

# unboxed

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# Welcome

**F**or teachers, the end of every year feels like the conclusion of a quest: you're physically and mentally exhausted, you feel deeply bonded with your traveling companions, and as you look back you recall your feats of courage, dexterity, and cunning, as well as your questionable choices, missed opportunities, and all the people you wish you had done more to help.

And then, there's this year: the year that we went on a quest by staying at home, the year that started at least twice, first online, and then haltingly, gradually, back in the buildings.

We hope never to see another year like it, but that doesn't mean we can't learn from it. And so in this issue we are looking back on the year, as well as at what came before, and looking forward to building a better world together. Schools are the laboratories where children and adults work together to design the future. This has always been true, but it's especially true right now, which is why we chose the mural on our front cover.

This mural was designed and painted by middle and high school students from National City and Chula Vista, California, in collaboration with local artists, as a part of the Market Makeovers project by A Reason



to Survive. In this project, artists and community activists are helping liquor stores and small grocery stores to sell fresh produce and healthy food, while giving the outside of the shops an actual “makeover” with a mural.

This notion of “rebirth” is a theme not just on the cover, but throughout the issue. Jay McClain asks if the loss of “normal school” is such a bad thing, and imagines what the future of school could look like; Amanda J. Meyer explains how schools can use improvement Science to journey towards that better future, third grade teacher Mara Gonzales explains how she remade morning meeting as a space to discuss social justice and fighting oppression, Brittany Perro explains how her school transformed their approach to the ELPAC test and their broader support for Emergent Multilingual Learners, Avery Barnes shares an elementary school project focused on “Radical Self Love,” Brent Spirnak explains how sixth graders are designing adaptive video game controllers for people with disabilities, and, for those who are continuing to work in online learning, Patrick Yurick shares his advice for “designing the largest classroom” online.

We also have project cards on page 59 and a glossary on page 98

Thanks for joining us!

Alec Patton,  
*Editor-in-Chief*



# A Found Year

*Jay McClain  
Hopewell City Public Schools, Hopewell, VA*

*Jay McClain is an assistant superintendent for Hopewell City Public Schools in Hopewell, Virginia, a district that serves about 4,200 students in pre-kindergarten through twelfth grade.*

**A**s an educator for over 30 years, serving as a teacher, principal, and assistant superintendent, I have never seen a school year like this one. This hasn't just been an unusual year, it has been a year of shared trauma. And like any traumatic experience, it takes a while to realize what has happened and how we have been shaped by it.

As COVID-19 has shuttered many schools and caused a strange masked and distant environment in others, the first thought that many seem to have is that this has been a “lost” year. It is certainly a year of great loss. Loss of an incomprehensible number of lives. Loss of the basic human connections and interactions that we crave and take for granted. But a “year of loss” and a “lost year” is not the same thing. When we say “lost year,” the loss we are describing is “normal school.”

Let's take a look at this “normal” that many say we want to regain. Our education system is mostly unchanged from what it looked like a century ago, in spite of enormous societal changes in professions, life skills, and communication. Normal is the growing number of students disenchanted with school: the percentage of students engaged in school drops from 76% to 44% in the years from elementary to high school. Normal is also an institution that was never built for

our Black and Brown children, and sends a highly disproportionate number of them to be pushed out, suspended, or on the path to prison. Normal systematically bars them from programs that could provide them increased opportunity.

The longstanding crisis of racism in education is compounded by the current crisis of the pandemic. As with the first crisis, races are experiencing both differently. Just take a look at the recent poll by the C.S. Mott Children’s Hospital, which found that the top health concerns among Black parents were racism, followed second by COVID-19 illness. Neither racism nor COVID-19 illness made the top ten concerns of white parents. Instead, white parents’ main concerns are social media, followed by healthy eating and exercise habits. Since the start of this year, in communities where in-person learning is an option, white families are disproportionately choosing in-person learning while many Black families are choosing to stay home.

Can we really respond to these two crises by just returning to “normal?”

With the pressure to reopen, it is far too easy at this point for us to grab hold of the narrative that we need to begin to return to normal, and thus find ourselves recommitting to the out-of-date, racist education system we are used to. This would be a grave mistake. Let’s look at this double crisis as a call to find ourselves. Let’s look at this year as a welcome jolt to find the soul of what education should be for our students and families.

For example, there have been four persistent elements in education that should instead be viewed as variables to fit students’ needs: Time, Place, Group, and Curriculum. If we see this as a found year we have the opportunity to use these four elements to transform and reinvent schools.

## **Time**

Prior to COVID-19, time has been fixed in many ways across our schools. While some schools have explored and used block schedules, or a slight change in the time school starts, the packaging of time within the day is fixed into bell schedules tied to isolated subjects. The variations in school time have been linked usually to the logistics of transportation, not tied to what may most benefit students, such as teens’ biological sleep patterns.

During this pandemic, learning time has looked different. Some schools began with a regular full day of online synchronous instruction and soon found that this was not sustainable. Students were rarely able to

maintain attention on the screen for seven hours. Thus, schools began to look at the mix of synchronous and asynchronous time, and also began to experiment with providing student choice with when to do the asynchronous work.

With this in mind, last summer I was consumed with trying to find opportunities to wrap the school day around what families needed rather than the other way around. This led us to start looking at ways to experiment with a shorter synchronous day, more student choice with activities, and more time for individual check-ins with students and families. Our district launched an option for some classes to occur in the late afternoon and evening times to meet a COVID-19 family schedule, and there has been no shortage of interest by families. Some of these families needed the school time to look different for their own survival as they balanced health and the need to maintain jobs and income.

It is time to rethink time. As we look to a post-pandemic era, this is an opportunity to create choices for when students are in school. Time can become a choice in terms of when most of the learning happens—morning, afternoon, or evening. This goes well beyond just making it possible for teenagers to have a schedule more aligned with sleep schedules. Think of the impact that this could have for high school students who need to have a job, watch their siblings, or whose parents work a late shift. We are due for a mindset shift in which the time of school gives students and families the best option for success.

## Place

Before the pandemic hit, the concept of place was rarely challenged in the model of schools. Students came into a building at the same time each day and were separated into classrooms. In most communities, students attended a school based on their address. Learning was seen as taking place while students were at school, and what happened outside of school was not a part of the learning process, except for students doing homework.

The concept of place certainly changed during the pandemic, and this happened nearly overnight. That is the most visible change and one that will likely live on beyond the pandemic, as a growing number of families are likely to choose virtual schooling options rather than brick-and-mortar. And, I'm not sure the choice needs to be one or the other. What if it was more like a sliding scale where families choose the amount of in-person instruction from a continuum of options?

As something like this is put into effect, another aspect of place that can change is a school attendance zone. With fewer students in school buildings at one time, there could be more choice offered across a geographic zone. In our district we piloted classes where students who needed a different timing and version of school were joined across attendance zones, with plans to bring these students together in spaces outside the school. If students are coming in-person with less frequency, and possibly in smaller groups, there is the ability to use a wider array of spaces for learning—including libraries, parks, and more.

All of this depends on ensuring that we have the wifi infrastructure and accessibility to technology across communities that have been so lacking. Access to the internet is understood now, more than ever, as not only essential to commerce and the operation of government in a pandemic, but also to the learning of students. We cannot allow this to be subject to the ability of a family to afford it, but rather it needs to be as much a basic right as a mailbox for one's home. Learning should be able to happen anywhere, and for that, we have to ensure that the technology infrastructure is in place.

## Group

Before March 2020, nearly all schools operated on a similar concept of how students were grouped. Starting in kindergarten, students were assembled by age and moved in lockstep through the grades until graduation. In elementary school, classes were composed of a similar number of students, and decisions on placement into a group were made by the school—there really was no choice of parents or students to what group/class they were in. The only groupings that went beyond class placement class itself were the ways teachers grouped students within a class, such as with reading groups. The only place where there was a true choice of groupings was usually in high school. Even then, “choice” was normally superseded by “tracking,” so the only area where students could be guided by their own interests were extracurricular activities.

Most schools did not change the typical class groupings during the pandemic. A third grade class was still a third grade class, an algebra class was still an algebra class, and so on. However, in some places teachers became specialists in virtual instruction or in-person instruction so that they could better meet those students' needs. Students who had always attended one elementary school were now in virtual classes with students from other schools. In our district we also challenged the notion that students had to be in a class with students of only the same grade level as the way they were grouped. We found advantages to having students grouped by similar needs for learning, such as an

evening class, to be perhaps more important than being grouped by the exact same age.

However, the potential to rethink learning/class groups goes far beyond this. With there being more variability in place and time, groupings could also change to have less large group synchronous time and more learning in small groups and individual check-ins. A greater portion of teacher time could be with those individual check-ins to support and coach students through their learning and life skill development, as students can access more of the typical “lecture” online.

There is also the potential for students to be grouped by interest rather than randomly. Colleges and universities have already begun work on this with freshman writing courses. In these classes, all students are in a writing course, but they are able to choose a topic of interest and are thus grouped accordingly.

From a teacher perspective, thanks to the possibilities of in-person or virtual learning, there is also the possibility of regrouping students throughout the year, and mixing up student rosters based on new interests over the course of the school year. By removing the confines of the four walls of the classroom, teachers can collaborate and work across boundaries with students in flexible ways unlike ever before.

## Curriculum

The standards and standardized testing era that started in the latter parts of the 20<sup>th</sup> century caused schools to rigidly adhere to a set of standards for what was taught in each grade level and subject. Accountability structures at the federal and state level reinforced adherence to the long list of sometimes isolated skills and knowledge. While the intent of this effort was to raise expectations for all students and try to ensure we were serving students equitably, it rarely played out that way. Instead, students who had the most barriers to overcome in order to achieve the standards were in schools most often punished and branded as “failing.” This only further intensified the efforts to focus rigidly on standards, and it put pressure on teachers to teach a narrow set of skills. In other words, the identity and value that students bring have been overshadowed by the need to comply with a set of standards.

A fundamental shift that has long been needed is with the balance between a common curriculum and the context of each child—his/her needs, interests, styles, and passions. Our nation’s “standard” model for education is to impose a common curriculum and then, when possible, we try to tie it to a child’s interests. It is time to flip this paradigm. Imagine scaling back to a smaller set of high-leverage skills,

such as reading, writing, investigation, and critical thinking, and then providing space for students to be able to learn in their areas of interest and passion.

What this could look like in fourth grade, for example, is that students are still focused on learning a core set of skills around reading, writing, math, history, and science, but they have choices of whether to do this by learning through a project of constructing a city park playground or working with the animal shelter to develop a new advertising campaign. These projects could shape the class for a year, a semester, or a quarter. The learning context, and ability to bring the individual students into the learning, need to become the primary focus and the core skills of the curriculum become infused into this learning and wrap around the student passions. In this way, we can be more culturally responsive to our students and cause our students to feel a sense of belonging and purpose and not just be taught how to conform.

### **Finding a New Path**

Before the pandemic, the last several decades have seen efforts to increase choice for students and families. This has occurred to widely varying degrees across our country, with charter schools making strong inroads in some communities and not at all in others. The primary choice has really been for the more privileged families who send their children to private schools or choose to homeschool. In each of these cases, the focus of choice has been much more about which school to attend, rather than choices that may occur within a school.

It is time that we finally make a fundamental shift on what schools have been for the last century or more. But the change is not to create a new one-size-fits-all. The needs of our families, the passions of our students, and our own humanity demand that we meet students and families where they are and give them choice so that we wrap around them, not the other way around.

Choice could be at the school level, where students have more variety with curriculum, classes, teachers, and format, or at the district level, where students have more options among schools for the learning approaches and interests of the students. And for once, where one lives does not need to be such a strong predictor of their likelihood of future success. Choice does not mean we need to take away the elements of our current system that work for some families. Rather, it means we provide a variety of pathways that will work for all families.

It also does not mean we shy away from accountability. Rather, it focuses accountability on how well we are meeting student needs, regardless

of the pathway. It has the potential to refocus our accountability on more meaningful measures than ever before—the ability of students to have not only academic skills and knowledge but also the ability to interact with other people in a meaningful way to make a difference and transfer those skills into real-life situations. It is time we create the choices that provide for student need, passion, and ownership.

### **Where We Go From Here**

The pandemic over the past year has caused everyone to do school differently and it will continue to impact schools for a while to come. We had little choice in how schools could immediately react to the pandemic and we coped with it the best we could. But we do now have the ability to determine whether we will use this as an opportunity to reinvent education or continue to follow a one-size-fits-all system that truly fits very few of our students.

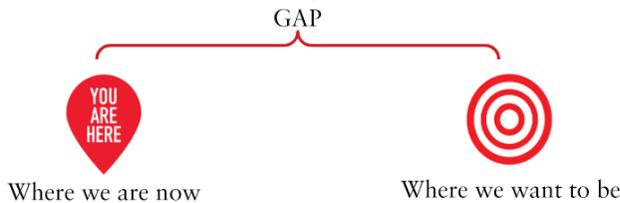
The pandemic and the broader awakening to racism (at least among white people) have provided a tremendous shock to our system. We have all experienced a shared trauma. Trauma in my own life called me to reevaluate my priorities and change what I spent my time on and what I let go. It helped me see through new eyes and see more clearly what matters.

As we come out of the shock of our crises, we have an opportunity. We have a choice. We can choose to be awakened, to come out of the wilderness, and truly shape learning around our students and families. Or we can choose to pretend this never happened and revert to what wasn't working. The choice is ours.



# Improvement as a Journey: Going the Distance with Improvement Science

*Amanda J. Meyer  
Independent Improvement Advisor*



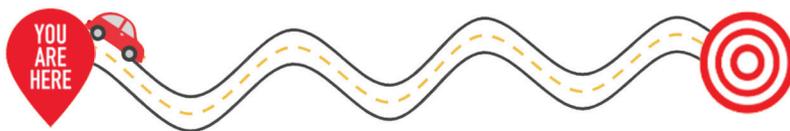
**E**very trip begins with a desire to get from where we are now to where we want to be. The same is true in problem-solving: when we experience a gap between our current reality and our aspirations, we’ve got a problem to solve—and a journey to go on!

In America, most educational gaps we face are rooted in the fact that our schools were not designed for equity. Thomas Jefferson, frequently credited with first envisioning American public education, wrote openly about it as a system for dividing the citizenry into two classes: “the laboring and the learned” (1814). Over the centuries that followed, our schools both reflected and perpetuated larger societal inequities, denying quality education to immigrants, indigenous people, descendants of enslaved people, women, and the poor, while concentrating power and

opportunity in the hands of the wealthy, white, and male (Ladson-Billings, 2006). Even in recent years, despite our society's stated commitment to equal educational opportunity, patterns of unequal outcomes have been maintained by widely documented factors such as vastly unequal school funding, biased application of disciplinary procedures, academic tracking, and an educator workforce that does not reflect the diversity of America's students (Lewis & Diamond, 2015). Because our system was not designed to educate all children well irrespective of race, class, gender, ability, or native language, our efforts to do so today inevitably grapple with the ramifications of historical and ongoing oppression (Anaissie et al., 2021).

Improvement science (a form of continuous improvement) is a methodology used in many fields to identify, understand, and solve problems, with an emphasis on producing consistently high-quality results, every day, for every person. When practiced with attention to the historical and present-day sources of inequity embedded in our schools, it can be a powerful method for closing gaps in educational experiences and outcomes. Organizations that practice improvement science become “learning organizations” that continually get better at what they do. Schools must become phenomenal learning organizations because they are crossing uncharted territory as they work to dismantle the past and build an educational system that reliably educates all children.

At its simplest, an “improvement” can be defined as a problem solved, or a gap closed (Ahlström, 2015). Anytime we close the distance between where we are and where we want to be, we are creating improvement. In many ways, solving problems using improvement science is like going on an adventurous road trip with your colleagues!



## Changing How We Travel: Better Problem-Solving

Make no mistake, educators are phenomenal gap-closers. Whether they are creating lessons or building classroom culture or making the most of ever-dwindling resources, educators are solving problems all day long. However, building an equitable school that reliably serves

all students, every day, in every classroom and grade level, requires us to take our problem-solving to the next level. We need skilled improvers working together in strategic ways, along with the culture, relationships, and structures that allow for continuous, collective learning. Better problem-solving means thinking differently about how we travel from our current location to where we want to be. There are three common problem-solving “potholes” that improvement science can help us avoid.

### **Pothole #1: Solutionitis**

The urgency we feel in our work with young people can lead us to commit to a particular “route” without knowing how well it will actually address the problem we face. This common tendency is called, “solutionitis” (Bryk et al., 2015). Without taking the time to examine our starting point from a variety of perspectives, we not only limit our options but also risk selecting solutions that, however well-intentioned, are based on our own assumptions or biases. Improvement science practices put “speed bumps” on the road to help us slow down our thinking and consider what we might not be seeing. This slowing down also helps us avoid jumping from solution to solution, and thereby burning unnecessary “fuel” by spending our team’s time, resources, and goodwill on routes that are unlikely to work.

### **Pothole #2: Analysis Paralysis**

In contrast to travelers swept up by solutionitis, some travelers want to be extremely certain they are taking the right route towards their desired destination. In trying to anticipate and account for every possible detail and eventuality, they fail to progress at all. We can call this pursuit of certainty through copious planning a form of “analysis paralysis.” Most journeys require some trial and error, and at least a few dead ends. If we don’t put our plans into action, we will never learn what actually works out on the open road.

### **Pothole #3: Focusing on Individuals, not Systems**

A final common problem-solving pothole is the tendency to place disproportionate blame on individuals doing the work. Too often, we blame people within the system, assuming if only they cared enough, knew more, or tried harder, our problem would not exist. But the reality is that people, processes, and tools come together in systems to perform complex work that is more than the sum of its parts. According to an often-cited improvement adage, “every system is perfectly designed to get the result it gets” (Langley et al., 2009).

W. Edwards Deming, a founder of the field of continuous improvement, said that if he were to use percentages to describe the relative impact of people versus systems, he believes individuals are responsible for just about 6% of the outcome, while the design of the system they work in determines the remaining 94% (Deming, 2000). Better results do not come from replacing people in the system; they come from redesigning our system to work better (Bryk et al., 2015). Seeing the people closest to the problem as the problem is a form of deficit thinking we must interrupt whenever it arises (Hinnant-Crawford, 2020).

Through improvement science, we can cure solutionitis, break free of analysis paralysis, and redesign the systems that produce our results. We can grow the capacity of our teams to engage in disciplined but action-oriented problem-solving, in which stakeholders learn and grow (and travel great distances) together.

### **Preparing to Leave: Who are “We”?**

Just like on a road trip, who you’re traveling with on your improvement journey makes a big difference! While improvement science can be practiced independently, we travel the farthest in collaboration with others working towards the same goal. Improvers must ask themselves:

- Who considers this a problem, and why?
- Who is most impacted by this problem?
- Who is best positioned to address this problem through their daily work?
- Whose perspective has been historically excluded or undervalued, but is vital to solving this problem?

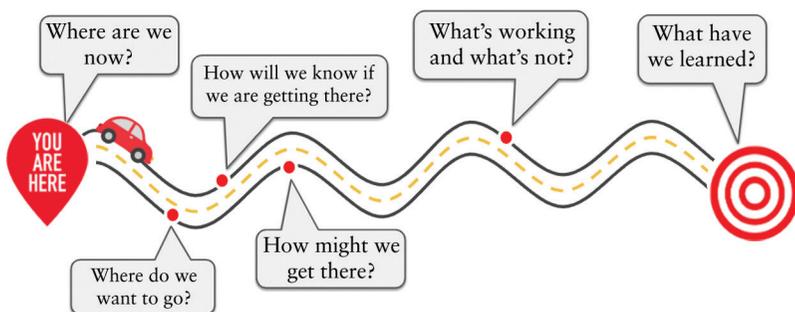
Based on our answers to these questions, we can identify who we must be in relationship with throughout this journey. A key value in improvement science is that those closest to the work are best positioned to improve it. When our team of travelers consists of a diverse group of stakeholders with different backgrounds, vantage points on the problem, and forms of expertise to offer, we are far more likely to have the collective wisdom needed to reach our destination.

Another aspect of answering the question, “Who are we?” requires each of us to look inwards, at our own identities, experiences, and lenses for viewing the world. We might ask ourselves, for example, how our own race, gender, culture of origin, or personal history might create a lack of awareness or contribute to harmful power dynamics in our work. Alternatively, how might our own unique constellation of identities and experiences present assets and opportunities along this journey? An ongoing practice of self-awareness and critical reflection

is essential to applying the considerable power of improvement science towards interrupting inequity, rather than reproducing it (Anaissie et al., 2021).

## The Improvement Journey: Questions and Answers

All improvement is about learning. After all, if we knew exactly how to get to our destination, wouldn't we be there already? Improvers must have the humility to recognize how much we do not know yet and the curiosity to ask lots of questions along the way (Lucas & Hadjer, 2015). The following diagram illustrates the learning questions that are asked at different phases of the journey. Each question is explored in greater detail below.



### CASE STORY | Introducing Fruit View Elementary

To illustrate the various phases of the improvement journey, we will follow the story of “Fruit View Elementary,” where a recent assessment of needs and assets in the school community has surfaced family engagement as an area in need of improvement. A team consisting of a community school coordinator, an assistant principal, two teachers, and a parent liaison has prepared to depart on their improvement journey. While “Fruit View” is a fictional team, the journey featured in the case is based on a real improvement effort.

## Getting Started: Where Are We Now?



Unlike a road trip, where we are likely to know exactly where we are starting from, an improvement journey requires careful attention to the starting location, or “current state.” The goal is to assemble a shared “picture” of our current performance based on a mix of data, both quantitative and qualitative. The clearer our common understanding of the current state, the stronger the foundation for our improvement journey.

When collecting information about the current state, we may use tools like the fishbone diagram to analyze root causes of problems, empathy interviews to understand stakeholder experiences, and process maps to visualize how things are currently done (Bryk et al., 2009; Hasso Plattner Institute of Design, 2018; Langley et al., 2009). We also gather and explore data relevant to current practice and performance. At the heart of exploring the current state is examination of variability in practice and in results (Hinnant-Crawford, 2020). Some questions we might ask include:

- What is our current practice?
- What is consistent and what is not (and why)?
- Who benefits the most from our current practice?
- Who benefits least?

When we bring all this information together and combine it with our team’s collective wisdom and experience, we will build a far more complete understanding of the current state than any one of us could have had alone.

## CASE STORY | The Current State at Fruit View Elementary

At Fruit View, the team discussed many aspects of parent engagement. However, a major pain point was clearly low family attendance at school events. Staff felt significant time, resources, and care were invested in these functions, but only a tiny portion of the target audience was benefiting. The team recognized that it was time to focus on understanding the system producing these results. They got deeply curious about the current state of school events and set out to investigate.

First, they gathered sign-in and attendance data from various school events over the past year. They recognized the data wasn't perfect, but they knew that having some concrete numbers would ground their discussion better than relying on memory alone. They also conducted empathy interviews with three staff members to understand their experiences hosting events. After being interviewed, the Assistant Principal felt inspired to examine her own workflow, so she drew a quick process map that laid out the steps she takes in planning, scheduling, and marketing parent-teacher conferences. The team also conducted empathy interviews with five parents, including two who regularly attend school functions and three who do not, but had come to the school for other purposes and were willing to also share their perspective on school events.

After a couple of weeks, the team came together to consolidate what they had learned about the current state. Insights that emerged included:

- 70 families attended the first conference night of the year, as compared to almost 300 families attending the Fall Festival.
- Attendance at school events was highest for students proficient in English, and lower for families of English Learners. Language barriers remained a consistent issue during in-person events, from both the staff and parent perspective.
- Staff and parents alike felt that parent-teacher conferences are one of the highest-leverage events for involving parents in their child's education but tend to be less appealing than "fun" community-building events like the Fall Festival.
- In the planning process for parent-teacher conferences, there often wasn't enough lead time for staff to get reminders out to parents about the opportunity before scheduling conflicts arose.

## Charting the Course: Where Do We Want to Go?



Once we understand where we are now, we can better identify where we want to go. Maybe it's the ultimate destination we had in mind when we identified the need to travel, or maybe we will first select a mid-point on the way to that more distant locale. Either way, we must clearly name what we want to achieve, and the purpose of our trip will be to figure out how to close the distance between where we are now and this destination. The destination of any improvement journey is articulated in an aim statement. An aim includes what will be improved, how much, by when, and for whom (Bennet & Provost, 2015). As improvement leader Donald Berwick says, "'some' is not a number and 'soon' is not a time" (2004). When setting an aim, specificity is key.

### CASE STORY | Fruit View's Aim Statement

The Fruit View team could see that the current state was a long way from their vision: not only was attendance at school events lower than they wanted, it was worse for some types of families than others. It was time to select an aim statement to focus their improvement efforts. While they aspired to change how families experienced many school events, they knew they had to start somewhere to set the foundation for later efforts. Based on their investigation of the school's current state, they decided to aim to improve attendance at parent-teacher conferences, with a specific focus on families of English Learners. Because the school offered conference nights three times over the course of the year, they knew they had two more opportunities this school year to learn if they were improving. Their aim statement was:

*By our spring parent-teacher conference night, we will increase family attendance from 70 families to at least 150 families out of 457, with at least ½ of English Learner families participating.*

By explicitly naming English Learner families in their aim statement, the team ensured their problem-solving focus would be grounded in the needs of a student population currently least well-served by the status quo.

## Charting Our Course: How Will We Know If We Are Getting There?



As we navigate towards our aim, we will need a way to know if we are going in the right direction. While travelers on a road trip might rely on Google Maps, improvers on an improvement journey know our desired destination but not how best to get there. Strategically chosen measures can provide us with ongoing and timely feedback about our progress, much like periodically checking our GPS coordinates as we drive. On an improvement journey, we use data not only to evaluate whether we have reached our aim, but also to help us reflect and adjust along the way. Like an expert teacher using formative assessment in the classroom, we gather simple data from within our daily work that gives us just enough information about which direction we should head towards next.

### CASE STORY | Learning from Measures

Based on their aim, the Fruit View team knew there were two key measures that would reveal if their changes were leading them to their desired destination:

- Overall number of conferences held
- Proportion of English Learner families who had a conference

They would collect and report these two measures each time they had a parent-teacher conference night. In addition to these outcome measures, the team prepared to collect data on the processes they were trying to change (Langley et al., 2009). They committed to checking in with parents and asking for feedback during and after each conference night, as an additional source of data. Some questions they planned to ask parents included:

- How and when did you hear about conference night? Did you have enough advance notice?
- Why did you decide to attend? Were your expectations met?
- What can our school do to help you feel welcome here?

They also asked teachers to track when and how they invited families, so there would be data on that practice as well.

## Charting Our Course: How Might We Get There?



In some of our previous experiences with problem-solving, it's likely that picking a route is what came first. But without initially clarifying our current location, our destination, and how we will get feedback on our progress, it's no guarantee the route we pick will lead us to where we want to go.

Even when we have those parts in place, we still might not know the most effective route to our destination. That's why we name many potential routes, and we start our journey with the expectation that we will make a few wrong turns here and there. In improvement, our routes are known as change ideas, or possible alterations we could make to our practice. Our prediction for which combination of change ideas might lead to our aim is called our "theory of improvement" (Langley et al., 2009). The word "theory" is critical here: a theory, as used in improvement science, is a set of beliefs that may or may not be right. We articulate our route as a theory with the expectation that our theories will be put to the test and eventually evolve based on how our journey unfolds.

Typically, teams think of their route not as a theory but as a plan. When we commit to a plan unwaveringly, no matter how "strategic" it might have been at the outset, we are not leaving ourselves open to new learning. We do not benefit from opportunities to reassess, adjust, or abandon our route entirely based on how the journey is going. When our plan does not lead us to the destination we hoped, our group of travelers loses valuable time, resources, and motivation. Strategic planning and problem-solving are not the same thing.

## CASE STORY | Generating Ideas for Change

The Fruit View team had spent a couple weeks examining the current state and setting targets for what they wanted to achieve. Finally, it was time to make changes! The team began by examining their findings about the current state and reflecting again on their team composition. While the team represented a range of racial, cultural, and linguistic backgrounds, they recognized that no one on their team could know exactly what it was like to be a Fruit View parent of an English Learner. So, they engaged in design sessions with parents to collaboratively develop change ideas for improving conference nights. Together, they were able to assemble this starting theory based on several high-leverage areas:

- Incentives that Appeal to Families:
  - » Offer additional features at conference night: dinner, uniform and clothing sign-up, and free health screenings.
  - » Attach a culturally relevant musical event to the conference night.
- Timely, Clear, and Culturally Relevant Communication:
  - » Create a protocol that gives teachers guidance about how and when to invite all parents to conferences.
  - » Engage a Spanish- and Mam-speaking parent engagement coordinator to make personalized phone calls to identified families about conference night.
- Student Ownership and Investment:
  - » Change the format to student-led conferences, at least for the older grades, so that students play a larger role in bringing their families to conference night.

Instead of getting excited about any one idea, the team knew that their initial ideas were just a humble theory. To learn which changes were effective, the team would have to experiment!

## Exploring Routes: What's Working and What's Not?

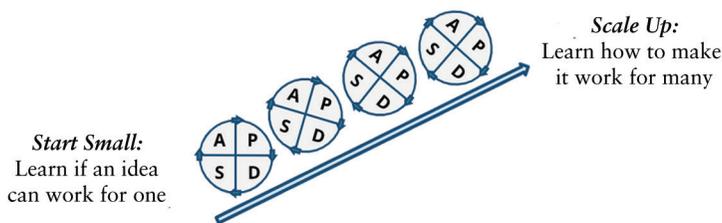


As we travel along our improvement journey, sometimes our route will take us down smooth, straight, four-lane highways that cover a lot of distance in a short time. In other moments, we find ourselves on roads that are winding, unpaved, or even dead ends. Despite the twists and turns, what is important is that we have a bias towards action and try many possible roads, while constantly asking ourselves, “What’s working? What’s not? And why?” The goal is to learn quickly, evolve from failure, and accumulate knowledge about the best routes to our destination. If it were easy to get there, we’d be there already. Instead, we must learn together through trying many different approaches.

In improvement work, the structure we use to experiment with our routes is a tool called the Plan-Do-Study-Act Cycle (described in detail by Langley et al., 2009). Through rapid, iterative cycles, we can learn quickly how our ideas play out in practice, and then scale them up to reach more stakeholders in more settings (see Figure 1).

In the Fruit View case, they were working on a conference night structure that occurred infrequently (only three times during the year). Even when working on something infrequent, we can still find many opportunities to test and iterate our ideas. For Fruit View, any interaction with a parent could become a chance to experiment. When we learn how to make things better for one person, we can scale those lessons up to benefit more people (Bryk et al., 2009). Recognizing the small opportunities to learn in our everyday work is central to improvement.

Figure 1: PDSA Cycles (adapted from The Improvement Guide)



## CASE STORY | Plan-Do-Study-Act Cycles at Fruit View

The second conference night of the year was fast approaching. In order to encourage more families to come, the team combined these conferences with dinner, uniform and clothing sign-up, and free health screenings. They predicted that at least 120 families would attend, and that all three services would be popular among families. As it turned out, 104 families attended: an increase from the 70 at the first conference night, but lower than their target.

Other data from the evening provided ideas for their next iteration:

- Almost every attendee participated in the meal. The uniform and clothing offerings were also popular. However, only five parents stopped by the health screening table. The team checked in with a few parents and learned that they did not want to do a health screening in such a public setting.
- The additional features did not appear to significantly affect the rate of participation for English Learner families, which was still lower than the overall participation rate.

Based on these findings, the team's theory evolved: perhaps the issue wasn't the event itself, but how it was communicated. This hunch was reinforced by the finding that in many cases, teachers did not know whether their invitations were reaching parents.

With this in mind, they planned the third and final conference night. This time they gave teachers a protocol for personally inviting all parents to conferences. This included advice on how many times to contact parents, how to use multiple forms of communication, and how to reach out in multiple languages. It also contained a step for nominating families to be called by a parent liaison that spoke both Spanish and Mam (the most common languages spoken by their English Learner families). The team designed the protocol in collaboration with teachers from multiple grade levels, to ensure it would be useful. The team predicted family participation would increase to at least 160 families, with at least 40% of English Learner families participating.

The final conference night of the year arrived. 168 families in attended, including 31 of 76 English Learner families. The team also collected feedback from parents and teachers, resulting in some suggestions for improving the outreach protocol, which the team decided to test the next time they held a conference night.

## Taking Stock: What Have We Learned?



When our journey ends, either when we have reached our destination or need to pick a new one, it is important we reflect on what we learned from our trip. We are likely not the last people who will want to go to this destination. What worked for us? What routes might others try? What dead ends would we suggest they avoid?

In improvement work, we call this reflection learning consolidation. Often, what we have learned can be documented in some way. If we have developed practices that we think others in our organization should use, it helps to write down the steps we took, the materials we used, and any advice we have for others. When we capture our most promising practices, we increase the likelihood that more efficient, effective, and equitable ways of getting somewhere become the “map” that everyone in our organization uses. Travelers from other organizations might want to use our map as well!

When we reach the conclusion of any improvement journey, we celebrate our progress and share our findings with our community. However, because we have become such capable travelers, the question soon becomes, “Where are we now, and where do we want to go next?” A new journey begins.

## CASE STORY | Celebrating Learning and Looking Ahead

The Fruit View team had much to celebrate. They had traveled a long distance in a short time, more than doubling attendance at conference nights, and increasing participation among English Learner families. While they didn't entirely meet their aim of 50% of English Learner families participating, they got a lot closer and learned many lessons to bring into the following year. They also felt proud of their team's collaborative problem-solving: they had worked together to explore a problem, set an aim, involve stakeholders in the creation of new ideas, experiment with different approaches, and capture what was learned. It was a more systematic, focused, and inclusive approach than most team members had ever experienced.

At an all-staff meeting, they shared their most promising discoveries about how to engage families, and their colleagues formed small groups to discuss how those insights might apply to other school events. Finally, they updated their planning documents for conference night, so that this year's best practices would be next year's starting point.

Near the end of the meeting, a colleague raised her hand: "What about Parent-Teacher Association meetings?" she asked. "Maybe we should figure out what's preventing parents from engaging in those events?"

The team looked at each other and smiled. A new challenge had emerged on their journey towards better family engagement, and they knew just how they would approach it.

## Concluding Thoughts

The Fruit View story demonstrates how a problem-solving effort might progress from the identification of a gap to the adoption of new practices that successfully improve results. However, it is just one example. While the principles of improvement science remain constant, no two journeys are the same.

Although applying improvement science to focused projects can be a powerful way to achieve specific aims, we must also consider how we are building school-wide culture and skills around improvement. People have the capacity to solve their own problems. Improvement science provides the shared language, common tools, and collaborative protocols needed to unleash people's innate problem-solving capacity. Imagine if the Fruit View team working on parent engagement was situated within an entire school of expert problem-solvers focused on identifying and addressing sources of inequity in their students' educational experiences. What then might be possible?

When we are new to the practice of improvement science, it is natural to feel a little intimidated by the jargon and the tools. This way of traveling might feel very different from what we are used to. However, the most important thing is that we get started, even if we don't feel totally ready. Find a group of like-minded travelers, grab your keys, and hit the road! The learning is in the journey.





# Morning Meeting: Rooting the Day in Community and Social Justice

*Mara Gonzalez  
High Tech Elementary Explorer*

“**F**REEDOM FIGHTER!” everyone said in unison over Zoom. On the screen was written the definition our class had come up with: “A freedom fighter is someone who asks why, questions what they see around them, and asks if it is right or fair.” This is how our class begins the day: reading a new vocabulary word that connects to the morning message and the sharing question in our Morning Meeting. Then, just as I presented the morning message, I saw a word pop up on my screen from a student who had started using the annotation tool on Zoom. He was spelling “freedom fighter” in large letters across the screen.

I paused. “I’m noticing that you’re annotating,” I told him. “Do you think it is unfair that I am the only one in the class who has the power to annotate?”

In an unsure voice, he responded, “Uh, yes?”

I asked what the rest of the group thought. All of a sudden other students were joining in and sharing their thoughts on whether it was fair that I was the only one who could annotate:

“I think we should definitely all be able to annotate.”

“Well, maybe we can all annotate, but it wouldn’t be fair if we wrote over someone else’s words.”

“We should also wait until the person is done reading the morning message.”

Right then and there, we changed our classroom agreements. Everyone now has the right to annotate in our class, just not while others are speaking!

This conversation happened during our third grade Morning Meeting. Our class uses Morning Meetings as a place to tackle topics such as identity, power, privilege, oppression, and resistance. Since we started doing this, I have come to understand that students are not only aware of these topics, they are eager to have a space to explore them.

### **What is Morning Meeting?**

Morning Meeting is first and foremost a space to build community. It is a space that roots the day in acknowledging and holding space for all of the individuals in the room. When I began Morning Meetings with my class, I utilized the traditional structure laid out by Responsive Classroom. A typical morning meeting is a full-class event in four parts:

- Greeting
- Sharing
- Group Activity
- Morning Message

The traditional structure is powerful in its own right, but for me, this year in particular, I felt like the conversations we were filling it with were lacking something. This hit me one morning as my students were sharing whether they would rather fight a five foot chicken or a five inch dinosaur and I asked myself, in the words of Dr. Gholdy Mohammad, “am I really unearthing their genius?” (2020). We had some creative debates and some good laughs based on ridiculous “would you rather” questions but while everyone loves a good laugh, it felt as though this roughly 30 minute structure was begging me to do more with it, begging me to honor the intellect of the 25 eight- and nine-year-olds in the room.

So here's my revised version of a morning meeting that honors a child's intellect and curiosity about the world:

- Greeting (2-3 minutes)
- Mental Health Check-in (2 minutes)
- Class Agreements (1 minute)
- Vocabulary Introduction (1-2 minutes)
- Morning Message (5-7 minutes)
- Reflection/Sharing Question (8-10 minutes)
- Class Chant (1 minute)

And here's each part in detail:

### **Greeting (2-3 minutes)**

Greeting is a time when every person in the room is acknowledged and seen through a greeting. This might look like singing a good morning song or saying good morning to each other.

### **Mental Health Check-In (2 minutes)**

Mental Health Check-In is the time when the class and the teacher can get a sense of everyone's well being and needs at the start of every day. Students might self assess how they've slept the night before, what they ate for breakfast, and how they were generally feeling. Students are also able to request a one-on-one check-in with me. This check-in supports teacher to student relationships, student to student relationships, and my ability to intentionally put supports into place. This might look like using the chat feature, sharing one by one around the circle, or filling out a Google form.

### **Class Agreements (1 minute)**

Our Class Agreements are guidelines that students co-create at the beginning of the year and adjust throughout the year. This practice fosters a culture of partnership between student and teacher, and support and respect between the class. During this portion of our Morning Meeting, we read and review our class agreements, and share one or more that we want to focus on during the day. This routine serves as a strong foundation to not only our day but specifically the conversations we have during our morning message and sharing question. Our classroom agreements this year are:

- Supporting each other
- Making everyone feel welcome and safe
- Having fun
- Being responsible
- Sharing my genius
- Learning about others and celebrating others

### **Vocabulary Introduction (1-2 minutes)**

The vocabulary introduction is a space for students to familiarize themselves with the words or concepts they will encounter in the morning message text. By introducing these words, students not only have a time to preview aspects of the text they will interact with, but they also have a time to build their phonics skills, expand their vocabulary and build on their prior knowledge. This was the part of the meeting where I introduced the phrase “freedom fighter” and its working definition. Some other examples of vocabulary words that we have introduced during Morning Meeting are “values”, “cultural intelligence,” “race,” “stereotypes,” and “identity.”

### **Morning Message (5-7 minutes)**

Upgrading the content of my morning message has been the most meaningful change I have made to this structure. I use this time to use the strategy of “layering texts” which means I share excerpts from articles, audio and video clips, photographs, and songs. Layering texts has helped improve reading fluency, comprehension skills, content knowledge, and has increased engagement.

While the content of our morning message comes from a variety of sources, I aim to curate content that connects to the areas of identity, power, equity, and anti-oppression—which comes from Dr. Gholdy Muhammed’s Equity Framework (2020).

### **Sharing Question (8-10 minutes)**

Following the morning message I ask students to respond to a sharing question. This is also an adapted portion of the original Morning Meeting structure. In our Morning Meeting, this is a time for students to reflect on the reading (and viewing, and listening) from the morning message, respond, and discuss with one another. I found that this is a place for students to practice listening to multiple perspectives, a place to respond and adjust, and finally a place to discuss topics that are relevant to students’ lives.

After reading our morning message about what makes a freedom fighter, our sharing question for that day was: Are you a freedom fighter? How? The answer was a resounding yes. We gave the original freedom fighter a cheer for leading the movement and making a change for the group. In 30 minutes students had learned a new concept, tried it on by sparking this movement together, built community through advocating for and supporting one another, took ownership over their learning, and went about their day feeling empowered.

For a list of morning message topics I’ve used with my class paired with sharing questions, see Table 1 on the next page.

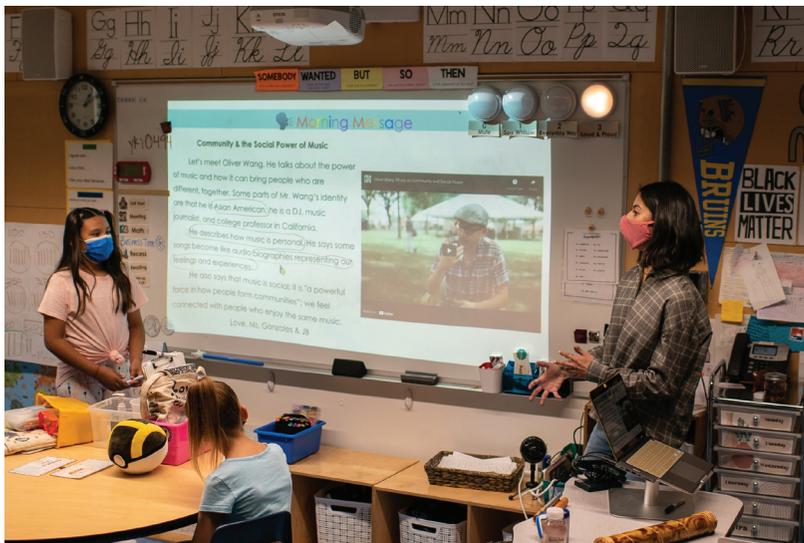
*Table 1: Morning Message Topics and Sharing Questions*

Morning Message Topic	Sharing Question
Values	Who and what do you value? How do you show your values in your choices and decisions every day?
Human rights	Some people fight to gain people more rights. Such as the right to housing and the right to free healthcare. What rights do you think we should all have? (Saunders et al., 2019)
Identity Development	Write down everything you can think of that makes you who you are. What has changed and what has stayed the same?
Power and privilege	What are some forms of privilege that you have? What is something you might be able to do that others might not be able to do?
Worldviews	People in the past held many views and beliefs that we disagree with today. Can you think of anything that people think is ok today but that people in the future may think is not okay? (Saunders et al., 2019)
Cultural Intelligence and Language	If you met someone that communicated in a way that was different from you, what do you think you could do? (O'Brien, Tabb, 2018)
Racism/bias	What can you do or say to interrupt racism?

## There's Only One Thing Left To Do: Upgrade Your Morning Meeting Too!

Of course this work cannot live and die in the twenty to thirty minutes of Morning Meeting, but since Morning Meeting is a structure meant to set the tone for the rest of the day, why not set a tone rooted in anti-oppression, building not only a community, but a community of learners? I know it feels like we just don't have a spare moment but I was surprised by how much meaningful social studies and social justice content I was able to fit into this 30 minutes of time. You may still be thinking, "But I LOVE the questions about dinosaurs and chickens!" Yes, they are so much fun and definitely have their place in building comfort and trust while building up to or integrating some of that deeper content. However now that I have seen how these quick discussions that begin in Morning Meetings find their way into the conversations we have the rest of the day, I am never going back. I welcome you to join me.

*You can see a video of Mara leading a morning meeting at [bit.ly/MaraMorning](https://bit.ly/MaraMorning)*



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# Serving English Language Learners Starts by Serving Teachers

*Brittany Perro  
High Tech Middle North County*

I stood in front of the classroom, testing guidelines in hand, as 17 sixth-grade students looked up at me with fear in their eyes. After I read the testing directions for the English Language Proficiency Assessment of California (ELPAC), the questions began.

“What if we fail, Ms. Perro?” asked Rina. “You won’t fail,” I answered with a reassuring smile, “you just get to show how much you know!”

“What if I don’t know how to answer a question?” asked Manny. “Just try your best to make an educated guess, you will do great,” I said.

“Why do only Brown kids have to take this test, Ms. Perro?” asked Yari.

There was an eerie silence as the students looked around at one another. “Uhh, well—” I stammered, but was immediately interrupted. “Is this a test just to call out everyone that speaks Spanish?” asked Edgar. “Not exactly—”

This time I was interrupted by Sara. “I’ve never spoken another language, why am I here? My mom speaks Spanish—so you assume I do too? This is a little racist, isn’t it?”

I was stopped dead in my tracks. I felt like the air in my lungs was stuck in my throat, my heart in my stomach. I wanted to scream, cry even. Sara named something I felt deep in my gut about the ELPAC, but failed to face until that moment. I was already uncomfortable about expecting English Language Learners (a population predominantly made up of students of color with bilingual backgrounds) to conform to the unofficial, white-dominant expectations of the English language. After witnessing the impact this test was having on my students, then watching them struggle through the test, and finally finding out that only four of the 17 students received “passing” results on the test, I knew the answer was, *yes, the ELPAC is problematic...* but so is my teaching, because I, like many educators, struggle to support students who have language development needs.

About 28% of students at my school, High Tech Middle North County (HTMNC), are classified as English Language Learners (EL) or Reclassified Fluent English Proficient (RFEP). Digging deeper into student data, I found that 100% of the students on the “D & F Grade Report” were EL students. When I pulled the summer school rosters for the past two years, I found that 67% of the list was composed of EL students. The data, paired with student voices, showed me that the test is not a singular issue: it is one of several components that form a mosaic. Sara’s question came to mind, “This is a little racist, isn’t it?” Yes.

We needed to make a change, not just for the sake of our students, but for the sake of following state law, and even the US Constitution. According to the California Department of Education (CDE), schools that receive state funding are required to “ensure that English learners acquire full proficiency in English as rapidly and effectively as possible and attain parity with native speakers of English,” and “ensure that English learners, within a reasonable period of time, achieve the same rigorous grade-level academic standards that are expected of all students” (2019). By not serving our EL population as the state of California mandates, we were failing to meet the requirements set by the CDE. We were also infringing on students’ 14<sup>th</sup> amendment right to an equal education. In the months following the ELPAC testing day, I developed an urgency to make sure that my students’ 14<sup>th</sup> amendment rights were protected. To do this, I needed to identify why our EL students were not showing mastery in their language development, and what was holding teachers back from providing students with the support they needed.

The inequities facing EL students go far beyond the walls of my school and district. “On average, ELs’ academic achievement tends to be low” across the United States (Goldenberg, 2008, p. 14). To be more specific,

EL students are, on average, about 40 percentage points behind their non-EL peers in both fourth-grade reading and eighth-grade math exams (Murphy, 2015, p. 2). This trend has continued (with slight improvement) over the past two decades. Challenging this inequity and closing the performance gap between EL students and non-EL peers may prove to be difficult, but it is possible if the issue is addressed one contributing factor at a time. I decided to focus my master's degree research on this task, using a continuous improvement methodology. After conducting a literature review, and interviewing teachers and students, I identified three key barriers to academic success for EL students:

1. The lack of professional development that supports teaching EL students.
2. The lack of teaching practices that serve and support EL students' language development.
3. The lack of EL students feeling a true sense of trust and belongingness within the school community.

After identifying these contributing factors, I set two goals (or "aims" in the language of continuous improvement):

1. By April 2021, teachers at HTMNC will report an increased sense of efficacy and confidence in their support and teaching of EL students, as measured by a teacher self-assessment.
2. As teachers increase their confidence and efficacy, the aim is for students to be positively impacted. By April 2021, at least 80% of EL students at HTMNC will make progress towards one or more of their individualized language development goals, as measured by interviews with their core content teachers.

With these aims in place, I could try out numerous "change ideas" (specific, measurable interventions to try in classrooms) to not only transform the way EL students are supported in inclusive, project based learning settings, but also support teachers to feel confident in doing so (MacConnell & Caillier, 2016, p. 18). Applying the structures of continuous improvement, I carried out eight Plan-Do-Study-Act (PDSA) cycles between November 2020 and April 2021, in order to collect data and make improvements one change idea at a time.

I knew I could not do this work alone, so I formed a team with two other teachers to drive the change efforts alongside me. We dubbed ourselves the "Emerging Multilingual Team (EML Team)"—the first our school has ever had. We chose this name because our first step as a team had been to officially change the label we used for students. Instead of "English Language Learner" (EL), which focuses on a



deficit (a student’s limited ability to speak English) we used “Emerging Multilingual” (EML), which focuses on an asset (the student, already fluent in at least one language, is adding another language to their repertoire). To mark this shift, I will use “EML” throughout the rest of this piece.

The team consisted of our school’s EML coordinator (eighth grade humanities teacher), an EML support teacher (seventh grade math and science student teacher) and me (testing coordinator and eighth grade humanities teacher). Our director, who shared our passion for supporting emergent multilingual learners, allocated one hour of professional development time for us to work with the entire staff every other Monday. This dedicated time with our fellow teachers was critical to our success. We identified three learning experiences as the most impactful, according to teacher feedback data and improved student results in the classroom:

**1. Create a staff “huddle” for teachers to discuss individual students.**

The huddle consisted of a humanities teacher, math/science teacher, and special education teacher, who met for 10 minutes to discuss a single student. This enabled teachers to routinely check in and discuss progress about each and every EML student. We called this the “By-Name Protocol” and returned to it every two weeks. During our sessions, we committed to using pro-child language, avoiding assumptions, and staying as specific as possible.

**2. Ask all teachers to take the ELPAC practice test.**

We did this so that teachers would experience the test the way our students experience it. Afterwards, most were frustrated by difficult and confusing the test was, and ready to join us in our mission.

**3. Facilitate EML learning opportunities for all teachers.**

In our biweekly one-hour professional development sessions, we provided space and support for teachers to learn, adapt, and develop EML scaffolds and strategies to support students in the classroom. In these sessions, teachers shared success stories of deeper connections they were making with students. In one session, teachers decided to create small group opportunities for their EML students to foster a more targeted learning environment for high-need students.

After the PDSA cycles finished, teachers from all content areas were trying different instructional strategies and sharing their results with each other. More and more teachers were joining our EML team’s weekly meetings, to support students. In April, it was time to analyze if we were able to make improvements on our campus.

Here are our main findings from the data we collected in April:

- 85% of the EML population either partially or completely achieved a goal set for them by their core classroom teachers.
- Teachers shared that after six months of professional development:
  - » They felt more prepared to help their EML students grow.
  - » They felt more comfortable seeking feedback from colleagues and students to help adjust lessons for EML students.
  - » They embedded more California’s English Language Development Standards into their classroom lessons, provided more specific classroom accommodations to their EML students to help them improve their English language development, and confidently communicated with parents of EML students.

While these achievements were very exciting, we could not cease our efforts just yet. The coming of spring and the month of April meant that it was time for the students to face the ELPAC once again. This time, we felt that they were more prepared than ever before. In a final push to celebrate and support our students’ hard work in the classroom and in small groups, our team created a fun theme to uplift the superpowers of our EML students: The Secret Society. We turned the ELPAC test prep experience into a secret agent-themed set of missions, complete with top secret folders, nicknames, and certificates. We wanted all our students to feel valued no matter what the outcome of their tests were.

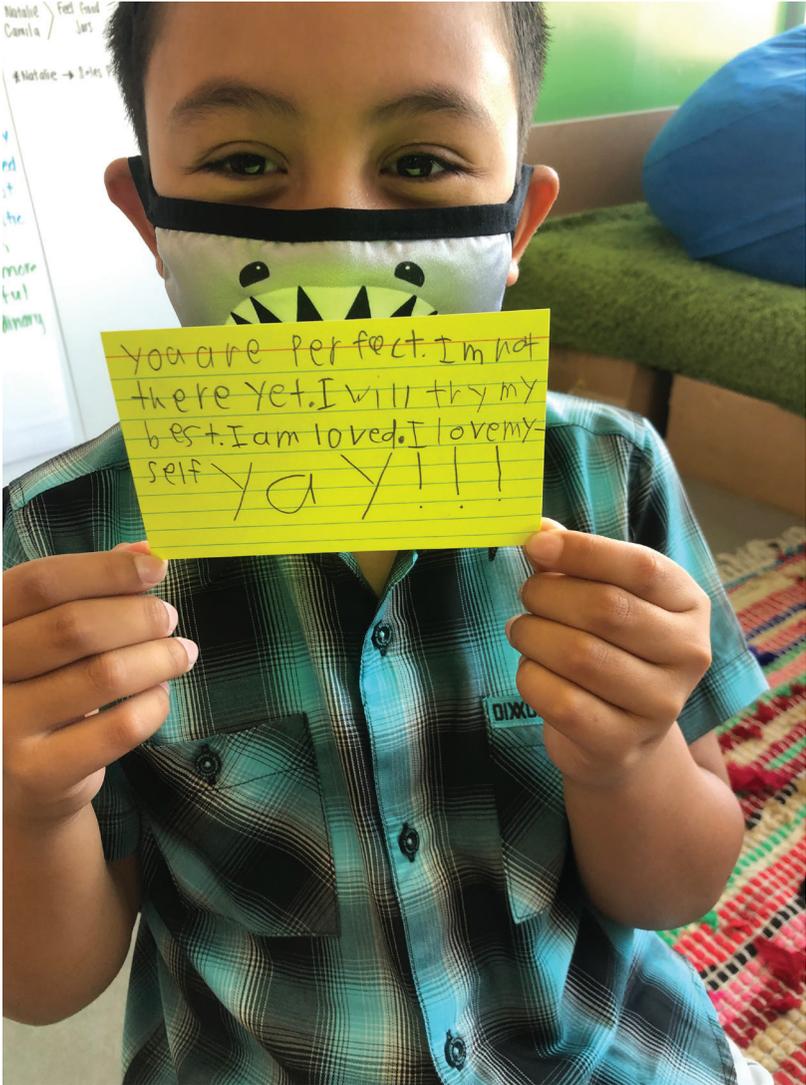
While the Secret Society convened, I started thinking about my own experience of the past year. I went from feelings of frustration and anger, to motivation and urgency, and finally awareness and understanding. Yes, the ELPAC test remains problematic, complicated, and despite perhaps good intentions from its creators, it can put down students rather than uplift them. Unfortunately, we can’t just stop administering it (I checked). With that option off the table, we need to do all that we can as educators to prepare our students for all opportunities that our problematic, complicated, and racist world will throw at them. We can empower our students to face obstacles, such as a test, and overcome them with confidence and pride. In order for teachers to prepare students for such obstacles, I learned that teachers need the time, space, and structures to service their most at-risk students. Teaching Emerging Multilingual Learners is a skill that needs to be explicitly taught, and that is something we were able to do in this Improvement Science experience. School leaders can support their students to succeed by investing in the teacher’s feelings of efficacy to service those students.

After our year of work, ELPAC testing day sounded very different. Instead of being greeted by a flurry of anxious questions the morning

of the test, I was greeted by confident “game faces.” I was amazed at how the very students who had been so frightened of the test in sixth grade left the testing room as eighth graders with their heads held high. When I talked to Edgar, who had asked if the test was meant to “call out” kids who spoke Spanish, he told me, “I feel pretty great. It was just like how I practiced in Secret Society. I knew what I was doing this time!” Manny, who had been afraid of not knowing the answer to a question, said “I feel like I was prepared and less nervous than when I took it last time.” Sara, who had accused the test of being racist, shared “I felt so relieved. I worked hard to prepare for the test. It made me feel a little more powerful and that I could do anything I set my mind to.” We won’t receive our ELPAC results until August, long after this article goes to press, and I would be lying if I said I wasn’t nervous about them, but our students faced the test without fear this year, and for right now, that’s enough for me.

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# Radical Self Love: A Third Grade Project Story With Lisa Saldias, Candice Arancibia, Desiree Powers, and Krista Galleberg

*High Tech Elementary Chula Vista*

*Interview by Avery Barnes*

*Our encouraging words, listening ears, hugs and high fives make a big difference in the lives of the students we serve. The summer of 2020 magnified our society's tremendous need for collective healing. As elementary school teachers, we knew that it was our time to love on our students because that is what we do. But how to do this from a distance? What we needed was love, sweet love—self love, more specifically—and our hope was that this project would empower our students to do just that: radically love themselves.*

Avery Barnes

Where did the idea for this project come from?

Candice Arancibia

Coming out of the summer, we saw a need for more love and connection.

Lisa Saldias

We were processing the killing of George Floyd, police brutality, racial inequities, all while being isolated in the middle of a pandemic. Listening to different podcasts and articles, we noticed they kept repeating “The first step in social justice work is self love,” and so, for me that’s really the origin.

CA

I was really moved by a quote from Audre Lorde: “Caring for myself is not self-indulgence. It is self-preservation and that is an act of political warfare” (1988).

As teachers, we are social justice warriors. This project is us doing the work. Like everyone, all three of us are on our own self-love and healing journey—that’s at the forefront for a lot of us right now. We are just trying to figure out our own identities still, and the ways that we can learn to love ourselves even more.

Desiree Powers

The pandemic also definitely had a huge impact on the project. In the fall, we were still in the midst of reinventing how we teach, our kids were stepping into a new class without physically being together. A question that kept coming to mind was “How do we love on kids who are not in our rooms every day?”

AB

What is radical self love and what does it look like for a third grader?

DP

I remember us being stuck on this question. What is self love? What does it look like for us? What does it look like for an eight year old? How do you know when you truly love yourself? Quite frankly, that last question is something I am still trying to answer for myself—our students are getting really good at it.

CA

Our unpacking of self love was driven by the idea that the things that you love are the things that empower you. So if you can learn to love all parts of your identity, all parts of your culture and family, that is being powered by love.

DP

As we got into it a little bit, we were asking ourselves, “Well, do our students really know all the parts of their identities?” It became more of a question of “Who am I?” Discovering who they are and the great parts about themselves. There were steps. We couldn’t just be like “You should love yourself.” Well, why? Who? What? What parts of ourselves do we need to still discover?

CA

Going back to the inward work piece, we really questioned ourselves as adults: Why is it that I am a grown-ass woman still figuring myself out? If we can give these kids tools at eight years old to figure out

who they are and what they love, then they are going to have a better understanding of themselves and the world and they aren't going to have to struggle with this—as much—when they are adults.

DP

As Candice said, we as adults are still on that journey. How can we get eight year olds to really make sure they are taking care of themselves? If they don't know themselves they really couldn't embark on that journey yet. We kind of realized at one point that our project really needed to take a step into unpacking identity.

AB

How did you structure this project?

Krista Galleberg

The idea of how to break up the project came to us during a meeting and we wrote the phases of the project on a little Post-It note. We still have the Post-It! Here are the questions: What is self love? Who am I? Who are others? How can I help me? How can I help others? To that point: I love me.

This was an epiphany moment during one of our planning sessions. We spent the first half of the year thinking deeply about who I am and who are others? Our guiding question for the semester turned into “What parts of myself can I love?” So we were really just learning about the different parts of our identities. Each week, we focused on a different facet of identity: family, family traditions, culture and cultural traditions, language, skin color and race, gender and gender identity. Having all those conversations through the context of “This is something you can love about yourself.”

LS

I think the way we structured our project around some of the facets that make up identity, made the concept really digestible for the kids.

We were actually reflecting on the first semester of the project with the kids just this week. When we came together to chat, we asked them what they remembered about the first half of our project. A student started with talking about all the different parts of his identity. Right away, he jumped into “Oh you know, our project is about our identities, our language, our culture, our skin color, our traditions.” To hear that that was the first thing he would say was really affirming—it's there for him, he can identify what makes us unique.



AB

How have students' understandings of self love evolved over the course of the project? Have there been any "aha moments" for your third graders?

LS

They are definitely having aha moments. For example, they are finding out "Oh, I am Catholic." They've added new words to their vocabularies—having names and titles to put on parts of their identities. "Oh yeah, I go to Tagalog classes, that is empowering to me, that's part of me." The way we have structured it has made the self work many of us do when we're older much less murky for them.

CA

When we were reflecting on the project, a student actually said, "In the beginning of this project, I used to think that I was all of these good things, but now I know that I am all of these good things." That quote resonated with me—she's loving herself.

LS

Another moment that comes up for me is when we learned about skin color. I had students share things like, "Well you know, I have Mexican skin color. I'm Chicana, I have Mexican skin color." The focus of our work was to help them name their skin color relating to food that they love. It was interesting to hear where that specific student was at first and where she was when she had time to think and revise how she'd describe herself.

CA

To build off of that, so much of this has been rooted in using mentor texts. So for that activity of describing our skin colors, we used the book *The Colors of Us*. We dove into a lesson on sensory writing. Using all five senses, the kids were able to describe their skin color in comparison to a food and then that color. This is just one example of a tool they now have to describe who they are and what they love about themselves.

DP

I agree: They definitely have learned a lot about self love from the activities we've done and the tools are sticking with them. The other day, one of my students said, "Just putting my power outfit on makes me feel good still."

CA

Oh yes, the power outfit activity was from our project launch! It was all about bringing mind, body, and spirit together: listening to your body and being able to make choices and knowing what feels good. This is *sentipensante* pedagogy which is a Spanish word that combines the words for “feel” and “think,” and it gives a place in academia for your intuition. Learning how to use mind, body, and spirit in an academic setting. Ultimately this skill helps one to learn how to trust themselves. We had them go through their closets and pick a “power outfit.” First, they picked out three different combinations of outfits. They played around with ideas, then they got to try on their outfits to see what felt good. The kids focused on what kinds of sensations they were feeling in their body. We did a lot of scaffolding for language in this part. “What felt good in your body when you saw yourself in this outfit?” We helped them recognize the feeling and let them be in that feeling for a moment. “This is the feeling that we want all the time. How can we start to do more things that will give us that feeling?” Then they got to do a power stance: “How would you stand wearing your power outfit?” We did a fashion show as well. The kids all did their “model walks” on Zoom to show off their power outfits.

DP

It felt great to hear my student bring up her power outfit. The launch is something that happened ages ago in a third grader’s mind, so it felt great to know that it was something that stayed with them.

AB

What actually happened? What did students do? What did they learn and make?

DP

Lots of discussion, exploring, questioning, writing and reflecting. We used mentor texts to unpack that week’s focus and guide our own explorations—like *The Colors of Us* when students learned how to describe their own skin tones, which Candice mentioned earlier.

CA

Each week we made a product for the facet of our identity we were exploring. Our launch was all about choosing our power outfit. We have created empowerment boards to visually represent what we love. When we learned about family structures and traditions, we made family portraits out of found objects. The kids have also recorded quite a few Flipgrids throughout the first semester—one of their videos was about a family tradition they value. There have been so many products along the way: videos, artwork, pieces of writing, which all came together in December.

DP

For our December exhibition, we curated Empowerment Altars. Each student's altar was decorated to showcase the products they made throughout the semester. The altars really spoke to their identities, the things they love—the things that empower them.

LS

This is all just about the first semester of our project. There's a whole other part to this. Everything in the first half of our project spoke to questions of "What is self love? Who am I? Who are others?" The second part is all about "How can I help me? How can I help others?"

I think the biggest evolution of the project going into the rest of the year is the business aspect of the project. At the beginning of the project we anticipated our end-of-the-year exhibition being a self-care fair. But as we started to unravel what it was we really wanted them to understand about self love, our conversations were geared around making sure kids knew self love wasn't just a spa day—self love wasn't just a massage. The real practice and belief of self love was really what we were striving for. With that sentiment driving us, our idea evolved from the self-care fair to a business.

DP

We have collaborated with a nonprofit called Real World Scholars that works with teachers and students to set up socially-conscious businesses. The business fits into our guiding question of "How can I help others?"

CA

Our business is a collaboration with a spiritual center in Los Angeles. We've gotten the owner of the center to come in as a "feel good practitioner." Every week, we've had a "feel good expert" come in and they teach us a new feel-good technique. He's going to teach us a form of meditation, we also have a curandera coming in—she's going to teach us about love languages—we have a woman coming in and doing a sound bath, we've done art with mandalas, we've done exercise...

What we have been doing is putting all of these feel-good techniques into a "Feel Good Box." The boxes incorporate the tools and techniques that we have learned to use when caring for ourselves, including handmade candles, and a rock that you can hold in order to remind yourself to take a moment to calm down.

AB

How have your own understandings of self love evolved?

LS

I actually relied on one of the tools that we taught our students for self love, a feel good tool: Writing positive affirmations. I was having a hard time last night, and I had to sit down and write myself a positive affirmation to cook and clean. “I can do this, I can cook and clean tonight.” And that got me the rest of the way.

DP

I think it’s definitely been a community builder for us as a team just like it has been for our students in our classrooms. The three of us have really gone out of our ways to check in on one another. We talk about how we are going to take care of ourselves this weekend. Checking in with each other to make sure we were showing our selves that self love.

AB

Is there a moment of working with students in this project that sticks out to you?

LS

I remember seeing their videos for the power word activity.

DP

Oh yes, the power word activity. They would pick one part of their identity that really empowers them and try to describe that part using a single word or a short phrase. We made a compilation of the videos.

LS

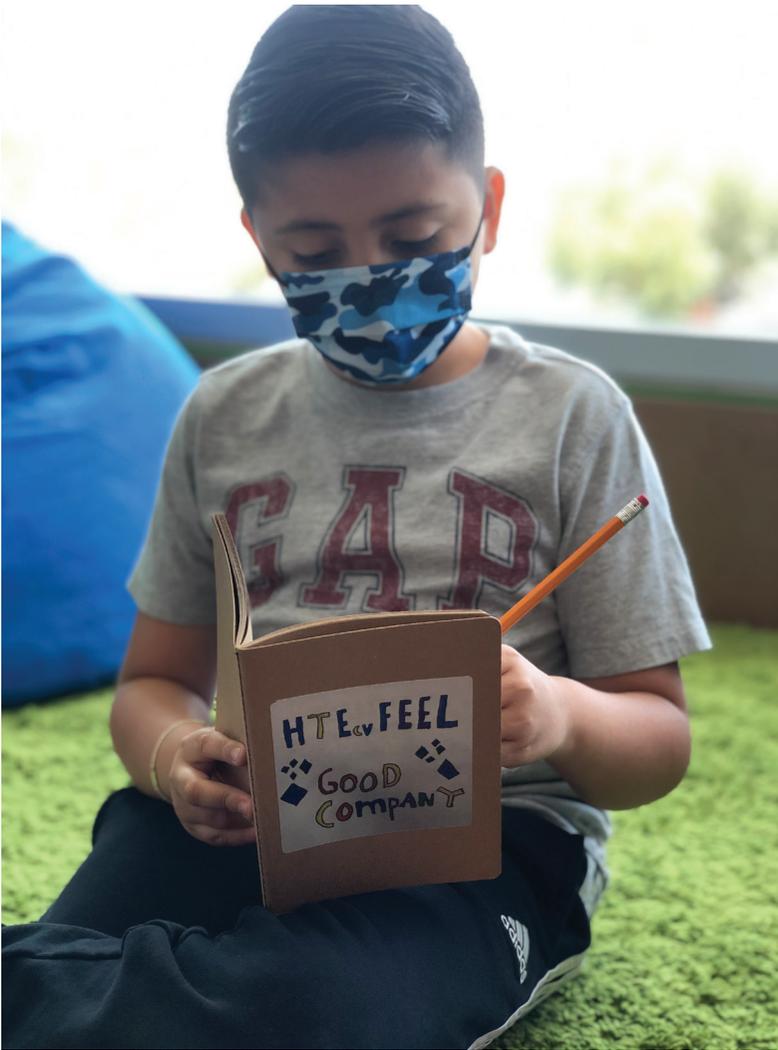
Just hearing my students say, “I’m Black or I’m Mexican, this is what empowers me.” Hearing them say that was just “Yes—this is exactly what we are striving for.”

CA

In the beginning of this project when we asked students who or what they love; not one student said themselves. We recently did heart maps and so many students included themselves as something they love!

I think every project time has been very uplifting because we know that this is meaningful work. It just reminds me that I need to be focusing on this: This is the heart of social justice work.

*You can see a project card for this project on page XX*



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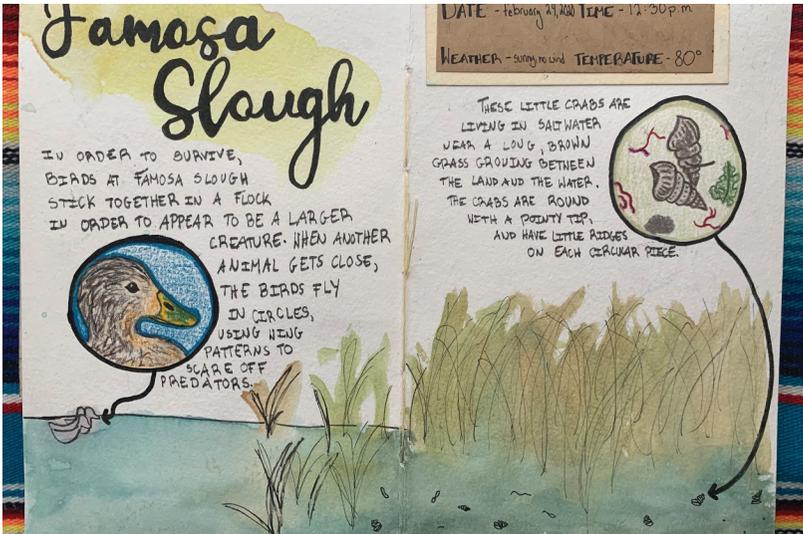


# Project Cards

*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)*



## **Migration is Beautiful**

Christopher Millow & Rachel Angeles  
Eleventh Grade Biology/Environmental Science & Humanities  
High Tech High Media Arts

San Diego is located in a “biodiversity hotspot,” home to thousands of plant and animal species found here and nowhere else. San Diego’s Mediterranean climate also supports thousands of migratory and introduced species, creating a complex biodiversity mosaic. As a border region, the human population of San Diego has been shaped by centuries of colonization and immigration. Through the lenses of science and humanities, students explored the interdisciplinary essential question: How do intentional & accidental migrants shape San Diego’s cultural & ecological histories?

We engaged in collaborative field experiences and service projects within our local community at Cabrillo National Monument, the San Diego River Park Foundation, and the Living Coast Discovery Center. In humanities, students interviewed family members to understand how they arrived in San Diego, and wrote essays and made artistic depictions of these experiences. In biology/environmental Science, students critiqued and revised original scientific illustrations of migratory and introduced species, wrote origin stories for their species, and created an interactive field guide. All student work was exhibited on site at The New Americans Museum.

### **Teacher Reflection**

Our project launched at the San Diego-Tijuana border, the busiest land crossing in the world. It was important for us to launch this project by physically engaging in movement with students (via the trolley) to see an artificial barrier to movement (the border wall). Some students were making this journey for the first time, while others had been making it their whole life. It was a truly profound experience for us to share with one another.

—*Chris Millow*

### **Student Reflection**

I liked that I was able to learn about things that I didn’t even know lived in San Diego. Also, I really liked the space we exhibited in. I think it was great that our project coincided with the entire theme of the museum, and I would be glad to exhibit in the same space again.

—*Jackson, eleventh grade*



## **Radical Self Love**

Candice Arancibia, Desiree Powers & Lisa Saldias  
Third Grade  
High Tech Elementary Chula Vista

Radical Self Love is a year-long, social justice project that unpacks the complex idea of self love for eight and nine year olds. In the first half of the year, students explored identity to better understand themselves and appreciate differences in others. “Who am I? Who are others? What parts of myself can I love?” were the questions that guided this work. Each week, the project focused on a different facet of identity: family, family traditions, culture and cultural traditions, language, skin color and race, gender and gender identity. Students learned to identify these parts of their identities through the lens of “This is something to love about myself.” They exhibited this work by creating Día de los Muertos-style Empowerment Altars to honor the parts of who they are. Their altars showcased products they made throughout the first half of the project: empowerment boards, photos of an outfit they chose that makes them feel powerful, words of affirmation they wrote for themselves, a family portrait, and more.

### **Teacher Reflection**

The idea for this project came to us during the Summer of 2020 as we were witnessing racial and social injustices while being isolated in the middle of a global pandemic. During a planning session, we talked about the ways we as teachers are practicing self-care. This led to discussing the ways we are each learning to love ourselves and how self love has been a difficult journey for us. The world teaches us that we should not love ourselves and this experience is amplified for people of color. We believe the first step to social justice is self-love. In the beginning of this project when we asked students who or what they love, not one student said themselves. We recently did heart maps and so many students included themselves as something they love!

I think every project time has been very uplifting because we know that this is meaningful work. It just reminds me that I need to be focusing on this: This is the heart of social justice work.

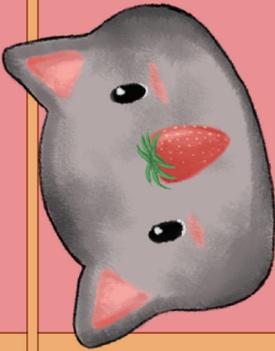
—Candice Arancibia

### **Student Reflection**

In the beginning of this project, I used to think that I was all of these good things, but now I *know* that I am all of these good things.

—Stella, third grade

# dessert & desire



choose from our boba selections to pair with your favorite dessert



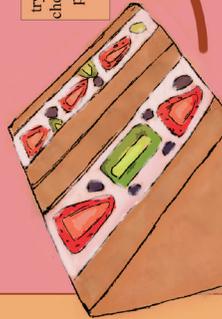
craving french desserts? try our newest addition: strawberry macarons!



try our signature item: the crepe cone. choose from a selection of fruits and ice cream to satisfy your sweet tooth!



try our fruit sandwiches, choose from various fruits paired with cream and sweet milk bread.



not craving anything sweet? no worries! try one of our savory sandwiches!



**Drive-Thru Generation**  
Jeremy Farson  
Twelfth Grade Multimedia  
High Tech High International

In this time of COVID-19 and social distancing, we must consider our need for appropriately accessible food services. Students were asked to generate a concept for a drive-thru restaurant and illustrate six components. The six visual design components culminated in a single digital image. This final image served as a “placemat” both in the literal sense and in the business sense. In the words of ThoughtForm, a strategy and design consultancy, “In business speak, visual explanation “placemats” combine images and words to explain a process, business model, or new product or service. They focus on the big ideas, making them tangible with illustrations.” The artistic process involved, conceiving and illustrating six restaurant features, including the following: five menu items including a specialty item (think the Big Mac), the structure, the signage, the mascot, and the slogan. These six features could be digitally or hand drawn but ultimately submitted as a digital art work in the form of a PDF.

**Teacher Reflection**

I think this project has a lot of potential. It would have been helpful to collaborate with a teacher in another discipline to focus on the significance of what the students were asked to conceive. We could also include more focus on the actual designing of specific and important details, like pandemic-friendly packaging, safe distribution of the food products and the designing and engineering of the facilities. There is a lot of potential to take this idea further and really get into the practice and inner workings of a pandemic safe drive-thru restaurant, as well as innovative and compelling architecture and design that embodies the purpose and flavors of the establishment.

*—Jeremy Farson*

**Student Reflection**

The part of the project I liked most was designing a menu of the food that I can only imagine but couldn’t bake in the kitchen. I think it’s good to think about how food service can be affected when there is something like COVID-19 around.”

*-Leeayne, twelfth grade*



## **Nature Treasures from Land to Sea**

Rosemarie Biocarles-Rydeen, Jeanine Blum, Angie Kenny,  
Latanya Lockett & Michelina Miedema  
Kindergarten  
High Tech Elementary Chula Vista

In this interdisciplinary project, our kindergarten students explored the diversity of San Diego's natural spaces and investigated the essential question, "What treasures lie hidden in nature?" From the fields of the Otay Valley to the tidepools of La Jolla, our students uncovered treasures that can only be found when we slow down and look closely. Using children's questions as our guide, we explored plant and animal life cycles, looked deeply into the life found in the chaparral and ocean habitats, and learned to identify the rocks and minerals found in our neighboring canyon. To support our study, we learned to write informative and explanatory texts. We wrote "How To" books and published "All About" books with accompanying hand-sewn stuffed animals. To share our love and appreciation of nature, students led their families and guests through a nature-inspired art gallery, a guided nature walk, "All About" book readings, nature learning stations, and a nature-inspired performance.

### **Teacher Reflection**

Exploring nature with children is one of my favorite things to do as a teacher. Young children are naturally curious about the world around them and being in nature with them brings out so many questions! My biggest highlights were the unplanned life lessons that often happen when spending time with nature. By observing and connecting with our neighboring plants, trees, and bugs, we discovered connections between their thriving ecosystem and our own classroom ecosystem. It was these relationships that inspired how we could be in community with one another. To work together, to handle with care, to approach with curiosity, these were the ways we were transformed by our experiences in nature.

—Rosemarie Biocarles-Rydeen

### **Student Reflection**

My highlight was looking at all the nature. It was so colorful and beautiful. Bugs lie hidden in nature. They do similar things with each other. My favorite was when we went to the beach and the tidepools because I liked looking at all the barnacles on the rocks. I still love nature because I find out new things about nature everyday.

—Reagan, kindergarten



**Project Dreamlight**  
Carol Cabrera  
Ninth Grade Humanities  
High Tech High North County

Inspired by Ray Bradbury’s *Fahrenheit 451* and Simon Sinek’s YouTube Video “Addiction to Technology is Ruining Lives,” ninth graders at HTHNC explored the questions: How do we make friendships? How can we have interesting conversations? How does technology divide us? How can we use technology for the former instead of for the latter? How can we share the light we have and discover and appreciate the light in others? As we explored these questions, we realized we must consciously put away our phone and be present with the people who are with us. We interviewed three different communities near us: first graders, family members, and senior citizens from the senior living community near school. We discovered through this interview and creation process that every individual has a unique story and life, and if we listen to anyone long enough, everyone is a poet. We created lanterns that illuminated their lived experiences.

**Teacher Reflection**

I loved that our students were able to talk to so many people about dreams: they interviewed senior citizens, elementary students, and community members. To honor their interviewees, students made lanterns that included parallel and series circuits and were able to integrate movement and light into the lantern design. The installations were fun to watch unfold since students were able to choose what they were creating and how to create it. I plan to do this project again and want to consider a more creative way to curate artist statements. I also love the act of gifting the lanterns back to the people who inspired them. Perhaps next year, we could get all of them in one place so we can do a performance and gifting ceremony for everyone who participated.

—Carol Cabrera

**Student Reflection**

*Fahrenheit 451* was a really interesting and unique book that I would have probably never read on my own. This book really did give me a new perspective on people and inspired some questions for the person who I got to interview. The human connection tasks also made me curious about humans and made me wonder about what other people had done or just thought about society. This project helped me interact with people that I didn’t even know, it made wonder more about them and it also made me be more sociable, something I’m really not.

—Kelly, ninth grade



**AbleGamerz**  
Corey Clark, Matt Gottilla & Curtis Taylor  
Sixth Grade  
High Tech Middle Mesa

What does ‘disabled’ mean, and how does it affect one’s perceived value in society? How, if at all, can technology create more access to economic and social opportunities?

Corey Clark , Matt Gottilla & Curtis Taylor set out to explore these questions with their sixth graders, using video gaming as both a point of common interest and a real-world engineering and technological challenge.

**Teacher Reflections**

When you step back and you let kids do them and allow kids to be creative and allow kids to be really critical thinkers and allow them to work together and figure out problems together– this is what my understanding of school should be.

*—Curtis Taylor*

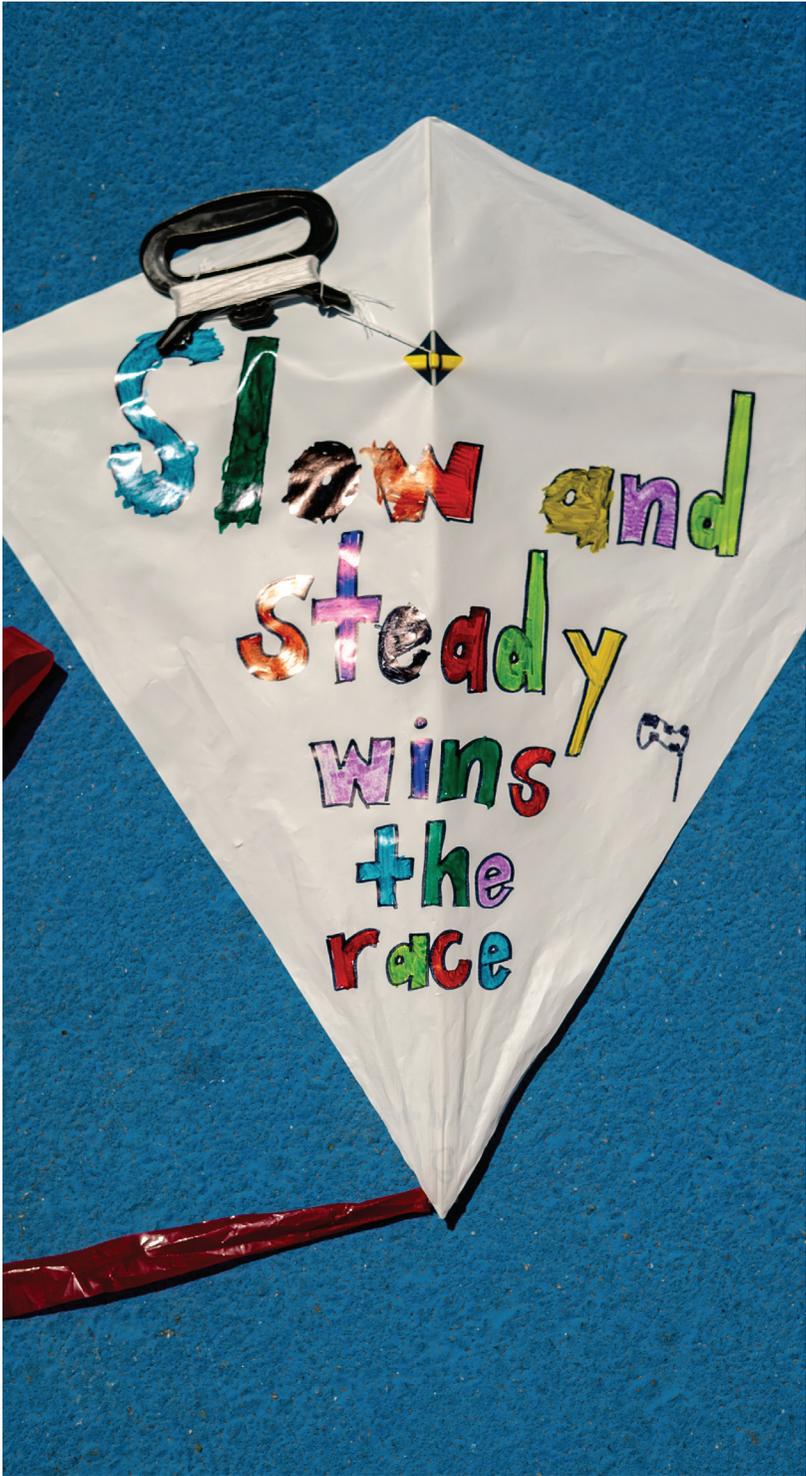
There is not a simple solution for the industry. There is no way to just say, here’s a controller for people with disabilities or here’s a controller even for these different groups of disabilities. It is that personalized. But in terms of somebody who’s creating a project and bringing kids through engineering, it’s kind of like a dream, right? Because it is literally everything you preach to kids about recognizing a problem and brainstorming a solution. These are real human beings that the kids are connecting with.

*—Corey Clark*

**Student Reflection**

Just knowing that this is going somewhere for someone and it means something, you’re inviting them to a world of video games, and you’re letting them play. Because they’re going to play video games just like you, but they’re just doing it differently.

*—Emma, sixth grade*



**Let's Go Fly a Kite**  
Meg Hassey & Dani Phillips  
Second Grade  
High Tech Elementary Explorer

In Let's Go Fly a Kite, second graders had the opportunity to learn all about kites, fly kites, and make their own kites while exploring the essential questions: "What can flying kites teach us?" and, "How can I measure the success of my flight?" Students learned about the history of kite flying, kite symbolism, and kite flying strategies through experts, fiction and nonfiction texts, and creating and flying their own kites. Let's Go Fly a Kite is a project that included authentic math, reading, and writing connections, as well as a way for students to get outside, have genuine fun, and collaborate with their peers. This project has given students a deep bank of knowledge not only about kites, but also about the varying lessons that flying kites can teach us.

**Teacher Reflection**

What surprised us the most about this project is the connections and teamwork that have transpired through spotter and flyer partnerships. These partnerships have been so encouraging and have flourished to be more than we ever thought. This project is also unique because all students experience a range of incredibly successful flights and then turn around to have a lesson from failing the very next day. This project gives all students experiences with both success and failure. This allows students to experience and learn from their frustration and provides a humbling experience for everyone. Through answering the essential question, "how can I measure the success of my flight?" students are redefining what success is. They are recognizing that sometimes failure is not necessarily about them and are able to think about outside variables, like weather. Finally, this project has authentic connections to all parts of our school day. Students are truly thinking about kites from the beginning to end of their day. It has felt so powerful to make each part of the school day feel purposeful and important!

*—Meg Hassey & Dani Phillips*

**Student Reflection**

My favorite part of the project is when I ran out of string. I ran out of string and it unattached from my spool. It meant I got to join the "Out of Line Club." Also on my first flight my kite just took off and had good stability even though I had never done it before. Kite flying has taught me how to be encouraging when working with another person.

*—Uriel, second grade*



## **Laughter Project**

Kalin Cameron, Rebecca Frost, Paige Kennick & Carrie Geremia  
Fifth Grade  
High Tech Elementary Explorer

In this hybrid project done in the 2020-2021 school year, fifth graders learned what makes them funny and how comedy can impact our lives. To investigate their own funny bones, students learned how to recognize and perform comedy, from dry humor and anecdotal stories to improvisation and slapstick. They watched and analyzed famous comedians, interviewed a professional improviser, and took on their own character work through reader's theatre and improv games. Students also deeply investigated the science of laughter and wrote research papers to highlight the health benefits of a good laugh. They read and found connections in Jessica Kim's "Stand Up, Yumi Chung," about a teenager with dreams of becoming a stand-up comedian.

One of our primary goals was to encourage social connections and joy among our students during a long and difficult year. The social bonds and connections they made with each other in distance learning through comedy allowed them to return to in-person learning with joy and lightness.

### **Teacher Reflection**

In the middle of the 2020-2021 school year, our teaching team was feeling the weight of heaviness surrounding our students. COVID-19 and the ensuing quarantine brought health, financial, and emotional burdens to many of our kids. This project allowed our students to smile and laugh again and to connect with each other authentically, even through the internet.

—*Carrie Geremia*

### **Student Reflection**

I really like learning that laughter makes you live longer. And if you are funny you probably got your humor from your parents, which explains why I'm funny!

—*Chiyo, fifth grade*

### **How to make this a "Remote Learning" project**

The majority of this project was done during distance learning. Students recorded Flipgrid videos of their own comedy work and shared feedback and celebrations with each other.



**Seafaring on the Web**  
Lucas Sexton & Allison Hostetter  
Eleventh Grade Biology  
High Tech High International

In this project, a hybrid of remote and on-campus learning, students underwent an exhaustive research project featuring one marine species local to San Diego. Each week featured a new ecological topic of research beginning with the abiotic (non-living) factors of their ecosystem (soil type, depth, access to sunlight, pH levels, etc.) continuing with the many interactions within their community, and ending with the unique anatomical and behavioral characteristics of their species. Their final presentation included a self-made food web, population dynamic graphs based on citizen science data obtained from the Reef Check Foundation, and even a trading card used to compare different species researched in the class.

*Some of the guidelines of this project were taken from a land-based research project written by Zakary Beltz of HTHCV.*

**Teacher Reflection**

Each of the species we researched could be observed in the wild five minutes from our campus. In fact, I was concurrently ocean diving during the time of this project, and was able to show videos of my students' species that I would record during my dives. Also, in the short time that we had together on campus, students collected samples of various plankton in our local bay to observe, photograph, and identify. Students were blown away by the biotic activity they were able to see under the microscope versus the seemingly lifeless water they observe with their naked eyes.

*—Lucas Sexton*

**Student Reflections**

The sea louse I observed really surprised me because I wasn't expecting to see any plankton when I took the water from my tow. Also, this specimen was moving around so much and it was really cool to watch once I saw him under the microscope.

*—Adam, eleventh grade*

It feels wrong to say this because of how bad climate change is, but I liked that my species was one of the few that was thriving from human impact.

*—Alondra, eleventh grade*



# Making Game Controllers Accessible to Everyone: A Sixth Grade Project Story With Corey Clark, Curtis Taylor, and Matt Gottilla

*High Tech Middle Mesa*

*Interviews by Brent Spirnak*

*Teachers Corey Clark, Curtis Taylor & Matt Gottilla designed the AbleGamerz Project, in which students designed and build adaptive video game controllers for clients with a variety of disabilities.*

*This interview was originally published as an episode of High Tech High Unboxed. It includes interviews with the three designing teachers, as well as students Emma L, Alex, and Emma P.*

BRENT SPIRNAK

What is the story of this project?

EMMA L

Not everyone can use normal controllers. Because if you have a disability like muscular dystrophy, and you keep on losing strength in certain areas, then a normal controller just wouldn't work for you. Because maybe you have to put certain pressure on a button, or you can't reach that button.

AbleGamerz was making custom controllers for people with disabilities, so that way they could play video games. Because we all love video games. And why not include them in the great experience that we have?

COREY CLARK

Yes, there's video games and technology and all of these pieces swirling around us. But ultimately, this is a project about access—who has it, who doesn't, and how are we going to be the type of people who engineer a solution to that?

BS

How did you and your teaching partners start this project almost three years ago now?

CC

I'm a big supporter of backwards design. I think a good project always starts with what the product or the client or the end goal is, and works backwards and finds its curriculum that way. However, I felt this one was almost cyclical in nature. Meaning that not only did it start with our clients—Guillermo, Shane, Lucas, Ryan, Ronald McDonald House—these individuals are really at the heart of everything this project was. And through the exhibition, and the final product came back to them again.

BS

What was the best part of doing this project?

ALEX

I think the best part about the project was knowing that we built something that can help someone actually play video games. It was really cool. And I was really happy to see someone else that can't really do something that I can, but just in a different way.

EL

Just knowing that this is going somewhere for someone and it means something, you're inviting them to a world of video games, and you're letting them play. Because they're going to play video games just like you, but they're just doing it differently.

And it's the professional quality work. It's like the drafts kept on coming. You already knew the first drafts was going to have so many errors. And then you would have to redo it and fix it again.

EMMA P

It felt really cool, because it looks like an actual controller, like something that you would see in a store that actual people would buy.

BS

Tell me about the person you met and designed for.

ALEX

The controller that we made is for a person named Shane. He was in the military. And he had an accident. He lost his hand and his knee down. So he can't pull the two triggers on the standard controller. We rewired it to where it's these two now buttons. So now he can play one-handed.

BS

What is the difference between designing for a single person versus a general design?

MATT GOTTILLA

When you're designing for individual clients, there's a couple pretty big differences between more of a generic build. The first one is just the magic of working with real people and having those connections for them—with your students, with your clients. I think not only is it more rewarding than just coming up with a general solution, but it's just so much more real to them. Because like a lot of the students alluded to, we're literally sending this to these people who need it versus we're working on an abstract problem that we're hoping to come up with a more general solution for.

And then in terms of designing, it does require a lot more thought. Because you need to not only coordinate schedules and find times to connect with the people that you are designing for, find times to have students connect with them, but also you need to build in the background so that students can build that empathy, can understand what they're doing. So there are some more design considerations. But the rewards and the payoffs for creating a project like this are more than worth it.

CC

So amazing. This, in some ways, is like the ultimate engineering challenge. Because any time you're building adaptive equipment, for pretty much anything—but that industry, the reason why it can't be an industry that is mass-produced—and this is something that I didn't know going in. But I was privileged enough to learn it through the relationships that I formed.

Every disability affects every individual differently. So in the very first year, we had Guillermo and we had Lucas. Different ends of the spectrum in terms of one was about my students' age, and the other one was closer to my age, who was in the hospital. But they both suffered from muscular dystrophy. But how it was affecting their body and which states they were in was completely different. So therefore, the controllers and the needs they needed could not be more different.



This is why this is not a simple solution for the industry. There is no way to just say, and then here's a controller for people with disabilities or here's a controller even for these different groups of disabilities. It is that personalized. But in terms of somebody who's creating a project and bringing kids through engineering, it's kind of like a dream, right? Because it is literally everything you preach to kids about recognizing a problem and brainstorming a solution.

BS

What types of things can you expect when students engage in these types of projects?

CURTIS TAYLOR

When you step back and you let kids do them and allow kids to be creative and allow kids to be really critical thinkers and allow them to work together and figure out problems together—this is what my understanding of school should be.

MG

One of the really powerful things about the iteration in the process is when you look at our first ideas and our first drafts, and then you have them next to our final product, it's amazing to see the progress that they've made over the course of the project. So not only is it a really useful framework for students to use in problem-solving in general, and to sort of lift all students to a place where they're able to meaningfully contribute to the project, but it's also a really cool way to see that progress in a very visual way over the course of the project.

EMMA L

I do remember a part where we would film these videos and take pictures just to—and send them to our clients to tell them that, hey, we remember you, and look at what we're doing. And when we would take these videos and we would walk around the classroom and show them what's going on and the students would explain what they're doing, it really made you feel—really reminded me that you have to work harder than you're ever going to work, because it's going to mean something. You have to put your all in it.

It has to look like something you would buy, something you would use, something that's going to last, not something that's just going to be used a couple of times. So I guess the fear part is just knowing this is actually going to be useful. It's going to the outside world.

BS

What were some highlights for you as a teacher?

CC

When you start a project that is human-facing, that is all about individuals and their needs and real human beings and empathy—even though it seems like it might be daunting or a lot of work for a teacher, you're going to realize that things like engagement from your students and buy-in and authenticity are going to be solved for you. Whereas normally you would have to try to create these things and try to find a way to engage them or force a buy-in or something like that, the second that these really are real human beings that kids are connecting with and that avenue exists, then what you start to see is a lot of the teaching job is done for us at that point. And we just become project managers.

We're helping them when they get stuck. We're suggesting things. But we actually don't need to worry so much about some of the pedagogy pieces, because they start to solve themselves.

When you give kids authentic, meaningful work, a lot of the other things just fall into place. Start with either a client or a need. If you start with a client or need, it's going to start to unlock a lot of those later pieces thinking about how are we going to invite kids into this community? How are we going to broaden our perspectives?

And a lot of that came through really thoughtfully chosen pieces of text, speakers, community partners. And I think a lot of that is just as essential as the engineering aspect. Because without that, I don't think you would have a full grasp on what it is that the needs are.

BS

What is some advice you would give to a teacher wanting to do this type of project?

MG

Do it yourself first. Don't try to teach kids how to make something that you've never made. Grab a coworker and a pizza and a weekend to do the project or the important parts of it yourself first. Because it will make a world of difference when you're trying to lead your students. You'll know what to look out for, what pitfalls there are. And it will just go much more smoothly.

CC

I think any time that I'm talking to any teacher and we're talking about project creation and project planning, I think dream big. I feel like a lot of times that sounds like a cheesy piece of advice. But I feel like some of the best projects and the best ideas never got off the first stage, because

it's easier to execute on the what I've seen done before versus things that are definitely achievable and easy to see through once you get all the students excited about it and you start going step by step by step. But I would say first is those wild ideas that you get in your head sometimes, and you're just like, yeah, that'd be great—but I just don't know how I would even go about that. Rather than immediately let that idea slip from yourself, hold yourself to that. And then immediately start seeking out other individuals. And start trying to figure out what would be step one if I was quote, unquote, “going to make this happen”? What would step one be? And I think once that ball—or that snowball starts rolling, you start to realize you know what? This actually can happen.

*You can see a project card for this project on page XX*



# Designing the Largest Classroom: Online Learning at Scale

*Patrick Yurick*  
*High Tech High Graduate School of Education*

In traditional classrooms we start the learning design process by taking a quick inventory of the resources we have to work with. How many chairs are there? Where is the projector? The entrance? The whiteboard? As we get a feel for the possibilities and constraints of our classroom we can then start building a learning experience for our students that optimizes both who they are and the resources we have.

The same goes for online learning. We need to assess our resources before we can design online experiences. Problematically, especially for teachers new to online learning, the online classroom bears little semblance to traditional physical spaces. Instead of morning gatherings we use Zoom meetings and email. Instead of a whiteboard we use Google Drive and Dropbox. The translation isn't one-to-one.

One of the best reasons to teach online is that you are afforded new possibilities to scale your learning. The digital classroom allows for you to up-cycle and iterate content in clearly measurable ways with larger audiences than you could have ever hoped for in a traditional classroom. Instead of teaching 30 students per hour you now have the ability, if your curriculum is configured correctly, to teach 30 groups of 30 students at any given time.

The most common issue for new teachers coming online for the first time is that they try to think of their physical classrooms first and then attempt to translate the elements and practices within those spaces one-to-one. Doing this one-to-one translation inherently diminishes the capacity for the curriculum to scale due to a lack of consideration for the variety of audiences attempting to access your content.

The following elements and principles of scalable online learning were curated specifically for teachers who are looking for guidance on how to start thinking with an online learning mindset. These building blocks will help you to design optimal learning experiences that maximize accessibility and engagement.

### The Six Elements of Scalable Online Learning

We'll begin with the elements, which you can see in the graphic below:

# Elements

## Scalable Online Learning



Video



Audio



Readings



Guests



Assessment



Meetings

### **Element 1: Video**

Video can provide a fun way to engage students in learning. Videos can take on the form of animations, documentaries, and simple lectures. Ensure that all videos are transcribed to allow for greater access to content. Remember that video isn't great for everything as it requires the consumer to sit, watch, and listen. Over an extended length of time this combination of requirements can lead to learner burnout.

### **Element 2: Podcasting/Serial Audio**

Presenting your material as a podcast, especially longer lectures or guest interviews, can be a great way to offset the fatigue mentioned above. Listening to audio recordings can free the learners to move around, take notes, or multitask while listening. Be aware that only a small portion of your learning audience actively consumes learning-based podcasts/ audio so make sure that you include instructions and suggestions for how to listen. For example, when running focus groups for the Great Communicators podcast we found that people needed to be explicitly told that they could go for a run or do the dishes while listening to our series. Make sure you indicate the level of concentration you expect of the student while listening to your course's audio content.

### **Element 3: Readings**

For many learners reading is still the quickest way to consume learning material as it allows for skimming and self-paced consumption not afforded by media like podcasts and videos. Consider making your course's required readings as short as possible and favoring longer versions for your additional resources section.

### **Element 4: Guest Speakers, Webinars, Etc**

Whether hosting guest speakers or webinar live or asynchronously consider including this element as a way to expose your students to professional perspectives on what they are learning within your course. Field related experts can add credibility to your course's assignments and goals as well as connect students with a deeper understanding of the material being consumed. If conducting a live session where students can interact with the speaker make sure to tape these sessions to allow access to future groups of learners.

## **Element 5: Assessment**

Assessments provide educators with the ability to track individual and group progress within courses as well as an ability to see growth over time. Assessments for scale need to be simple and systematic so that you can easily understand where your students are within their learning no matter the size of the population you are working with. Traditional assessment types within scalable online learning environments are quizzes, tests, and peer-reviewed assignments. In my latest experiments I've been also taking latent analytics into account when assessing student engagement. Latent analytics include email open receipts, clicks within emails, and time spent on pages. While these latent analytic assessments probably wouldn't help in forming a final student evaluation of learning, they can enhance my ability to see which pieces of my curriculum are working and for whom.

## **Element 6: Synchronous Meeting**

Due to the nature of scale anything synchronous needs to be minimized as it limits the curriculum's ability to be relevant asynchronously. That being said, there is definitely an argument to be made for students facilitating their own conversations synchronously to engage more deeply in course content. Within an application like Zoom or Google Meet you can have your students record smaller group meetings and discuss course content. These recordings can be used for assessment later.

OK that's it for the elements. Now on to the Principles.

## **The Ten Principles of Scalable Online Learning**

### **Principle 1: Scalable Levels Of Engagement For Users**

Design your core curriculum to reflect the needs of multiple types of learners. Voluntary online learning typically shows a large drop-off of engagement immediately following initial exposure to learning materials. Plan for that kind of student as well as the student who eats up everything your course has to offer. Engage active and passive users equally, by providing unlimited content access to all users. Active users will have content delivered to them as they engage with material while passive users will have the ability to see all information within the course with the option to participate or not.

Refer to the graphic that breaks down the five levels of user engagement on the facing page.



# Principles

Scalable Online Learning



## **Principle 2: Write for Skimmability**

Just because users don't sink their teeth into your content immediately doesn't mean they aren't interested in doing so at a later time. There are many reasons why an internet user may not have time for your material when they first see it. Plan for those users to walk away with easy-to-remember phrases and search terms so they can readily find your content again later when they do have the bandwidth to consume.

## **Principle 3: Designed For Repetition (On Demand)**

Design your course in a modular way so that it can be repurposed for new audiences in the future. This allows you to reconstruct the course easily on different learning management systems in the future thereby increasing the accessibility of your content for future audiences.

## **Principle 4: Entertaining At The Onset**

There is a reason that people like TED Talks better than traditional lectures filmed and made available on YouTube. TED Talks are engineered to make complex ideas accessible and entertaining. Look at your content and ask yourself, "Why would someone care about what I'm trying to teach them? What about it might get them excited?" Try to hook users within 15 seconds of exposure to your material. There are lots of ways to do this: instructional animations, micro-videos, and podcasts that break the topic down so that the user can engage enthusiastically. At the end of the day what entertains your course's audience is something you will need to figure out and iterate upon.

## **Principle 5: Short & Sweet**

Remember those short attention spans mentioned above? Plan for that by ensuring that all information presented will be to-the-point and designed to be read by the casual passerby while maintaining the depth needed to engage intellectually.

## **Principle 6: Relevant Activities & Assignments**

Not all of your users are coming to your course to complete it. Some are actually coming to learn quickly how to better themselves and it would be a logical fallacy to correspond completion rates with learning. Plan for that by making your assignments and activities memorable and high-quality. Ensure activities will always be geared around demonstrating competencies and that users are always asked to do something within the course that they can use outside of the course.

## **Principle 7: The Feeling of Instructor Care and/or Presence**

The more I've embraced designing automated course experiences the more I've leaned towards making sure that all the content presented has sign-posts that ensure the student within my courses knows, even if I'm not present within the run of the course they've enrolled in, that the content developed was done so with care and passion. I alternate between declarative statements that best demonstrate my expertise on a subject and "I" statements that remind the student that a teacher, a person, designed the course that they are enrolled in.

Example declarative statement: "The first thing you need to do to approach painting watercolors is to make sure you have the right supplies."

Example "I" statement: "I've found that fear is the biggest factor in why my students don't naturally identify as artists."

The "I" statements do quite a bit to humanize the course to the students. "I" statements make my assertions opinion statements, which weakens their ability to be authoritative but strengthens their ability to show vulnerability and feeling.

I try to show, when I can and where I can, what I'm excited/nervous/passionate/concerned about within the content. How this is done changes between media types. For instance, I'm writing my opinions in this paragraph by using the first person consistently. This gives you, the reader, a sense of my presence even though I'm not actually here reading this with you. The way this manifests changes when considering podcasting, video, graphics, etc. but the sentiment and goals remain the same.

If you choose to present a course synchronously with yourself as an ever-present instructor you will still need to keep in mind what is described above. Just know that you are sacrificing scalability by designing a course that can only function with you present.

## **Principle 8: Connected To Important Information & People**

In an in-person classroom I would encourage you to do field trips and bring in guest lecturers. With online learning you do not have the ability to bring your students physically from space to space or share a room with a content expert. What you do have, however, is the ability to connect your students to experts more easily through taped conversations and/or live question and answer sessions.

## **Principle 9: Brimming With Resources & Information**

You want to give students within your course the awareness that they can dive into the material being presented even deeper at any point they want to. After presenting highlighted/required work, direct participants to optional materials that can deepen their understanding of the content.

## **Principle 10: PBL (Project-Based Learning) Online**

Due to the inherent qualities of teaching online your students are bound to feel that the material within a course is less personalized and more sterile than if they were in a room with peers. To combat this consider employing project-based learning practices online with your students (see our recently released “How To PBL Online” course for more tips and tricks on how to accomplish this).

Some possible online learning structures that can be repurposed to enhance online PBL:

### **Peer Review/Assessment**

Consider employing a peer review system for assessing work completion instead of formative quizzes and tests. Peer review of materials allows for scalability as well as personalized feedback on work. Within a peer review system students can submit artifacts such as writings, videos, audio recordings, or images. Once submitted they will be prompted to review a set number of their peers’ submissions. This allows for everyone to get personalized feedback on their work. The only caveat to this is that peer-review is also limited in scalability as it requires a set number of users to be synchronously taking the course in order to work.

### **Product Oriented Assignments**

Consider having your students construct media that demonstrates their understanding of the consumed curriculum. This can be done in the form of presentations of learning recorded on video, reflection writing in essay form, audio reflections of significant learning experiences, etc.

### **Inspiration**

Before I started designing online learning experiences I was a high school art teacher. On an average day I worked with a little over 100 students that would rotate out of my classroom mid-year and be replaced with a new population of incoming art students. I consistently had predictable

absences by students because of competitions, sickness, etc. It became predictable that students would ask, after an absence, “Mr. Yurick—what did we do yesterday?”

In my second year of teaching I started wanting to find a way to have that question answered before the student came through the door. I abandoned my whiteboard and started using Google Documents and my digital portfolio website to house my lectures, assignments, and worksheets. I trained my classes to go to this online space before coming to me. Doing this freed me up to have meaningful conversations with students around their specific art and decreased the rote repetition of instructions. My ethos was: everything that can be repeated needs to only be said once—and it needs to be digital so students, and parents, can easily access it anytime they need clarification.

An unforeseen additional benefit came from this approach to managing my classroom. Due to the fact that almost all of my instructional material was constantly being digitized my classroom structures suddenly became easily scalable. Instead of writing instructions, assignments, lectures, and grading systems for one class at a time, I was constructing a base set of materials that could be used for all classes. If one class needed something unique or custom I was able to add those instructions and additional materials without needing to rewrite and construct the entire system.

This all led me to start asking myself questions regarding the nature of scale in-and-of itself. Could my scaled curriculum for 100 students now scale to 1,000? 10,000? 1,000,000?

I subsequently left classroom teaching to explore these questions. This set of elements and principles are some of the consistent building blocks of my findings. These elements and principles are chosen to reflect the tools specifically needed for thinking around scaling curriculum for lots of audiences.



*Second graders in Janice Swaisgood's class posted their self-portraits as zoom backgrounds during their online exhibition in Fall 2020.*

# Glossary

*We try our best to make Unboxed a jargon-free zone, but there are invariably a few words that may be unfamiliar. We've done our best to define them here!*

*Note: Definitions with an asterisk were written by Amanda J. Meyer. Definitions with no source indicated and no asterisk were written by the Unboxed editors.*

## **Aim Statement\***

A succinct statement of what the improvement effort is trying to accomplish. Includes what will be improved, how much, and by when.

## **Change Idea\***

An idea for a specific alteration that could be made to practice in service of creating improvement.

## **Continuous Improvement**

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

## **Current State\***

A description of the status quo at the outset of the improvement effort. Could involve a mix of quantitative and qualitative data.

## **Director**

The leader of a school (synonymous with “principal”)

## **Empathy Interview\***

A specific type of interview that focuses on uncovering the emotions, experiences, needs, and desires of stakeholders affected by the problem

or the improvement work. Originates in human-centered design.

### **Equity**

Each child receives what they need to develop to their full academic and social potential (National Equity Project, n.d.).

### **Fishbone Diagram\***

A tool for identifying and relating root causes of a problem. Also may be referred to as a “causal system analysis” or “Ishikawa diagram.”

### **Improvement Science**

A disciplined and collaborative approach to problem-solving in organizations characterized by a thorough investigation of the gap to be addressed, rapid-cycle testing of ideas for change, and spread of promising changes in order to generate evidence about what changes produce improvement, for whom and under what conditions. Involves the integration of relevant content knowledge with improvement methods, which are drawn from experimental science, systems theory, psychology, statistics, human-centered design, and other fields (Institute for Healthcare Improvement, n.d.).

### **Learning Consolidation\***

An effort to pause, take stock, and summarize key learning during or after an improvement effort. May include the documentation of promising change ideas that have been tested.

### **Measures\***

Data that is collected and displayed in a way to inform ongoing improvement work. A typical project will have a small number of measures working in combination to help the team know if they have met their aim, are making progress in key areas, or are creating unintended consequences elsewhere in the system.

### **Oppression**

Systematic and intentional disadvantaging of a group of people based on their identity while advantaging members of the dominant group (gender, race, class, sexual orientation, language, etc.) (National Equity Project, n.d.).

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

A four-part mini-experiment in which a change idea is identified, and predictions are made about what will occur. Then the change idea is executed, data is collected, and predictions are compared to results. Finally, the improver decides what actions to take next.

**Process Map\***

A tool used to visualize the steps taken in work. May include details such as owners of key steps or common breakdowns. Also known as a “flow chart.”

**System\***

An interrelated set of people, tools, and processes that come together to accomplish a particular purpose.

**Theory of Improvement\***

A concise articulation of the key “drivers,” or high leverage areas, that an improvement team believes it needs to impact to reach the aim. Illustrates the hypothesized causal connection between change ideas and outcomes.

**Tracking**

Placing students into classes based on perceived academic ability (for example, dividing students into either “regular” and “honors” class is a form of tracking).

## References

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

# Contributors

**Jay McClain** is an assistant superintendent for Hopewell City Public Schools in Hopewell, Virginia, a district that serves about 4,200 students in pre-kindergarten through twelfth grade.

**Amanda J. Meyer** is a designer, facilitator, coach, and improvement advisor who builds educators' capacity to solve problems and improve learning experiences and outcomes for all students. Amanda is a cisgender, middle-class, able-bodied, white woman who strives to interrogate her own privilege and positionality as she integrates improvement science, human-centered design, community organizing, and an equity consciousness in her practice. Amanda discovered her passion for improvement science eight years ago, during her time at the Carnegie Foundation for the Advancement of Teaching. At Carnegie, she designed and facilitated numerous improvement science learning experiences, including the EdX online course, "Improvement Science in Education," taken by thousands of learners around the world. She began her career teaching high school English as a Second Language in San Antonio, and currently resides in Oakland with humility and reverence for its rich traditions in arts and activism.

**Mara Gonzales** teaches third grade at High Tech Elementary Explorer. Mara majored in Sociology at Ventura College and UCLA and earned her Masters in Curriculum and Design from the University of San Diego. She is finishing up her second year as a classroom teacher and is passionate about teaching social justice and fostering a learning environment that is anti bias and anti racist. Outside the classroom she enjoys singing at the occasional open mic, roller skating, and spending time at the beach with her family and friends.

**Brittany Perro** is a Massachusetts native who began her teaching career as a 2011 Teach For America Corps Member in San Antonio, TX. After her first two years teaching middle school English Language Arts and Inclusive Special Education, she briefly left the classroom to explore a variety of interests. It wasn't long before she realized that she was her happiest, best self while teaching. In 2016, she returned

to the classroom as an art teacher at Brooke Charter School in East Boston, MA. When Brittany moved to San Diego for her partner's medical residency in 2018, she fell in love with the staff, students, and community at High Tech Middle North County in San Marcos, CA and has worked there ever since. Brittany is in her third year of teaching eighth grade humanities, and simultaneously fulfills the role of testing coordinator. She recently received her Master's Degree in Education Leadership with High Tech High's Graduate School of Education, where she dedicated her capstone work to improving teacher efficacy to improve academic growth of English Language Learners.

**Avery Barnes** is going on her fourth year teaching at High Tech Elementary Chula Vista and her eighth year teaching fifth grade. Before coming to HTeCV, Avery taught at the Bronx High School of Science, LREI (Little Red School House and Elisabeth Irwin High School), and Avenues: The World School, all in New York City. Avery works to foster a positive community in her classroom that is conducive to risk-taking. She's a fan of Haruki Murakami and reads surrealism any chance she gets. Avery is also an editor of *Unboxed*.

**Brent Spirnak** is the Multimedia Ethnographer for the High Tech High Media Team, and an editor of *Unboxed*. He began at HTH after graduating from San Diego State as a video ethnographer in 2008. After two years, he transitioned to the classroom and was a founding staff member at High Tech Middle North County while obtaining his art credential through the HTH Intern program. Brent taught Digital Arts at the middle school level for 9 years before joining the High Tech High Graduate School of Education (HTH GSE) staff.

**Patrick Yurick** is a former art educator at High Tech High Chula Vista. For years he worked with the HTH GSE to help design and facilitate massive open online learning experiences such as New School Creation, Learning Mindsets & Skills, and How To Make a Comic Book. Following his time at HTH Patrick spent just under three years working as an Instructional Designer for the Office of Graduate Education at MIT. For the MIT OGE Patrick was tasked with designing resources that would scale to fit the MIT graduate population's need for science-based communication professional development. This work resulted in a project titled Gradcommx. Within that project Patrick worked with internal researchers at MIT, as well as an external research group, to look closely at scalable models of learning and media to understand what works when trying to spread educational concepts at scale.



# unboxed

EDITORIAL TEAM

Randy Scherer  
*Director of Unboxed*

Alec Patton  
*Editor-in-chief*

Brent Spirnak  
*Multimedia Ethnographer*

Avery Barnes  
*Editor*

Jean Catubay  
*Editor*

Shira Feifer  
*Editor*

Chris Olivas  
*Editor*

Sophia Oller  
*Editor*

Colleen Stevenson  
*Editor*

Patrick Yurick  
*Director of Experience Design*

Jimena de la Torre  
*Web Designer*

Robert Guerra  
*Web Designer*

Luke Piedad  
*Web Designer*

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Unboxed welcomes submissions from teachers, administrators, teacher educators, policymakers, researchers, and other informed observers of education. In addition to reflections on practice, submissions may include essays on purpose and policy, accounts of teacher research, scholarly articles, project design tools, photography, art, and student work. Send submissions to [unboxed@hightechhigh.org](mailto:unboxed@hightechhigh.org) or to the HTH Graduate School of Education, Attn: Unboxed Submissions, 2150 Cushing Road, San Diego, CA 92106.

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Web: [hthunboxed.org](http://hthunboxed.org)