectively.

## Julie Ruble PDSA 4

<b>Date:</b>	<b>4/15/19</b>	<b>Name(s): Julie Ruble</b>
<b>What are you going to try?</b>	Do a quick walk around the room 3 times per week in addition to the time I actually check quick jots for slight additional accountability getting notebooks open quickly.	
<b>Plan Details:</b> <i>What</i> do you need to do to get ready? <i>When</i> will you test the idea?	No extra supplies needed.	

<b>Questions:</b> What do we want to learn from this cycle?	<b>Data:</b> What data will we collect to answer our questions?	<b>Predictions:</b> What do we think will happen?	<b>Results:</b> What were the results? What did we learn? <i>(completed after implementation)</i>
A few students still need verbal reminders to take their jots out which interrupts independent reading for some kids. I hope to see if just a quick physical circulation solves this problem.	I will observe how many students open their notebook as I walk past and if there are any with notebooks still closed.	I predict this will eliminate the need for verbal reminders.	This practice almost eliminated the need for verbal reminders, and I found tapping the notebook quickly took care of the few kids who still didn't notice my physical proximity and needed a quick extra reminder to start their jots.

# Quick Jots to Support Student Reading

Julie Ruble  
*High Tech Middle Media Arts*

*At the end of the HTH Teacher Center's California Teacher Induction Program, participants identify a particularly effective practice (or group of practices) and write it up in such a way that other teachers can benefit from what they've learned. This piece is called a "Change Package."*

*This is the Change Package that Julie Ruble wrote at the end of her work in her Induction Program.*

**I**ndependent reading is the reading students do that has potential to be most engaging and naturally includes the most student choice. For this reason, embedding explicit reading skills instruction into independent reading structures is potentially a high leverage change idea. My change idea was largely supported by the Columbia Teachers College Reading and Writing Project, where they place significant emphasis on learning reading skills via independent reading with regular mini-lessons, conferences, and means of recording students' thinking in reading notebooks. I wanted to work on how kids pause while they're reading to ask, "Did I get that?" and record their thinking. At TCRWP, they do this with quick jots in their reading notebook as they read, so my change package centers on creating effective structures for these jots.

## **Impact on Teaching**

Relying solely on whole-class novels to teach reading skills holds some kids (who read at a higher level) back while losing some kids (who read

at a lower level and can't access the text even with whole class support). Supporting kids to find a choice novel at their level, however, and then facilitating reading skills through independent reading can ensure they practice these skills in a way most effective for them personally. In order to ensure they stop and ask, "Did I get that?" when reading and employ reading skills, and in order to capture their thinking, students jot as they read. My change idea centered on implementing these quick jots and then using them to teach several specific reading skills.

Most of my research was compiled from Teachers College Reading and Writing Project resource bank. This includes the research that shows the value of focusing reading instruction on independent reading. For instance, "Anderson, Wilson, and Fielding (1988) researched the relationship between the amount of reading done and reading achievement. They found that the amount of time reading was the best predictor of reading achievement, including a child's growth as a reader from the second to the fifth grade" (Teachers College).

The research also indicates how important it is to be able to track students' reading skills and growth in order to specifically address their needs. The following sources underscore the necessity of tracking reading progress carefully and being able to give them targeted feedback: Denton, Vaughn and Fletcher's (2003), "Bringing Research Based Practice in Reading Intervention to Scale," concludes that "effective teachers are able to identify struggling readers and modify the nature and intensity of instruction to address their needs, basing instructional decisions on information gathered from frequent assessments and monitoring of student progress" (Teachers College).

Finally, in "What I've Learned about Effective Reading Instruction From a Decade of Studying Exemplary Elementary Classroom Teachers," Allington (2002) highlights the benefit of teaching reading skills in context where they can be modeled and then actively employed: "there is specific research that supports the fact that reading is an active meaning-making process, and that exemplary teachers engage in 'active instruction—the modeling and demonstration of the useful strategies that good readers employ'" (Teachers College).

This change idea has made it possible to create accountability for students' independent reading without overburdening their reading time with something that feels like an assignment and taking the joy out of reading. They can show their thinking and practice new ways to approach a text (for instance, summarizing, looking for character transformation, noticing a motif, etc.) in a book at their reading level that they are interested in and chose for themselves. It gives them more autonomy over their learning without reducing accountability.

Because I've experienced so much success with this system and because I noticed how students were getting held back or left behind when trying to teach reading skills in a class with very diverse reading levels via whole class novels, I've transitioned completely away from whole class novels in favor of shorter whole class anchor texts and students reading independent novels at their own pace with this accountability.

The California Standards for the Teaching Profession (CSTP) my work relates to are:

# 1: Engaging and Supporting All Students in Learning

# 3: Understanding and Organizing Subject Matter for Student Learning

# 4: Planning Instruction and Designing Learning Experiences for All Students

# 5: Assessing Students for Learning

### **Impact on Students**

I completed the following PDSA cycles:

Cycle 1: Implement quick jots (see Figure 1) for two reading skills (summarizing, noticing character transformation)

Cycle 2: Implement a post-it flagging system for students to turn in their best jots to be checked.

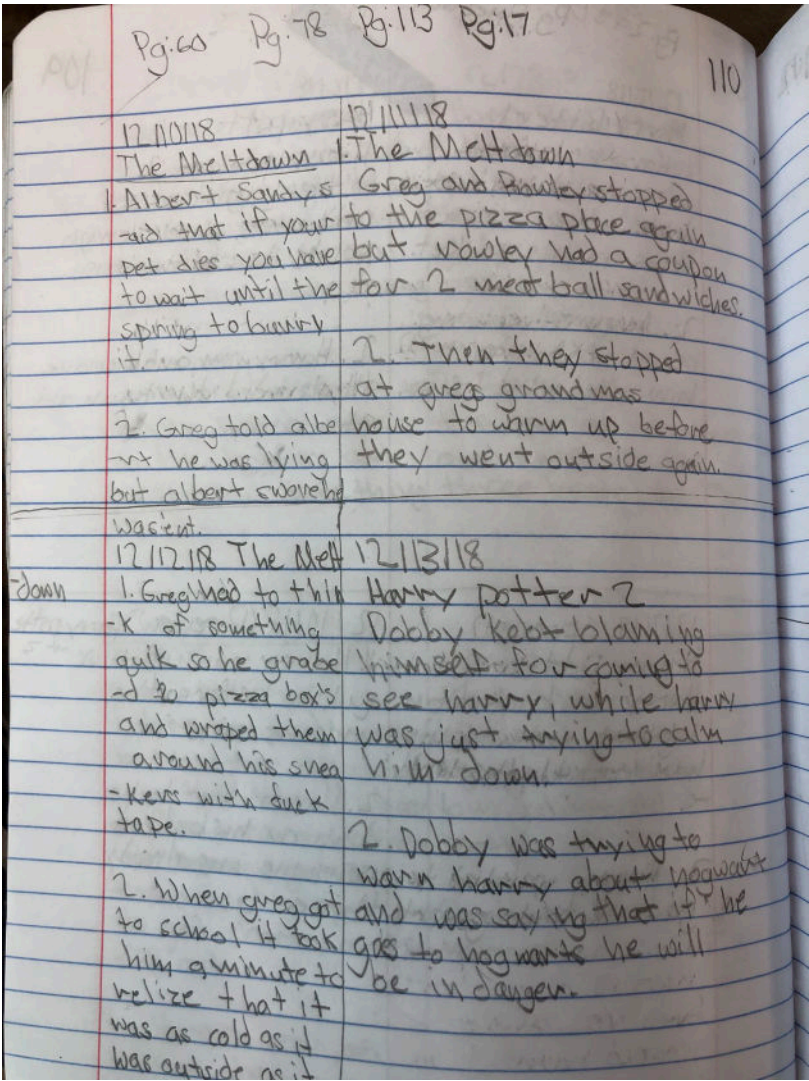
Cycle 3: Implement a worksheet-based accommodation for kids who have not gotten the hang of jotting (just three kids), requiring them to show me their jots during exit procedure or have to jot during break the following day.

Cycle 4: Do a quick walk around the room three times per week in addition to one time I actually check quick jots for slight additional accountability getting notebooks open quickly.

In the first PDSA cycle, I was able to identify from students' summary jots that a few students were fake reading because their jots were nonsensical and I knew the students could communicate thoughts via writing in other contexts. I was also able to gauge which students were grasping the events in their book. I realized, though, that it was difficult to look through all jots or to decide which jots to focus on.

In my next PDSA cycle I implemented a post-it flagging system where students chose their most impressive jot to represent each skill. I learned here that the flagging might be a good idea but didn't help my main issue with assessing students' reading struggles: time.

Figure 1: Example of a Page of “Quick Jots”



In my third PDSA cycle, I tried to help kids who weren't jotting consistently or clearly by providing them with a jot worksheet that they would use as an exit card each day (see Figure 2). This solved the problem for all but one student, who continues to struggle with jots.

Figure 2: Jot Worksheet

<p style="text-align: center;"><b>Quick Jot:</b></p> <p><b>DATE:</b> <b>BOOK:</b> <b>JOTS:</b></p> <p style="text-align: center;">•</p>  <p style="text-align: center;">•</p>	<p style="text-align: center;"><b>Quick Jot:</b></p> <p><b>DATE:</b> <b>BOOK:</b> <b>JOTS:</b></p> <p style="text-align: center;">•</p>  <p style="text-align: center;">•</p>
<p style="text-align: center;"><b>Quick Jot:</b></p> <p><b>DATE:</b> <b>BOOK:</b> <b>JOTS:</b></p> <p style="text-align: center;">•</p>  <p style="text-align: center;">•</p>	<p style="text-align: center;"><b>Quick Jot:</b></p> <p><b>DATE:</b> <b>BOOK:</b> <b>JOTS:</b></p> <p style="text-align: center;">•</p>  <p style="text-align: center;">•</p>

In my fourth and final PDSA cycle, I implemented an assessment system where once a week, I walk around the room and assess their jots during reading time. This made sense because their notebooks are already open to their jots and it’s also a perfect time for a quick conference to tweak anything not working. It has helped close the gap between the work students are doing and the work I’m able to assess.

Ultimately, these jots have helped me to eliminate fake reading in my classroom, and given me an opportunity to discuss reading skills and books with students as they read. It has also allowed me to model reading skills and allow students to practice them authentically in

texts they have chosen and are interested in, and have a record of their thinking while reading.

## Put it to Practice

### *Change Idea:*

My change idea is to teach reading skills with mini-lessons embedded in independent reading and monitor the apprehension of these reading skills via a section in students' reading notebooks called "quick jots," which they add to as they read each day.

### *Process:*

We have a prepared section in our reading notebooks for quick jots. Students jot two times as they read. We begin the year with a mini-lesson using a short shared text (e.g. a fairy tale or myth) teaching and modeling how to do a one-sentence summary quick jot. Throughout the rest of the year we pause regularly to teach and model new types of jots (e.g. character transformation jots/model) to add to their jotting repertoire and their toolbox about the thinking readers do as they read. When I teach these new skills, I pause early during our silent reading period to teach them (in a five to 10-minute mini-lesson) so students can immediately apply them after we practice them together.

To set up the quick jot section, students complete the following in 10 minutes:

1. Put a stickie note on page 100 of your reading notebook so it's easy to flip to.
2. Make a "cover" on page 100 for your FREE READING QUICK JOTS section.
3. Divide each page after that into four quadrants using a straight edge. Glue Example Quick Jot into first quadrant.
4. Keep going until the timer goes off.

### *What I've learned about implementing quick jots well every day is:*

- Assess quick jots regularly by making it a built-in part of your in-class routine instead of trying to take up tons of notebooks and churn through them. For instance, walk around three to four times a week during reading/jotting time and most of the time, make sure notebooks are open and jotting is happening. Once per week, read jots and confer about any misconceptions.
- Keep mini-lessons about reading skills short (five to 10 minutes), allow reading time for kids to practice after the mini-lesson, and have a model for kids to glue in their quick jots section for each new skill.
- For kids who have trouble jotting, make showing you their jots for

the day an exit card.

## Data and Evidence

- After starting quick jotting on our reading, the quick jots showed that all but a small handful of students are understanding their free reading books. I spotted fake reading in a few nonsensical quick jots and this allowed me to confer with those kids to offer preview stacks of more appropriate books.
- Students put post-it flags on the jots they thought best exemplified their thinking in order to streamline my assessment, but I never looked back at the notebooks. It felt like there was no time. I think I learned that this system right now isn't systematic enough. I also noticed some kids were not jotting, which throws off the system. This tweak was something that ultimately wasn't successful.
- To intervene with a few kids who weren't reliably jotting, I gave them worksheets divided into quadrants to jot on and this became an exit card for them each day. Two students were able to jot more effectively with a worksheet accommodation. The other student is still not jotting effectively. The two students will continue to use the worksheet and show it to me as an exit card, and the other student will participate in a separate book club during independent reading time with an academic coach in order to stop and think-aloud about the book.
- The practice of walking around the room once at the beginning of silent reading time almost eliminated the need for verbal reminders, and I found tapping the notebook quickly took care of the few kids who still didn't notice my physical proximity and needed a quick extra reminder to start their jots. In addition, I can now assess the jots one day each week by walking around to read each students' jots instead of having to take up notebooks. At this point, almost all of the kinks are worked out of the jotting system.

## References

- Anderson, R. C., Wilson, P.T., & Fielding, L. G. (1988). Growth in reading and how children spend their time outside of school. *Reading Research Quarterly*, 23, 285–303.
- Allington, R. L. (2002). What I've learned about effective reading instruction. *Phi Delta Kappan*, 83(10), 740–747.
- Denton, C. A., Vaughn, S. and Fletcher, J. M. (2003). Bringing research-based practice in reading intervention to scale. *Learning Disabilities Research & Practice*, 18, 201–211.
- Teachers College Reading And Writing Project. Research base underlying the Teachers College Reading and Writing Workshop's approach to literacy instruction. <https://readingandwritingproject.org/about/research-base>



# Culturally Responsive Continuous Improvement

Dr. Michelle Pledger  
High Tech High Graduate School of Education

*Continuous Improvement has a great deal of potential as a method for identifying and dismantling the structures that uphold white supremacy, patriarchy, and other engines of oppression within schools, but it doesn't do so "automatically."*

*In this piece, High Tech High GSE's Director of Liberation, Dr. Michelle Pledger, describes how she is turning continuous improvement into an instrument of liberation. To learn more about Culturally Responsive Pedagogy, check out the work of Gloria Ladson-Billings, Geneva Gay, Zaretta Hammond, Django Paris and H. Samy Alim.*

In the fall of 2019, I was entering my third year as an Induction Coach for the High Tech High Teacher Center, and I knew I needed to do something dramatically different. Newly credentialed teachers in California complete a Teacher Induction Program, which provides job-embedded support and mentoring that must be completed to finalize the credentialing process. HTH facilitates an induction program in which participants self-select into teams focused on topics of their choice. Although the previous inductees that I had coached and mentored were lovely humans and we were able to learn and grow together, I knew that we could go deeper and further by addressing an opportunity gap in the structure of our induction program, especially because our team's induction focus was Culturally Responsive Pedagogy (CRP).

CRP is a research-based pedagogy that leverages cultural competence, critical consciousness, and cognitive capacity development to improve engagement, access, and learning outcomes for culturally and linguistically diverse students. In other words, students see themselves reflected in the curriculum in accurate and affirming ways, they have opportunities to learn about social justice movements of the past and participate in social justice initiatives of the present that are relevant to them, and they develop routines to problem solve when faced with cognitive challenges. In a culturally responsive classroom, students are seen, heard, respected, trusted, challenged, and transformed.

Truth be told, at the start of the course, I felt equipped as a CRP educator, but I still felt like a novice improvement coach, and I wanted to grow in my practice to better serve my inductees so that they could better serve their students. Three factors led to teacher transformation during this induction year: time, identity work, and a culture of loving accountability, and they built on each other in tangible ways.

### **Time**

In the past, the High Tech High Teacher Center's induction program had consisted of eight meetings, though the first of these is orientation and last is a "celebration of learning," so in actuality there are six sessions devoted to continuous improvement. My previous experience attempting to facilitate a team striving to strengthen their efficacy as culturally responsive practitioners in just six sessions substantiated my hunch that we needed more time.

I reached out to the Director of the Teacher Center and the Director of Continuous Improvement to propose a pilot for the upcoming Culturally Responsive Continuous Improvement group with double the opportunities of face time, and a limit of ten participants. Thankfully, they eagerly agreed. This meant seven additional virtual meetings for my group. The compensation for this additional commitment was two-fold: materially, it meant a greater number of continuing education units, which move teachers up the pay scale; more important to me, it meant a greater sense of self-efficacy that would allow them to positively impact the lives of historically underserved students.

### **Identity Work**

The nature of continuous improvement means you are trying things out, collecting data, and reflecting, but, in my experience, teachers do better by first shifting their mindsets by doing their own identity work. For example, teachers may unpack deficit thinking about the capabilities of culturally and linguistically diverse students or

examine how their sociocultural identity impacts their curriculum and classroom decisions—just two of the competencies of a culturally responsive teacher. For example, when I was a classroom teacher I engaged in self-analysis around how my background influenced my beliefs and biases, and how they manifested in my teaching behavior. I noticed that, as a person of color, I was intentional about integrating black and brown narratives in my curriculum, but as a heterosexual and cisgender person, I had blind spots when it came to incorporating LGBTQ+ narratives in my curriculum. When I became aware of this blind spot, I was able to interrupt the inequitable practice.

The emphasis we placed on identity work was imperative to establishing relational trust with inductees, because we cannot trust people if we do not know them. I noticed that the previous year, there wasn't sufficient time and opportunity to get to know my inductees on a deeper level or strengthen the coaching relationship, so even when I did notice deficit language or problematic change ideas, it was challenging and uncomfortable to surface them because the coaching relationship was fragile to non-existent. Inductees (who come from a variety of schools) also were not able to truly get to know each other to engage in authentic collaborative learning.

The relational trust these new inductees established and maintained by spending more time together was a tremendous gift that led to tangible transformation. With more time to explore culturally responsive pedagogy and continuous improvement tools, inductees were able to co-create Plan-Do-Study-Act (PDSA) cycles that were informed by content and collegial expertise.

During our first PDSA cycle, the elementary school teachers created space for information processing by using a practice introduced by Zaretta Hammond, author of *Culturally Responsive Teaching and the Brain*. Hammond shares a framework called, "Ignite-Chunk-Chew-Review," which basically means you get the brain's attention, present information in digestible chunks, facilitate the processing of new information, and provide opportunities to apply the new learning.

The elementary educator group provided "chew" time after "chunked" learning time, and they did this in various ways: pair shares, drawing, application time, and open-ended discussions. One inductee reflection stated, "With open-ended questions, students have a variety of very interesting thoughts, questions, and ideas after Math discourse. It feels valuable to give them this processing time and allows me to see what is sticking with them."

During our second PDSA cycle, a secondary Humanities teacher wrote

that he wanted to improve “the quality and sincerity of the feedback that students give each other in their bi-weekly writer’s workshop,” by thoughtfully incorporating the use of “beautiful exemplars” and the use of a feedback-focused protocol. As he examined the data from three focus students, he found that his students were providing more specific feedback, as well as engaging in authentic revision based on the examples. They told him they appreciated the new protocol, but still found it challenging to process feedback at times. I was encouraged by how much inductees were learning with each PDSA cycle.

### **Loving Accountability**

Inductees interrogated their identity and curricular decisions through protocols and practices that placed value on caring for and encouraging each individual to grow and learn. Our practice of engaging in conversations about race, intersectional identity, and trust generators fostered a strong sense of psychological and emotional safety that allowed us to employ what I refer to as “loving accountability” when we needed to call each other in, to engage during challenging moments.

In our first week together, we developed a “problem statement” that would define the focus for our work in the coming year. One inductee noticed that the way their group had phrased their problem statement—“Too few students are carrying the cognitive load in the classroom”—placed the onus of change and the blame on the students rather than placing the change practice on the teacher. The group worked together to revise the problem statement so that the teacher became the unit of change: “Teachers are providing too few opportunities for culturally and linguistically diverse students to carry the cognitive load effectively.” At another point during the year, when a couple of induction candidates felt like they did not know enough to begin the PDSA cycle, we discussed how we often fail to try things in education because we are waiting to know enough, waiting to feel like experts, when in reality, continuous improvement is an opportunity for us to learn and improve by doing. I felt comfortable reminding inductees that the goal is not to learn first and then practice improvement; the goal is to practice improvement so we can learn.

When I think about this group now, what stands out most vividly are the various ways that inductees implemented change ideas and created a set of change packages that are available to other educators striving to facilitate learning experiences in which culturally and linguistically diverse students have more opportunities to carry the cognitive load in class, and improve their ability to do so.

Upon evaluating the change packages, there was a notable difference

in the depth and breadth of ideas in comparison to the previous year. After reviewing the post-induction evaluation, participants reported a strong sense of belonging, as well as an increased understanding in both continuous improvement and culturally responsive pedagogy. My decision to expand the course so that I could build relationships with my students resulted in authentic improvement for equity by design.

# Project Cards

*Teachers and Students  
High Tech High Schools  
and other Innovative Schools*

*Project Cards provide quick glimpses of inspiring projects designed by teachers and realized in collaboration with students.*

*Our full collection of Project Cards is available to download for free on our website, [hthunboxed.org](http://hthunboxed.org)*



## **Popular Engineering in Response to COVID-19**

Clayton Evans, Engineering and Woodshop

McClymonds High School, Oakland, CA

As the COVID-19 pandemic has ground the wheels of global capitalism to a halt, makers, manufacturers, and citizens around the world have joined forces to produce and distribute PPE and other products to fight the spread of the pandemic. In this project, students learn from these examples and identify problems in their own lives, home, or community. After brainstorming problems and identifying what can be solved with available tools, students design and document a solution. Finally, students document their process by creating an “Instructable” (that is, free step-by-step instructions available at [www.instructables.com](http://www.instructables.com)) that can be shared widely, exporting their solution globally.

### **Teacher Reflection**

I learned from this project that students have a natural sensitivity to design problems in their own lives. Getting students involved with the design process in a classroom worked best when dealing with authentic problems. When students are at home or in a distance learning context, they are immersed in those types of problems. In some ways, just being able to focus their attention with an academic tool unlocks a world of possibilities when they apply it to where they live and relate with people they are close to.

*—Clayton Evans*



**Schooling Fish**  
Matt Leader  
8<sup>th</sup> Grade Math and Science  
High Tech Middle North County

At the start of this project, students raised rainbow trout in order to reintroduce them to streams and rivers in San Diego County, as part of a larger effort led by the California Department of Fish and Wildlife. Rainbow trout are a domesticated form of steelhead trout, and are therefore used as a “model organism” to understand steelhead trout in the classroom.

When in-person school ended abruptly in March, teacher Matt Leader moved the trout to his garage, and set up cameras to “stream” them to his students as they matured. While students continued to observe and analyze the fish, they also studied the broader ecological implications (and challenges) of steelhead trout recovery in San Diego. In addition, students participated in online art workshops and critique sessions in order to create artwork designed to raise awareness of the steps needed to reintroduce trout to local waterways. They submitted these pieces to the Bow Seat Ocean Awareness Art Contest, an international competition that has been running for a decade.

This took place as part of an ongoing, multi-year collaboration between teachers across High Tech High, ranging from elementary to high school, led by Matt in collaboration with elementary science teacher Shelly Glenn Lee.

**Teacher Reflection**

Raising trout every year continues to be a great way to bring the natural world to our students.

*—Matt Leader*

**What the Image on the Facing Page Shows**

This art piece shows a mix of the causes and effects of climate change: coral bleaching, pollution, oil spills, dams, hurricanes and habitat loss. In San Diego, steelhead trout are a native, keystone species. Due to climate change and things like dams, their habitable habitats have been diminishing, causing a significant decline in the species. The uninhabitable habitats have runoff from farming, factories or sewage treatment plants. Also, sediment from human development can severely disrupt the food chain and cause a decline in all species.

*—Athena Bernheim, 8<sup>th</sup> grade Student*



## **Changemaker Profiles**

Bryony Maxted Miller, Amber Friel, Shea Hubbard, Chissa  
Duangnet, Leesa Chisholm, Adrian Kirkby,  
Cheryl Terry, Debbie Renn,  
NIST International School, Bangkok, Thailand

Students at NIST International School in Year 3 inquired into the central idea that “people’s actions can lead to sustainable change.” Students were acquiring an understanding of “communities and the relationships within and between them.” We explored this by learning about historical, global and local changemakers that made their communities better somehow. Then we reached out to our NIST and local community to find changemakers who wanted to share their stories.

In small groups, Year 3 students chose a “changemaker,” interviewed and photographed them, designed a template and wrote the content for a “Changemaker Profile.” These were then unveiled at an exhibition in our school library in which the changemakers, Year 3 parents and community members were invited. The profiles were left up and displayed on our school media screens to highlight the changemakers within our community.

### **Teacher Reflection**

The craftsmanship and quality of student writing in this unit was incredible! The type of writing required for a “profile” was something unknown to students and the writers within the groups produced thoughtful texts rooted in the information from the interviews. The designers also used new tools and apps with great resilience resulting in work that the teams were proud of.

Highlighting the amazing people within our community, and showing how that changemakers do not just exist in history but are all around us, gave students new perspectives and a sense of pride.

*–Bryony Maxted Miller*

### **Student Reflection**

It was a turning point for me to work with my mom at school about how she is a changemaker. I was a graphic designer and I had never done that before and I really enjoy doing it. We learned about how changemakers are all around us and everyone got to see what we wrote and created about them.

*–Leonardo R.*



## **Mathigami**

Kristin Komatsubara and Perla Myers, Ph.D.  
6<sup>th</sup>/7<sup>th</sup> Grade, Mathematics  
High Tech Middle & University of San Diego

Mathigami is a program designed at the University of San Diego by Perla Myers and Celina Gonzalez, in collaboration with students and teachers, that reimagines mathematics as a joyful exploration.

Mathigami is the exploration of mathematical concepts through the art of paper folding. In this year-long project, students explored two essential questions: “What does it mean to do mathematics?” and “How does origami inspire creativity, discovery, and deeper understanding of mathematical ideas?” Students explored fractions, surface area, and scale—building Sonobe cubes. They applied properties of angle relationships to find missing angles within their triangle-edge module folds. Using the Question Formulation Technique (QFT) protocol, students posed and explored their own mathematical questions for the origami Golden Venture models they created. A visit to the University of San Diego allowed students to partner with university undergraduates to explore new folds such as a hyperbolic paraboloid and a giant firework. Through the project, students recognized the importance of making mistakes, of persevering, of exploring deeply and of being precise in their calculations, folds, and communication of mathematical ideas.

### **Teacher Reflection**

As math teachers, we should also be math students and have first-hand experiences with productive struggle, posing questions, and collaborative learning. Mathigami has ignited my love for origami but more importantly, helped me to redefine the math skills and experiences we value. Students now see math as a creative discipline where their math ideas and questions drive the learning.

*—Kristin Komatsubara*

### **Student Reflection**

Mathigami seemed so far from what I considered to be math. I approached it as more of an art project and so did many of my peers. However, we came to learn that it was far more than just about aesthetics but rather about the mathematics behind our art. Looking at how far along some other groups were compared to us didn’t bring us down but rather challenged us to try harder and work more efficiently to achieve the most precise project we possibly could.

*—Hisami Oliva*



**The Good News Project**  
Shira Feifer, Meg Hassey, Jessica Lewis  
4<sup>th</sup> Grade  
High Tech Elementary Explorer

In the Good News Project, fourth grade students set out to learn all about the news - from identifying strong news stories, to getting the facts and understanding your perspective, to report it out. Students studied different forms of news media, learned to distinguish facts from opinions, thought about the author's purpose, and began to produce their own news segments.

When COVID hit, students also learned that the news can be disturbing and overwhelming. Thus, students focused on reporting good news—positive news that is high-quality and reliable.

They started creating draft newscasts on the very first day of the project, refining their research, writing, presenting, and filming skills. As they learned more and more about what makes a news story, they continued to iterate their draft newscasts.

When in-person school ended due to COVID-19 the students kept working, creating Good News reports from home, and ultimately sharing them in an online exhibition! Students created a “Good News Playlist” consisting of all their best good news stories uploaded to YouTube and shared publicly at their virtual exhibition.

**Teacher Reflection**

This project began because students were showing more and more interest in the news, so we decided to capture this interest and run with it!

When the pandemic hit, we felt a tug towards positive news, or “good news” to help students process the overwhelming world around them. Students dug deep into the good news stories emerging during this stressful time, and even produced their own “good news stories” about their own lives. Students recorded news segments about increased family time, being able to learn in their PJs, and having more time to read at home. While this project involved a lot of pivoting, the end result was just as powerful as what we we had originally envisioned, if not more so!

*—Meg Hassey*

# teenvoices

"We're smarter than you think..."

submissions

## Editor's Picks



### Shoot Like a Girl: My Journey to Being the Only Girl on the Boys Varsity Basketball Team

Lilly V.

Normally when kids grow up they want to become famous, a celebrity, or someone for others to look up to. I was different than most kids. Growing up playing basketball I've always wanted bigger competition because I am a very competitive person. Never in a million years would I think that I would be a starter on the boys high school varsity team.



### 50 Years of Progress, One Day at a Time

Bean C.

I don't know if there's anything I want to take with me from high-school. Perhaps the ability to brush off hurtful comments and cruel assumptions. As a teenager who is just trying figure out myself and life, some days that seems easy and others it is downright agonizing.



### Is Winning The Lottery A Death Sentence?

Daniel S.

Everyone has always imagined winning millions when buying a lottery ticket, imagining how amazing life would become having everything you could ever dream of. Well ask 70 percent of lottery winners who go bankrupt within the first 5 years of winning the lottery.



### Chip's Garden

## **East Coast, West Coast, Worldwide**

Steve Masson & Matt Hauptert

High School Humanities

Hudson Valley Pathways Academy & High Tech High North County

This project brought together students from High Tech High North County (HTHNC) in San Marcos, CA and Hudson Valley Pathways Academy (HVPA) in upstate New York to design, write, and produce a digital magazine that documented their experiences, thoughts, ideas, and predictions for the future during the tumultuous summer of 2020. Students collaborated daily on Zoom to develop a title and mission statement, create content, and build the site.

Twice a week, students were joined on Zoom by guest speakers—including *The New York Times Magazine*'s Sam Anderson and NFL broadcaster Charles Davis—who ran workshops and offered students critical feedback on their work. The final product was *Teen Voices*, a “platform for the experiences, passions, and opinions of teens today.” You can read it at [teenvoices.net](http://teenvoices.net)

### **Teacher Reflections**

The most exciting aspect of the Teen Voices projects was watching students from HVPA connect and collaborate with the students from HTHNC. HVPA students were largely in charge of the look and feel of the site and ended up posting content generated from the HTHNC students. They worked really hard to honor their work and make the site look as professional as possible.

—Steve, HVPA

Distance learning has been a challenge for every teacher, but this project gave us a chance to use that as an asset. Collaborating with Steve from across the country was an opportunity I might never have otherwise considered, and it gave kids a chance to do something that was exciting and different and meaningful. HTHNC students were working on this project as part of a required summer school course, and it was amazing to see so much passion, engagement, and creativity despite the dual challenges of summer school and distance learning.

—Matt, HTHNC

### **Student Reflection**

I loved collaborating with other writers. The mix of guest speakers and professional guidance helped me improve my writing so much.

—Cianan

## Inside the dog house

By walker settle

**Characters** SPARK is a golden retriever gold and tan in color age 3

JAZZ is a mix breed and is mostly black and grey in color age 7

**Setting** is an average size living room with a table and a couch laying against the far wall near the front door of the house. The other side of the door is the staircase up to the second story.

### At Rise

*JAZZ is sitting on the couch trying to take a nap and SPARK is pacing back and forth and is exploding with energy running in and out of the room trying to get the attention of the owners but comes back in the room.*

JAZZ

Stop running its annoy-

SPARK

Do you know why everyone is back in the house or why-

JAZZ

I said to be quiet and know I don't know why does it matter

**Quaranscene**  
Carol Cabrera & Alden Walters  
9<sup>th</sup> Grade Humanities  
High Tech High North County

Circle Circle dot dot Theatre Company, a local theatre company in San Diego, went online right as quarantine hit the state of California, asking for scenes written inspired by people's quarantine experiences. Inspired by this project, 9<sup>th</sup> grade Humanities students wrote playwriting scenes in response to their own experiences of quarantine. Some students wrote comedies, some wrote tragedies, some wrote sci-fi scenes that questioned what life might look like once we emerge from this shared experience as a planet. Students read one another's scenes out loud in class, connecting through the art of theatre and storytelling from our different physical locations.

**Teacher Reflection:**

Students all had a way to get into the writing since they were to be inspired by what they were living in that moment: quarantine. There was so much student voice and choice throughout this project and it was exciting to see the unique ways that students were expressing themselves and their stories.

As a playwright myself, I have used the writing of fiction and the mode of theatre to work through my own thoughts about the complex times that we are living through. I was featured by Circle Circle dot dot a few times throughout the spring during their series of online plays, and to hear my stories out loud and to share those stories with a larger community was incredibly powerful and healing for me and my own life. To watch my students read one another's plays out loud, laugh at one another's jokes, and drop sad faces into the chat when something sad happened in a scene, was incredible, and felt like such an empathy-building exercise for our team as a whole. It was also the first thing that we did in distance learning, to write scenes and read them out loud together, so we were all learning together to navigate a whole new way of learning, and the students were so incredibly thoughtful as we braved something brand new together. Their scenes were incredible and it was so lovely to see their different voices shine!

*—Carol Cabrera*

# Improving FAFSA Completion Rates

Dr. Ben Daley

High Tech High Graduate School of Education

*In this article, we are attempting to represent the findings of a major Continuous Improvement project in a way that is thorough, rigorous, and practical.*

*This is new territory for us, but it's also new territory for everyone else—there is currently no academic journal of Continuous Improvement in education anywhere in the world. If you have feedback on this article, and/or you feel inspired to write your own, we would love to hear from you—email [unboxed@hightechhigh.org](mailto:unboxed@hightechhigh.org).*

*Also, if you're pressed for time, skip to the **tl;dr** box at the end of the article on page \_\_\_\_.*

Students from top quartile families are almost five times more likely to have earned a bachelor's degree than students from bottom income quartile families (Cahalan et al., 2019). Similarly, white people are about twice as likely as African American or Latinx people to have a college degree (National Center for Education Statistics, 2019). In response to this, in 2018 the High Tech High Graduate School of Education (GSE) launched CARPE, a network of 19 high schools (and growing) in Southern California to increase the number of students who are African American, Latinx, or from low-income backgrounds who apply, enroll, and ultimately succeed in college.

## Our Goal

To reach the goal of increased college access and based on previous work, this network began with a plan to focus on four areas: financial access, the college application process, students' sense of belonging in college, and reducing summer melt - students who leave high school with a reported plan to attend college but do not show up in the fall. Due to the accessibility of public data on Free Application for Federal Student Aid (FAFSA) completion and with a hope of creating some early wins, the network chose to initially focus on increasing FAFSA completion rates. The network goal was to increase FAFSA completion rates from 64% to 74% by March 2, 2019 (the deadline for FAFSA in California in order to qualify for the Cal Grant, a scholarship program for lower and middle class families who meet certain grade and income requirements). By March 2<sup>nd</sup> 2019, the network improved to 70%, and by March 2<sup>nd</sup> 2020 improved further to 75%. This report focuses on our work with eight large comprehensive high schools within the CARPE network during the 2018-19 school year.

## Investigate The Problem

To launch this project, high school seniors from the target population were interviewed by CARPE staff via empathy interviews to learn student perspectives on college access. From these interviews, it became clear that financial aid needed to be a significant area of focus. Further, student interviews increased awareness on our team that we needed to pay more attention to working with family members, particularly on navigating FAFSA processes and related areas of financial aid. In addition to those empathy interviews, we reviewed relevant scholarly literature.<sup>1</sup>

The issue of FAFSA completion has received national attention recently. Every year, two million Pell grant eligible students do not file the FAFSA, which has been found to be an unnecessarily complex and poorly timed process (Gates, 2015). One of the most common reasons for failing to complete the FAFSA is the mistaken belief that the family wouldn't qualify for financial aid (Davidson, 2013). Several studies have found that supporting families with the financial aid process leads to better student outcomes. In one study, merely giving families information about applying for financial aid did not have an impact, but accompanying this information with direct help

---

1 This literature review is excerpted from Daley, B. (2017). Improvement science for college, career, and civic readiness: Achieving better outcomes for traditionally underserved students through systematic, disciplined inquiry [Unpublished doctoral dissertation]. University of California, San Diego.

filling out the application led to more FAFSA filing, more financial aid received, and more students enrolling in a four year college (a 7.7 percentage point increase) (Bettinger et al., 2009). In 2007-2008, 42% of community college students eligible for Pell grant funding did not fill out the FAFSA, making them unable to receive federal aid to which they were eligible (McKinney & Novak, 2013). In a study of first year community college students, not filing the FAFSA negatively impacted persistence from fall to spring semester in the first year and was the strongest predictor of persistence of all factors studied (McKinney & Novak, 2013). In one recent randomized control study, Texas families who opted into an intervention received weekly text messages from February through April about the FAFSA process and the status of their FAFSA application; this led to a six percentage point increase in FAFSA completion rates (Page & Casleman, 2019). The same authors performed a similar intervention with community college first year students which led to 14 percentage points more students persisting through spring of their second year (Castleman & Page, 2016).

## What we tried

Four change ideas to increase FAFSA completion: From talking with students, reviewing literature, and synthesizing findings from an earlier college access network, the CARPE team selected four practices to highlight and propose to the network (Daley, 2017).

### *Practice #1: Support early FAFSA completion*

The CARPE team hypothesized that if students completed the FAFSA in October of senior year, they could learn in early November that they had received a Cal Grant. Knowing that tuition at a four-year college was covered, these students might be more inclined to apply to a four-year college (such as a University of California or California State University program) by the November 30 deadline.

### *Practice #2: Identify students who have completed FAFSA*

By downloading data from the California Student Aid Commission and matching this to internal school data on all seniors, it is possible to have relatively real time data on which students have not yet completed FAFSA or have an unresolved error in their application.

### *Practice #3: Proactively follow up with individual students*

Rather than waiting for students to come to counselors or other adults with questions, staff should reach out to students through a proactive counseling model (Dukakis et al., 2012).

#### *Practice #4: Host Family “Sit and Do” nights*

Rather than holding family nights where students receive information about the FAFSA process, research suggests that helping families fill out the FAFSA in the moment can increase FAFSA completion and college enrollment.

### **Network Activities**

To support schools across the network in making improvements in FAFSA completion rates, during the 2018–19 school year, the GSE team held two two-day convenings (one in December, one in February). At these convenings, teams engaged in a number of activities, including learning about the proposed (optional) practices and brainstorming other changes. Teams also took stock of what systems were already in place in their schools to support students in completing the FAFSA as well as reviewing data on current FAFSA completion rates and goal setting for this year. Teams implemented their ideas between convenings one and two, reviewed status at convening two, and then continued to implement ideas as well as implementing new ideas after convening two and before the California FAFSA deadline of March 2. To support teams, CARPE staff coached schools between convenings via video calls and on-site visits.

### **Investigate Variation**

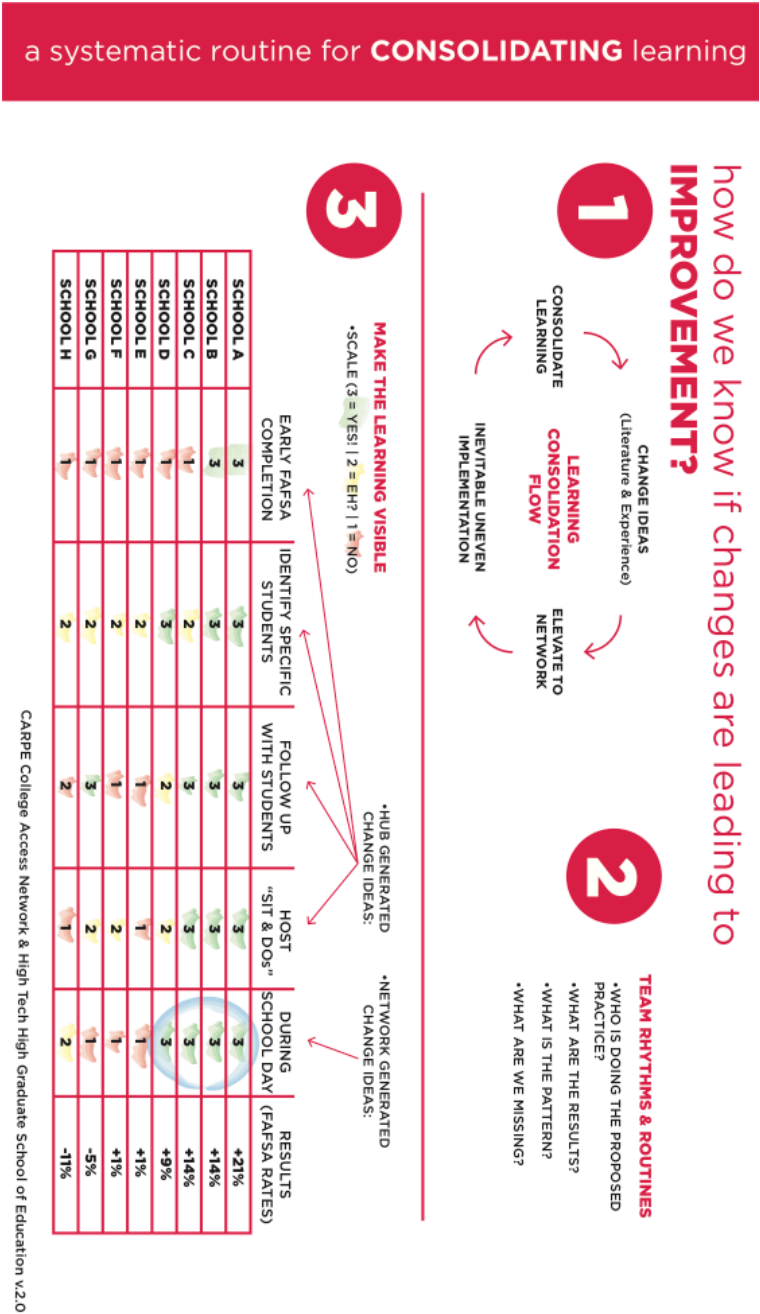
In order to investigate the extent to which the proposed practices had an impact across the network, a “consolidation of learning” activity was completed by CARPE staff.<sup>2</sup> The purpose of this process is to capture our learning at the end of the year, but also during the year to highlight bright spots in the network for further investigation and to surface teams that need more support. This process begins with identifying likely high leverage practices (for experience and literature), elevating these practices to a network, recognizing and acknowledging that there will be uneven implementation of these practices, and then using that unevenness as a natural experiment to investigate if doing these practices actually leads to the intended outcomes (see Figure 1).

For the initial round of consolidation of learning, the CARPE team grouped the eight large comprehensive high schools (high, medium, low) based on looking at their FAFSA completion rates compared to the previous year as well as subjective CARPE staff knowledge about team functioning. Then, each school was rated by CARPE coaches on

---

2      Thanks to Alicia Grunow and Sandra Park from the Improvement Collective for their support in this process.

Figure 1: A Systematic Routine for Consolidating Learning  
Image created by Enrique Lugo and Rodrigo Arancibia



a scale of one to three on the extent to which the school implemented the proposed change ideas.<sup>3</sup>

By completing this activity, CARPE staff gained increased confidence in the effectiveness of practices 2, 3, and 4. Practice 1 was difficult to test in year one because the first network convening was too late to propose this practice during the 2018-19 cycle.<sup>4</sup>

### **Additional Practices**

After reviewing the level of implementation of the proposed practices, CARPE staff discussed if there were other practices that schools were implementing beyond those originally proposed. By completing this analysis, an additional practice emerged: doing interventions with students and families during the school day rather than only after school. This includes taking advantage of existing opportunities at school, such as through AVID classes, advisory periods, and senior teachers who reach many or all students in class each day.

### **Results**

The GSE updated this chart several times throughout the spring. First, the GSE filled it out during a team meeting in January 2019 based on our own incomplete understanding. Later in the spring, network staff followed up with individual schools to understand how they had applied the suggested practices. Finally, we updated this chart with the actual results on FAFSA/Dream Act completion. Based on these official results, six of eight large comprehensive schools in the network had more students completing the document in the 2018–19 school year by the March 2 deadline. As shown in Figure 1, while the pattern is not completely clear, there is some evidence that implementing all of the five high leverage practices led to increased FAFSA completion rates. Specifically, sitting with families and doing the FAFSA/Dream Act and working with students during the school day seem particularly promising. While the evidence in this paper does not rise to the level of a randomized control trial, it has nonetheless been useful to our team to systematically check whether our ideas for how to improve are actually working.

---

3            1 = did not implement. 2 = implemented but only modestly. 3 = strong implementation of the practice.

4            The team has since found a correlation between supporting FAFSA completion early and overall results. The highest performing CARPE schools based on overall FAFSA completion rates also have strikingly high completion rates in October (as high as 90% in small schools; as high as 50% in large comprehensive high schools).

## Next Steps

With our increased confidence in these change ideas for increasing FAFSA, we began discussing these results with teams to encourage greater implementation in the 2019–2020 school year. Some other practices from some of the CARPE schools that seem worthy of further investigation include holding phonathons (with scripts), having childcare and dinner at family FAFSA events, exploring peer to peer supports, and identifying special supports for specific populations (e.g. Dreamers, EL, migrant, homeless, divorced parents). Finally, while we will continue to work to increase FAFSA completion across our network, we are also shifting to other interventions aimed at summer melt, belongingness, and the college application process. We hope to share progress on this work in future reports.

### tl;dr: Advice For Your School

Take concrete steps to support more students in completing the FAFSA; this may increase college access and success.

Suggested practices include:

1. Support students to complete FAFSA in October
2. Make sure you can access data on which students have completed FAFSA, and match this to the school records of all seniors
3. Conduct individual follow-ups with students who have not yet completed or have an error,
4. Help families fill out the FAFSA—don’t just tell them about it
5. Make your FAFSA efforts part of the school day—don’t leave before- and after-school.

Schools and networks should follow a routine for systematically investigating whether proposed changes actually lead to improvements. Several times a year, practice a disciplined “consolidation of learning” routine including attending to which practices different schools or teachers have implemented and cross referencing this to results on important outcomes.

## References

- Bettinger, E. P., Long, B.T., Oreopoulos, P., & Sanbonmatsu, L. (2009). *The role of simplification and information in college decisions: Results from the H&R Block FAFSA experiment*. National Bureau of Economic Research. <https://www.nber.org/papers/w15361>
- Cahalan, M., Perna, L. W., Yamashita, M., Wright-Kim, J., & Jiang, N. (2019). *Indicators of higher education equity in the United States: 2019 historical trend report*. Pell Institute for the Study of Opportunity in Higher Education. <https://eric.ed.gov/?id=ED595444>
- Castleman, B. L., Page LC. (2016, Spring). Freshman year financial aid nudges: An experiment to increase FAFSA renewal and college persistence. *Journal of Human Resources*, 51(2), 389–415. <https://doi.org/10.3368/jhr.51.2.0614-6458R>
- Daley, B. (2017). *The \$50,000 prize: An improvement project to increase Cal Grant award rates* [Unpublished manuscript]. High Tech High Graduate School of Education. <http://bit.ly/hthcalgrant>
- Daley, B. (2017). Improvement science for college, career, and civic readiness: Achieving better outcomes for traditionally underserved students through systematic, disciplined inquiry [Unpublished doctoral dissertation]. University of California, San Diego.
- Davidson, J. C. (2013). Increasing FAFSA completion rates: Research, policies and practices. *Journal of Student Financial Aid*, 43(4). <http://publications.nasfaa.org/jsfa/vol43/iss1/4>
- Dukakis, K., Duong, N., de Velasco J. R., & Henderson, J. (2014, August). *College access and completion among boys and young men of color: Literature review of promising practices*. John W. Gardner Center for Youth and their Communities. <https://files.eric.ed.gov/fulltext/ED573658.pdf>
- Gates Foundation. (2015). *Better for students: Simplifying the federal financial aid process*. [https://postsecondary.gatesfoundation.org/wp-content/uploads/2015/07/FAFSA-Approach\\_FINAL\\_7\\_7\\_15.pdf](https://postsecondary.gatesfoundation.org/wp-content/uploads/2015/07/FAFSA-Approach_FINAL_7_7_15.pdf)

- McKinney, L., & Novak, H. (2013). The relationship between FAFSA filing and persistence among first-year community college students. *Community College Review* 41(1), 63–85. <https://doi.org/10.1177%2F0091552112469251>
- National Center for Education Statistics. (2019, February). *Indicator 27: Educational attainment. Status and trends in the education of racial and ethnic groups*. [https://nces.ed.gov/programs/raceindicators/indicator\\_RFA.asp#info](https://nces.ed.gov/programs/raceindicators/indicator_RFA.asp#info)
- Page, L. C., & Castleman, B. L. (2019). Customized nudging to improve FAFSA completion and income verification. *Educational Evaluation and Policy Analysis*, 42(1). <https://doi.org/10.3102/0162373719876916>

# We're About All Kids, and All Kids Being Successful

Dr. Adriana Lepe-Ramirez  
Escondido High School

*Escondido High School principal Dr. Adriana Lepe-Ramirez has been a part of the CARPE College Access Improvement Network since its inception in 2018. The CARPE College Access Network is a college access network housed out of the Center for Research, Equity, and Innovation (CREI) at the High Tech High Graduate School of Education. Its aim is to systematically get more students who are Black, Latinx, or from low-income backgrounds into, and through, college.*

*The percentage of seniors who completed their FAFSA forms at Escondido High School (required to apply for federal financial aid) jumped from 60% in 2017 to 76% in 2020. In this interview, Dr. Lepe-Ramirez tells Rodrigo Arancibia and Cesar Fernandez from the Educated Guess Podcast about her own experience of education, her path to school leadership, and what drives her commitment to helping kids navigate the path to college.*

*This article is a collaboration between High Tech High Unboxed and the Educated Guess Podcast. We're releasing an extended version of this interview as an exclusive crossover episode on the High Tech High Unboxed Podcast.*

## RODRIGO ARANCIBIA

Thank you, La Reina del Norte, Adriana Lepe-Ramirez, for joining us. We also have Cesar Fernandez, host of the Educated Guess podcast, and Katie Yording handling the boards on the phone joining us. And this is a crossover between the High Tech High Graduate School of Education, and the Educated Guess podcast, which Cesar and I - but mostly Caesar - have been running for the past three years. And on The Educated Guess podcasts we're trying to get the origin stories of

amazing educators and then just have honest conversations, ‘cause a lot of what we hear in education is a sanitization of the truth. So, I’m gonna probably cuss. But tell me a little bit about where you grew up, where you’re from and what your educational experience was like growing up. What was that like for you?

### ADRIANA LEPE-RAMIREZ

Alright. Well, I grew up in East LA in a little town called El Sereno. High poverty, large Latino population. Most of us were Mexican or what we thought was Mexican. So, like a Mexican, Salvadorian ‘cause, you know, there, everybody’s “Mexican.”

I can’t say that I had a great experience. I feel like educators usually have another educator that they can say “This teacher really inspired me or really believed in me.” I didn’t have that. I saw that in my sister’s and my brother’s journey, but not in mine. I’m the youngest of three, and my older brother and sister were über smart and like, captain of the football team, and I just wasn’t ready to try that hard, just to be real. So, going into middle school and high school, all the teachers would get really excited to hear that another Lepe was coming into their classroom. And yeah, I had to make it real clear that they’re not going to get that same “Lepe experience.”

So most of my friends, we kind of jumped from one year to the next without any real guidance, without any real direction. And my senior year was probably the first time we spoke to a college and career tech or counselor. And the conversation was kind of like, “Well, what community college do you want to go to?” And I said, “Well, what do you mean, what community college do I want to go to?” I wanted to go to Cal State LA cause that’s—that was the local CSU in my community. And you know, she laughed at me, you know, she was like, “No, I’m serious. What community college do you want to go to? And you know, I said Rio Hondo. I didn’t realize that there were courses that I had to take and there were pathways that I needed to be on in order for me to get to Cal State LA. I had decent grades, but my friends and I, we just didn’t know. And so, the majority of us ended up either at East LA College or Rio Hondo Community College.

### RA

This is a typical story that we hear with educators, you know, they didn’t really have that rich experience, um, in their formative years, but there had to have been a moment where you turned that corner and it sounds like it was in community college. Maybe there was a professor that inspired you or maybe it was just the experience of being with

others in community college where you said, “Hey, I gotta make this move and I gotta get to that four year and do such and such.” When was that moment for you?

ALP

Honestly, I think that moment came from me when, when I got pregnant with my son and realized I needed to figure out my life because I was having a baby.

RA

How old were you?

ALP

I was 18 when I got pregnant. Again, I wasn’t the best student, so it wasn’t like I left my high school prepared for much. I remember walking into high school classes, and there were notes written on every chalkboard that lined every wall, and we spent fifty minutes just copying the notes and that was class. So, when I got to Rio Hondo I struggled and I didn’t know some of the basic stuff that I probably should have known, I did have professors say, you know, “College isn’t for everybody, and you just might want to rethink this.” Yeah, no, it was amazing. My self-esteem was great, really high at that point...

I did fall in love with history. Like I fell in love with the subject and I fell in love with the way some of my teachers talked about it, which made it so relatable and understandable. And it was the way they taught me history that made me fall in love with it. That led me to decide to, to major in, or at least get a minor in history and major in social science. But to say like, somebody really inspired me. I knew I wanted to work with at-risk kids, that was my jam. I wanted to work with kids who represented my group of friends that didn’t have the same opportunities that I had and ended up in jail or ended up dropping out or ended up just not making it. And they didn’t make it because they didn’t have the supports that they needed and the spaces where they should have felt most safe. So that’s what I wanted to do, but I didn’t know what that looked like. I didn’t know it was going to look like becoming a teacher and eventually moving into being an administrator. I just knew I wanted to work with that population.

RA

Was there a particular moment where you’re like, “Yo, I’ve got to do this”?

ALP

I think it's just always been there. I lost my first friend to gang violence in middle school, you know, I could look back at my first-grade class pictures and see little Robert Dalian who was super sweet and didn't even make it to the ninth grade. The boys that I graduated sixth grade with, I can't remember graduating high school with them. They either moved away or they went to jail or they went to continuation schools.

RA

How does after-school come into your world?

ALP

Again, I got pregnant when I was 18 and I needed to work. My son's dad left shortly after I got pregnant, so I started working as an instructional aide in an elementary school. And that was when I fell in love with teaching, watching the teachers spark that excitement for learning, and the creativity that they were able to use in everything that they did, whether it was teaching, reading or math, everything was creative and engaging and the kids were just so excited to learn. And that's what made me fall in love with the teaching aspect.

RA

Sounds like you've had a really good experience being an instructional aide. So, I mean, the teachers you worked with obviously were amazing. I mean, I know that it was my experience as an instructional aide that really turned me on to be an educator. So that honestly was the catalyst for you wanting to be in the classroom also?

ALP

I think that was the biggest indicator that this is where I wanted to be, was watching how they literally changed kids. Does that make sense?

RA

Absolutely. 100% on this podcast, it makes sense. There are some places that it doesn't make sense. That's what we want every adult on campus to be able to do. Absolutely. And so, wait, so you're an instructional aide and then how again, like, I'm sorry, I'm harping on the after-school stuff.

ALP

I had a pretty amazing principal at the elementary school. I was working at Sierra Park Elementary in El Sereno and the principal at the time was part of the after-school program movement that at that time was starting LA's BEST. And at this point I already had my son and I needed a job. My principal was in charge of the after-school programs and managed several schools, kind of like a regional manager, if you will, and there was a position that was open at Griffith elementary school I applied, I interviewed, I got it. I became their drill team coach!

RA

The real question is, did your team use the flags or the shields for props?

ALP

It was all arms!

RA

Oh, alright, all arms! I love it. And how, how long were you in the after-school space?

ALP

Maybe like six or seven years. I went from drill team to homework club. I worked anywhere from kinder to sixth grade. Eventually I became after-school coordinator back at the school that had first hired me as an instructional aide.

RA

Give us your catalog of work as a teacher and an administrator. Obviously, we know you're principal, but give us the whole catalog.

ALP

Okay, I started teaching at a charter school - not a charter school like what you're probably imagining, like a "choice school" - it's called Soledad Enrichment Action, and we serviced all of the "at-risk kids." So the students that came to us were just getting out of Juvenile Court and Community Schools, so they had already been expelled from LA Unified and there was really nowhere else for them to go.

Just to explain it, it's one school but there's 18 different classrooms all over LA County. It stretched from North Hills to Pomona and everything in between. I started working in the Crenshaw area. That was my first classroom, and back then you were allowed to teach under an emergency credential, but they were quickly coming through with No Child Left Behind and they were only allowing teachers who had full credentials to teach. So, within a couple of years, I lost my classroom because I hadn't cleared my credential - I was in the credential program, but I hadn't finished. So, they moved me into special ed because special ed had a one-year grace period - that is, you could still work under an emergency credential for sped. So, I worked in special education for the resource kids within the same school system.

When I got my full credential, I went to Soledad Enrichment Action's South Gate site for a few years, but after a few of my kids were shot and died, it was really rough. I decided to make the leap into admin and I was hired as an assistant principal through the Alliance for College-ready Public Schools. So, a very different charter. And the exciting part though was that I was able to open a school site in Watts, so there were eight of us and we were able to build it pretty much from the ground up. Then the opportunity to become an assistant principal at a comprehensive high school out in Riverside opened up. So, I went from Watts to Menifee and I worked as an assistant principal for Paloma Valley High School, so that was a little different.

I was at Paloma for about three years and then I transferred within the same school district. I transferred to Perris high school. So, I was at Perris High School for about six years.

#### CESAR FERNANDEZ

And were there differences between Pomona and Perris?

#### ALP

There were some significant differences: Perris High School's full student body were students of color, and a lot of poverty in that area. In Menifee it was about 60% white, 40% Latino, a more affluent neighborhood, so a population that I wasn't necessarily accustomed to coming from the background where I taught and you know, moving into an assistant principal position, it was definitely a transition.

#### RA

How does the opportunity open up for you to come down south to Escondido?

ALP

I had been an assistant principal for almost a decade and there were some changes in the district, and I figured, you know, "This is my time." For a long time, you doubt yourself and you think you need to learn more or get more experience in certain areas. And I looked around, and Escondido really had the demographics that I was looking for. It had the history that I was used to. And just looking at the school and reading about it, it just really felt like home and I knew that was where I wanted to be. So, I applied and I was lucky enough to get it. Now I'm officially the first person of color in 120-odd years to call myself the principal.

RA

Yeah, I was going to say it. I'm super curious. Like day one, boss lady walks in, Latina, what are you thinking when you're walking in the first day?

ALP

Holy shit.

RA

Yeah. You ain't lying, huh? Everything is your responsibility. Every kid, every parent, everything is your responsibility, huh?

ALP

Yeah. To the Roundup they use to kill the weeds too, you know.

RA

And did you have anybody that was already working here, some kind of support system in Escondido? Somebody who kind of waved you in?

ALP

I came in really not knowing anybody. I can't say I didn't have support. I did. I think my name came up as a candidate because the UCSD/Cal State San Marcos Joint Doctoral Program has a strong presence in this area. So, when my dissertation chair knew that I was applying, she reached out to some folks. And so, I was given an interview. So, I did have support and I had people that I knew I could talk to, I just didn't

know anybody! It wasn't like I already had a friend within the district. It was a leap of faith. 'Cause no one knows me out here. They don't know what I've done. They don't know my history, and I have to build that from scratch because it's not like, "Oh, I knew her when she was in the classroom and she was bad-ass" or "We did drill team together," like, no-one knows, there's no history.

But my friend [San Pasqual High School principal] Dr. Martín Casas has been just absolutely a rock star with me and helping me network and meet some fine folks like my friend Rodrigo here.

CF

I am pretty familiar with the young mother going into education - that was my mom having me at 18 and having to take me to college with her. At this point, when you become principal, how far along is your son into his education and how did your experience shape your vision for his experience at school?

ALP

I think I put a lot of pressure on him. And when we moved out to Riverside, we, um, we kind of settled in and you have to remember my son comes from East LA where, you know, they're putting their money together to buy a can of soda from the ice cream truck. So, to go from that to a space where kids have three or four Gatorades in their backpack, you know, I don't think he felt like he fit in. I think he dealt with a lot of racism and he ate a lot of it for my sake because he knew that I was living out my dream. Like, this was my path. So, I think he stayed quiet through a lot really ugly stuff—teachers telling him "This is America, you need to speak English," people calling him a beaner, a cherry picker, he had a really rough time, so he rebelled a little bit. He refused to get his A through G requirements, meaning he couldn't go to college, and his counselor at his particular school didn't help either, was just kind of like, "Well, he doesn't want to." I think his counselor was also the counselor for the athletes, so if you weren't going to a D1 school on a full scholarship, they didn't care about you. I think they saw a little brown bean walk into their office with gauges in his ears and they knew he was going to be a piece of shit and they let him give up on himself. You know, they didn't believe in him and what he could do. And my son needed more than just me to be his cheerleader and nobody else was cheering for him. You know, like your mom can say you're amazing and you're super smart until she's blue in the face. But if you hear it from somebody else, it means something. And I don't think there was anybody there to tell him how amazing he was.

So, the boy struggled a little bit. He moved to LA with my parents, went to East LA college and ended up on the Dean's list. I think he was just defeated in high school, but he's killing it at community college. He's just passing all of his classes. He loves school. He wanted to be a high school counselor, then he took sociology and absolutely fell in love with it. So now he wants to be a sociology professor. He's getting ready to graduate at the end of this semester, and then he's transferring hopefully to UC Riverside to finish up his degree.

RA

Hey, well, I'm proud of you sis, 'cause that's, that's hard, fam. So, your experience raising your son, that obviously influences how you lead your school, you know what I mean? How are you communicating that when you're talking to your team?

ALP

Honestly, I think from the moment I walked on to this campus, my message was about ALL kids. Not just the kids that show up every day, not just the kids that want to do the work, but ALL kids: the kid that's getting high in the bathroom, the kid that's just making poor choices. We're about all kids, and all kids being successful.

And I think it was a little overwhelming for some folks, right? It seemed unrealistic. But I think at the core, the teachers get it, they know we have to be about all kids and making sure that the practices that we implement and the rules that we roll out are really equitable, and we're not creating those systematic barriers that keep kids from being successful. And I'm not saying we're perfect, but we're always open to conversation and poking holes and really using different lenses to see how we're impacting our kids.

RA

What's been the biggest learning between first stepping foot on Escondido's campus and first joining the CARPE College Access Network, and then from CARPE to now? Are there two different learnings or is there one learning?

ALP

The biggest learning from being a part of the network was understanding that sometimes my team needs to hear it from a different space. So, it doesn't have to come from me.

There were a lot of things that I was asking to happen, but being a part of the network gave them a space to make it their own journey, versus “We’re doing something that the principal wants us to do.” And that was huge. That was a big lesson, like “You need to get out of your damn head. You need to step back and let your people do what they want to do the way they need to get it done so that they could own it and they can love it and they can live it every day.”

RA

Was there a singular point that you remember where you’re like, ah, that’s the one, or is it, has it just been an accumulation of little wins here and there?

ALP

I think I honestly saw it when we were in the interview process to be a part of CARPE because the things that we were being asked and some of the data that we had to collect made people a little more curious about what we’re doing. And then the interview process allowed people the space to share what their passion is and how they support kids.

Then, after the first time we met together, it just got exciting. They were able to own a lot of the movement moving forward. So, then my role just became a supporter. Like, “What do you need to get it done?” You know, it’s no longer pushing like “Do this and do this and we should do this and how about we do this?” Now it’s them saying, “Oh, can we do this? Can we do that? Can we have a space to make this happen?” And then I just get to be like, “Yes, yup, done. Let’s do it.”

RA

Remove barriers and let them do their thing, right?

ALP

It’s just been amazing, the work that they’ve done, and this is a team of counselors that have worked together for a decade. And the work that they’ve really been able to do collectively is amazing.

And like I mentioned before, I’d already had conversations with my admin team about removing those barriers that keep our students from, from filing for financial aid, so when we came into the CARPE space and the team time, I may have like given suggestions like, “Hey, what if we did something like using our PSAT day, right? While all our 10<sup>th</sup> and 11<sup>th</sup> grade students are taking the PSAT, instead of letting

the seniors stay home and sleep, like, why don't we bring them in and really kick off our FAFSA application?" And they had some questions like, "What might that look like?" And I answered what I thought, but then I just kind of stepped back. And then they started getting excited, like, "Oh, and we could do this, and, what do we do with our freshmen?" And then it's like, "Well, what conversations might we want to have with freshmen about what their four-year plan is?" And then you kinda just drop some ideas and then step back and let them get really excited, knowing that they're going to have a certain number of hours with the students.

At least for me, I think my team already had a lot of great ideas that were living in silos. Like this counselor has a great idea of what they would want to do, but we never really created a space where they could make those things come to fruition where they're all working toward one goal.

RA

Right. And it feels like the work that we've been doing helps de-silo a lot of what's happening on campuses. Like, college access is the initial conversation, FAFSA completions or whatever, or you know, SAT signups or whatever that conversation is, but we've noticed that it starts to surface some of these other institutional issues.

That's one of the biggest learnings that we've had as a team: these practices aren't solely for college access - you could use them in a multitude of ways.

How do you build that trust with teachers to have these discussions and make some of these changes that you want?

ALP

We started with AVID<sup>1</sup>, obviously, because college readiness is really their territory. And they went out and talked to other teachers that would be interested in supporting this work. Then we started building our team based on who wanted to learn more, who wanted to be a part of that process. And we sent teachers to trainings. You know, when we do our big kick off to college day, we have a team of teachers that do the financial aid packets with the kids. And that's just regular classroom teachers who wanted to be a part of that work and wanted

---

1 AVID (Advancement Via Individual Determination) is a curriculum designed to help students develop skills and habits that will set them up for success in college.

to learn more for the next year. So, we got them trained up so they can answer questions and feel more comfortable in that space.

RA

That's something that more principals need to understand, that teachers already have their own networks and principles think "Oh, it's going to be so tough to push out this new initiative, 'cause we're going to get pushback." No, there's actually a cadre of teachers on campus that want to grow, and want to do this work. So, you have to trust that there's already a network for this work on campus as opposed to stepping on and saying, "Hey, I know this person does good work. Let me bring them in my network." I mean, again, it's building that trust and knowing that those people that are already there.

ALP

Okay. And it's about how do you build those leaders, right? You build those leaders within that space.

RA

Help us understand what that looks like.

ALP

Oh, yikes. Holy smokes. I think it's just creating a space where people feel comfortable stepping out of the norm and taking that leap of faith, or like, "Let's just try something different because what we've been doing, is it giving us the results that we want?" So, let's just step out: let's try something different and create that space where it's okay for it to not be amazing the first time around.

And we're learning together, right? Like, this is new for all of us. But we're all gonna get better together. I think just building that safe space and trusting that everybody's going to do their part and we're all going to give it everything that we have, and then we're going to come back and we're going to see what we've learned.

RA

Adriana, we're close to time here, but I'm super curious: do you have any questions for our listeners? Like, if there's one thing you can ask every single listener to do, what would that be?

ALP

I would ask them just to give a little bit of grace, right? We're all doing the best we can every day. And we make mistakes. We're human and just give us a little bit of grace.

CF

I just really appreciate your time and I hope to meet you in person. You are an amazing educator, but more importantly, I wish your son good luck on his journey through education because I was your son at one time. And so, you really hit me with that and I wish him the best. Thank you so much.



# Doing Lesson Study in Math

*Katerina Milvidskaia,  
Dr. Daisy Sharrock,  
& Dr. Curtis Taylor*

*High Tech High Graduate School of Education*

*The Mathematical Agency Improvement Community (MAIC), facilitated by the High Tech High GSE's Center for Research on Equity and Innovation (CREI), has woven public lesson study into its approach to improvement.*

*Alec Patton interviewed MAIC Director Daisy Sharrock, and Improvement Coaches Katerina Milvidskaia, and Curtis Taylor to explain how MAIC got started, and how the practice of “lesson study” fits into the program, and what one actually looks like.*

## INTERVIEWER

Where does this story begin?

## DAISY SHARROCK

Originally, I taught math and chemistry at High Tech High. However, six years ago I was hired by CREI to work on their college access grant, which was the start of our work on trying to get more students applying to, and getting accepted by four-year colleges. We were fairly new to Continuous Improvement at that time. I had read some of the original papers by Anthony Bryk about the work in Chicago, and when he became the head of the Carnegie foundation, there was a big push to bring some of these Continuous Improvement methodologies over to education. The sentiment seemed to be “This seems to work really well in healthcare—education is another really complex system full of

humans—maybe some of these methods could create some benefit for students.”

Around the same time, I read Jo Boaler’s *Mathematical Mindsets*, which is a book that highlights some of the issues around the way that we think about mathematics education, and right then, Jobs for the Future (JFF) put out a Request for Proposals for new improvement networks, and it seemed like an amazing opportunity to use continuous improvement to dig into this new way of thinking about mathematics in education.

And they funded us! Which was great. So, we reached out to neighboring districts and ended up with a number of interested teachers from Southern California, and MAIC got going.

#### INTERVIEWER

MAIC has possibly my all-time favorite mission statement. Where did that come from?

#### DS

In our very first “community of practice” convening event with the other JFF grantees, we attended a communications workshop. The facilitator asked “What’s the one-sentence thing that you’re trying to do?” And Stacey Caillier, the Director of CREI, said, “Well, we’re trying to abolish the phrase ‘I’m not a math person.’” And it resonated, so we kept it.

That sentence gave us our goal: we wanted students to feel like they were math people. That they had mathematical agency. It turned out that we had a number of math teachers who were giving their kids survey questions about sense of belonging, growth mindset, and relevance. And there were a few classrooms that were reporting “a hundred percent of the students felt like they belonged in that classroom,” which is really rare for a math classroom. And when we talked to those teachers, they were all iterating on a related set of practices. One of those teachers told us he had been really inspired by Katerina, who was teaching math at Vista Unified in north San Diego county.

#### KATERINA MILVIDSKAIA

I had also read Jo Boaler’s book and my district was contracting with her to provide professional development for the middle school teachers over the years. So, we had a lot of close work with her and like Daisy mentioned, she helped to reimagine what mathematics instruction should

look like. And so, I began thinking about how in my class, I wanted students to recognize the importance of each other's mathematical ideas. And I wanted their voice to be the center of instruction that was happening. And so, I started implementing different strategies around group work and presentations and belonging, to build this culture of discussing mathematical ideas that came from students. And then at that same time, I had made a connection with Daisy and MAIC, and it felt like two worlds were colliding with the same goal in mind.

DS

That was our starting point: we felt like we had some practices we could share and some goals around supporting students' mathematical identities and sense of belonging to the mathematical community. And we started from there.

INTERVIEWER

What were those practices that you started with?

CURTIS TAYLOR

We were focusing on routines or structures in the classrooms to allow it to be more student centered: How to launch a lesson, how to allow kids to explore the mathematics, and then having the kids actually participate in their own student discourse, so they engage with each other in the mathematics. Things such as number talks, agency warmups, participation quizzes, accountability quizzes, status interventions with students, as well as thinking about inside or outside questions as you're working with students to understand their thinking.<sup>1</sup> All of those practices were valuable in helping to create a classroom that felt more of a mathematical learning environment where the students' voice was valued and heard and, and they were starting to feel more sense of "belongingness" in the classroom.

INTERVIEWER

What differentiates a classroom like this from a traditional math class?

---

1 You can find more information about these practices on the MAIC website: <https://www.mathagency.org>

## CT

A lot of traditional math classrooms follow the, the, “I do, You do We do” model of teaching, which is how most of us learned: like, our teacher taught us the procedures of how to do a problem, we did it on our own, and then she, or he would have us come back and we’d discuss if our answers were correct. And that was pretty much how math was.

What we’re doing is a “You do, Y’all do, We do” model. So, it starts with “You do,” where I will pose an open-ended problem and allow students to have individual think time, where they can structure out or create ideas around the problem and to use what they’ve learned from their own background in trying to make sense of this problem.

Next, we move to “Y’all do,” where the students are put into partnerships or groups to share their initial thinking. And now they have to talk through and be skeptical of each other, but also try to come to a consensus.

Then we move from “Y’all do” to “We do,” where we now all come together, and groups share their ideas with the class.

“You do, Y’all do, We do” allows the students to have ownership of their learning and to see that they have a lot of brilliant ideas and are very creative in their mathematical thinking.

It also allows them to see that mathematics is a subject that needs to be talked about and a subject where collaboration is key, and for students to see the beauty of coming up with their own ideas and making sense of their own learning. I think that that’s what makes it really different. And the teacher is moving from being in front of the classroom to being immersed as a facilitator within the classroom. A lot of the time I try to stay in the back of the classroom to allow the students to have that time to talk and share their ideas with one another.

## INTERVIEWER

Got it. So, you got your network together, working to abolish the phrase “I’m not a math person,” you got a shared approach to teaching that you could all experiment on. How did the “lesson study” start?

## DS

It emerged from the first year. We had these practices that supported productive group work, so we were sharing them in workshops and

teachers were saying, “This is great, but I’d like to see it in action with students.” And then we were like “Well, we’re embedded in a K–12 organization here at High Tech High - so let’s do that!”

We had some brave volunteers from within the network who were willing to try out the practices in their classrooms with students while other teachers in the network observed. Then we would debrief about how well the practices worked and how we might improve them.

From those first observations, we realized how important it was to see instruction in action and in particular, to see how instruction impacted student learning. Around the same time, I went to a workshop at the Carnegie Improvement Summit, and saw a presentation on lesson study by Catherine Lewis, at Mills College and Nora Houseman from the San Francisco Unified School District. As they described their process I realized that I wanted to see it in action. About a month later, Stacey Caillier and I went up to San Francisco and saw one of their elementary school public lesson studies, and it was the most powerful experience I’ve had in education.

#### INTERVIEWER

What did you see up there? What were they doing?

#### DS

It was in a third-grade classroom. We came in and briefly met the students, and then we sat down with the team of teachers who had crafted the lesson together. They explained their theory of action and what they hoped to see, what student strategies they thought would show up in the class that day, what questions they might ask to help students make connections between those strategies and deepen their own understanding of the concepts they were focusing on. The superintendent and principal both attended the lesson study event as well. But the best part was when the parents showed up to watch the lesson. So, it was all these little third graders and their parents who were super proud.

Before the lesson started, the lead teacher, Karen, told us all “There may be times when I’m just going to speak Spanish to the students, or the ones that are more comfortable sharing in Spanish are going to share out in Spanish, and then we might have another student translate for you, but we might not. So, just a heads up!” And then the students came in to wild applause like superstars. During the lesson, it was amazing to watch them think about the mathematics, and then share and discuss the solutions that they came up with.

After the lesson the parent association hosted a lunch. It was delicious. And it was just this incredible atmosphere of celebrating student thinking from the whole community. It was just magical.

#### INTERVIEWER

How did you bring Lesson Study to MAIC?

#### DS

When we got back to San Diego, I reached out to a number of high school and middle school teachers to try this out, and Sarah Strong, who teaches math at the original High Tech High, volunteered to go first. We composed a team to co-design with her, and they designed a lesson, and we hosted our first public lesson study.

From there, the team regrouped, and we did a middle school public lesson. Then we convened a team of elementary teachers from across the schools and hosted a third-grade public lesson. We did three iterations of a public lesson ourselves, in order to learn from the process. That also meant we had a cadre of teachers across the K–12 spectrum who had all been through the lesson study inquiry process and could support lesson study in their schools.

#### INTERVIEWER

Can you talk me through what “make it public” looks like?

#### CT

Normally the lessons happen in the Forum, which is a big open space, like an auditorium but with no stage, so everyone is on the floor together. That allows for researchers, other educators, administrators, school leaders and parents, to watch the lesson together. Usually the teacher is wearing a lapel microphone, and I’ve seen examples where they all have mics at the tables or folks with a mic and a boom who go around to different groups as they’re discussing. It’s a little like when a surgeon is performing a surgery at a teaching hospital, and there’s a bunch of people behind glass watching.

#### KM

We also have two “commentators” at these events: a “content commentator” who gives us feedback on the mathematics, and an “equity commentator” who gives feedback on our equity goals, as well

as the social dynamics between students that are taking place within the lesson.

#### INTERVIEWER

Like a sportscaster, narrating as the lesson is happening?

#### KM

That would be awesome, but distracting. So, the commenting happens after the lesson, in a couple different stages: first, there's commentary that happens publicly right after the lesson, and later the design team debriefs with the commentators privately.

#### INTERVIEWER

So, to the extent that this can feel like a normal lesson in this highly artificial environment, a normal lesson then takes place? Like, it takes the amount of time you would expect it to, no one's like pausing and freezing in the middle of it. Is that right?

#### CT

Yeah, that's pretty much how it is. This year I taught a public lesson myself, and it feels like a real lesson, you're just much more nervous! But it's a wonderful experience, 'cause after you get past the nerves and settle into doing what you usually do in your classroom with the kids, being mindful of listening, everyone else flies away. This could just be for me, I don't know about others, but when I got into the zone it just felt normal and then at the end it was like "Oh, everybody's still here!"

#### DS

In terms of logistics, the lesson wraps up with a big celebration and applause for the students. There's usually an exit card, and the students' work is collected because the team is going to look at that next.

One thing that's really important is that the lesson belongs to the team, so if it goes totally off the rails, it's the whole team, it's not just that person who's teaching the lesson: it's collective ownership.

The debrief starts with the person who taught the lesson. They share how they experienced the lesson and what they felt went well and what they would change. And then the team members weigh in with the reflections they want to share publicly. And then we usually hear from the expert content commentator and the expert equity commentator.

Sometimes the commentators have been involved in the planning process, and sometimes they just show up for the lesson study event. Their role is to provide an outside perspective on the team's content understanding goal and the equity goal. To wrap up, there's usually questions and comments from the audience and the parents.

The other thing that's been incredibly powerful about lesson study has just been for teachers to be able to watch each other teach, and normalize the practice of teaching. When I was a teacher, there were plenty of times when I would reflect at the end of the lesson and feel like, "Oh my gosh, that went terribly! Thank goodness nobody was in here to watch that debacle!" But that's actually just the reality of teaching. We all experience those moments, so how do we normalize that so we can move onto the next step ask our colleagues, "Oh, what would you have done in that instance?"

And having parents there is so powerful too. In Japan, where lesson study is widely practiced it's the norm for parents to be there. As a society, it reflects their values because there's a communal sense in raising kids. In the US we tend to be individualistic in our views, but lesson study flips that dynamic. When you plan a lesson as a team there is a sense that these are OUR kids, and we want to have a community around them to support them in their thinking.

#### INTERVIEWER

That's so awesome. Connect for me how "lesson study" as a structure has informed your approach to continuous improvement.

#### DS

Within Continuous Improvement, you're conducting "inquiry cycles" of different durations. Normally you're trying out a small tweak, and then you collect some data to see how it's going and whether what you've done is an improvement or not. Then you make some decisions based on what that data tells you. And that's where we started in MAIC: "Hey, test these practices in your classroom, collect some data, see if it's working for your students, and then maybe iterate and then share your iterations back with the rest of the network."

Lesson study starts with that model, but just makes it more open and collaborative. So, for example, one of the first things that teachers do when they're planning a lesson for a lesson study is to select focus students and conduct empathy interviews with them - which is a big part of all Continuous Improvement work, and you do it to get a sense of questions like "How does this student experience my class?" "What

are the student's math experiences like at home?" "What resources can we draw from?" "What connections we can make?"

From that information, you're think about the student's mathematical thinking, and as a team you can decide what the next level of understanding is that the team wants this student to reach, and how best to craft a lesson to get at that. And then, because this is going to be public, one of the teachers on the team can watch that student during the lesson, and see whether the lesson study team's instructional planning works for that student or not. So, at its core, a lesson study cycle has the shape of a classic Continuous Improvement inquiry cycle, but it has these added elements of collaboration – extra minds in thinking through the process, observing, and then debriefing. To me it feels like a richer, more fleshed-out version of Continuous Improvement.

#### INTERVIEWER

Yeah, normally when a teacher is doing an inquiry cycle the "laboratory" is the classroom and the teacher's going "I want to get this outcome, so I'm going to do this thing, and I'm going to figure out what data I can collect as a proxy for this outcome." And you're talking to other people about your findings, but you're doing most of the observation and testing as an individual, with your own class. And so, a lesson study is really the same thing, just with lots more people in that classroom, observing and sharing ideas.

#### DS

That's the way I view it, yes.

#### INTERVIEWER

That makes so much sense, thank you!

