“Creativity takes courage.”
—Henri Matisse
WHO WE ARE

“Teach me out of desire, not obligation.”
—Kwaku Aning
WHO WE ARE

The K12 Lab includes a full time team of designers, as well as colleagues from the d.school and broader Stanford community, a rotating set of fellows, and a broad network of students and educators from across the globe.

The K12 Lab serves as a catalyst for creative confidence in K-12 education. We aim to obliterate opportunity gaps in elementary and secondary education by designing, sharing, and supporting new, more equitable approaches to learning and building with students and educators.

WHY WE EXIST

K-12 education needs to be radically transformed from a system that perpetuates inequitable learning experiences into an ecosystem that thrives on bold experimentation and a commitment to equity. In order to build a brighter, more just future, we need to build the education sector’s design abilities.

OUR WORK UTILIZES THREE COMPLEMENTARY APPROACHES:

1. Advancing Experimentation: K-12 education desperately needs to build research and development muscles. There are so many giant challenges demanding radical responses, and far too few efforts to bring intentionality and expertise to trying new things. As a Lab, we seek and discover new ways of thinking about old (and new) problems in education. We investigate and design experiments and resources that are ultimately shared broadly throughout the education sector.

2. Disseminating Resources: We make learning resources about design and equity in K-12 education free and accessible. Every tool, video, and article we create is shared for free on our website and through collaborations with media outlets and education organizations. We seek opportunities to engage in multi-directional sharing, so that as much as we are offering resources we create, we are also hearing and learning from others. We share our work with the global community to ensure that design is accessible.

3. Supporting the Field: No one can make change on their own. The K12 Lab supports educators and students in elementary and secondary schools in using design and innovative approaches to transform their communities. Through design workshops, coaching, and long-term engagements, we help students, teachers, and system leaders build the will, the skills, and the relationships to work together toward creating more equitable educational experiences.
“Design is a tool and method for optimism.”
—Laura McBain
“Design thinking crosses all boundaries addressing equity through the use of empathy.”
—Rich Boerner and Shauna Hobbs
DESIGN IN K-12: A STATE OF THE FIELD

We believe all good educators are designers. Through the learning experiences they create, the assessments they design, and the macro and micro moments they curate with young people, educators can actively shape the behaviors and mindsets of future generations. Throughout the last decade we have seen an increased adoption of design thinking in classrooms and schools.

Many educators have successfully launched design challenges, built schools around design thinking, and are experts in the process of crafting and delivering design challenges in their community. But these same educators are asking: "What’s next?" and "How do I become a better design educator? How do I shape deep design experiments in my community that really make a difference?"

Just like the educators we work with, we too have been asking what’s next for design thinking in K-12 education. Our new experiments, as well as gatherings like our Futures Fest, emerged out of this collective interest to explore how design might offer processes for learning and methodologies to shape the future.

And of course this learning is not done, ever. The d.school is a learning organization which means we will always reflect on our impact, seek new insights, and continue to take on bold experiments to obliterate the opportunity gaps that exist in our educational system. For us, design is a way forward. Design offers methods and tools of optimism.

We see the world as it could be if we took a more equitable and humane approach to uncovering and addressing society’s most pressing problems. This retrospective of our recent work offers some visions of what the future can hold, but there is much more to be done. We hope you will join us as we walk into the future together.
"There are no new ideas, just new ways of giving those ideas we cherish breath and power in our own living." —Audre Lorde
In the K12 Lab, we believe in the power of radical collaboration to push our work forward. Our work is about empowering our community of engaged, passionate, anti-racist educators using design mindsets. We seek out individuals and collectives that use design to tackle messy problems and audacious opportunities in the K-12 sector.

Our work is created alongside educators and young people. We work to design and deliver professional development training, resources and tools, and community events that enable people to use design to transform their classrooms, schools, and organizations. The hands-on experiences we create for people in the K-12 sector focus on building the creative confidence to identify, create, and share original solutions to locally felt and nationally known challenges. Our participants leave our experiences equipped with the design abilities to bring design to their communities.
The K12 Lab is a catalyst for equitable innovation in the elementary and secondary education sector.
ARIAM MOGOS:

**HOW MIGHT WE LEVERAGE EMERGING TECHNOLOGIES TO ADVANCE EQUITY, EMPATHY, AND SELF-SUFFICIENCY IN K-12 EDUCATION?**

**THE WORK:**

REP| a publication focused on understanding how technology can be used to further equity initiatives and push our thinking in K-12 education. REP| is a student-centric magazine launched by the K12 Lab and Teaching and Learning Studio at the d.school for young people and educators to learn through analog play about the foundational concepts which underpin emerging technologies. They investigate the implications of these technologies on society at large, and reflect on how their own identity and social status shape the technologies they create.

Each issue of REP| features a different emerging technology and the work of an artist who captures essential social themes behind the tech through mixed media, which young people can remix.

JESS BROWN:

**HOW MIGHT WE HELP EDUCATORS UNDERSTAND WHAT NEUROSCIENCE TELLS US ABOUT INTERSECTIONS OF CULTURE AND LEARNING?**

**THE WORK:**

Working with Zaretta Hammond, author of *Culturally Responsive Teaching and the Brain*, we have created a series of short videos, gifs, and other tools that support educators in utilizing learning science practices in their classrooms. These are complex, nuanced topics. This collection offers an exploration into that complexity and an invitation for educators and learners to be increasingly intentional about how we and our students learn.
This work is inspired by the positive deviance approach, which is based on the observation that in every community there are certain individuals or groups whose uncommon behaviors enable them to find better solutions to problems than their peers, while having access to the same resources and facing similar challenges. We are developing a toolkit to help schools utilize this process to find their own “bright spots.”

This toolkit will be a resource to help schools utilize this process to find their own “bright spots” within their communities.

**MARC CHUN:**

**HOW MIGHT WE EQUITABLY SPREAD PROMISING PRACTICES IN K-12 EDUCATION?**

**THE WORK:**
This work is inspired by the positive deviance approach, which is based on the observation that in every community there are certain individuals or groups whose uncommon behaviors enable them to find better solutions to problems than their peers, while having access to the same resources and facing similar challenges. We are developing a toolkit to help schools utilize this process to find their own “bright spots.”

**BARRY SVIGALS:**

**HOW MIGHT WE IMPROVE STUDENTS’ EMOTIONAL, PHYSICAL, AND MENTAL SAFETY?**

**THE WORK:**
We developed a tool for school communities to use to reframe conversations about school safety. This tool is available for download and is designed to be used individually or in small groups across K-12 schools. The aim of the tool is to prompt a shift in the traditional ways in which we think of school safety to suggest the following:

- Any safety strategy should contribute to the overall quality of the learning environment.
- School safety is a communal responsibility. Everyone can contribute. Everyone is called to collaborate.
- Students need to be included in any discussion about school safety.
- A greater sensitivity to issues of equity and inclusion needs to be nurtured.
- Wellbeing must be at the heart of school safety strategies, understanding that “being safe” and “feeling safe” are not the same thing.
“You can’t move an idea forward if you haven’t imagined it. Even if you feel something is fantastical or unfeasible, you have to open yourself up to the possibility.”
—Lisa Kay Solomon
SUPPORTING EDUCATORS

The K12 Lab designs professional development experiences that inspire educators and set them on a journey to creatively engage with their students, content, school, and community. Through experiences, resources, and tools, we are constantly developing ways to build the creative confidence of educators.

We teach teachers in the ways they are now being asked to teach—in immersive real-world projects and experiences where creative problem-solving matters most. Since doing beats talking about doing, we embrace jumping into new, invigorating experiences. Sure, there’s some initial discomfort, but the reward becomes clear as educators stretch beyond their comfort zone to pick up new skills and mindsets.

We build the creative confidence and design abilities with K-12 educators through professional development.
Educator as Futurist: Moving beyond “Preparing for the future” to “Shaping the future”

By Laura McBain and Lisa Kay Solomon, Originally published on Medium on October 5, 2020

We shape the future and the future shapes us. Educators shape the mindsets, behaviors, and skills their students will carry with them into the future. And while this has always been true, the global pandemic, nationwide public attention to social justice, and the need to dismantle historically inequitable systems have heightened our collective sense of urgency to design more equitable and abundant futures with—and for—our students.

This moment has made us realize that we cannot just prepare students for the future, we must help them develop the imagination, agency, and will to shape the future. As educators, we spend an inordinate amount of time preparing students for the future as if we know how the future will unfold for them. But in an ever accelerating moment of uncertainty and ambiguity—merely being ‘prepared’ feels insufficient. In a world filled with more unknowns than knowns—how do we help our students not just be “prepared” but capable of envisioning and building the futures they want to bring to life?

Educators have a responsibility to our collective futures. We need educators to be futurists. To be an education futurist means weaving the practices of futures thinking and design into our learning experiences with leaders and students.

In a rapidly changing world, futures thinking helps us imagine a wider range of the possible, plausible, probable futures in which we will be learning and living. Design helps us build toward more preferred futures by giving form to ideas, rapidly experimenting, and learning through iterative processes and feedback. Through these lenses, we see the world not just as it is, but how it could be if we took a more empathetic and human-centered approach to uncover and solve complex challenges in the hopes of creating a more equitable, humane, and anti-racist future. We believe educators have the capacity to enable these capabilities at scale by co-designing experiences with students that provide opportunities for intentional practice, and a protective space to develop them.

Embracing the mindset of an educational futurist requires a foundational shift that will challenge our vision of why, how, and where we implement learning. In K-12 schools we are comfortable teaching the past; but not the future. There are plentiful lesson plans, teacher training, multiple-choice options, and even essay prompts on how to examine what already exists in the world. But there is no teacher preparation program that prepared us to teach about how to intentionally shape the futures we want to bring to life.

This isn’t just another fad. This is an inflection point. We are being shaped by this moment, and outcomes of the choices we make will shape us for years to come. Educators and students are the futurists we need today.
Being safe and feeling safe aren’t the same thing—and the difference will matter to kids when schools open.

By Sam Seidel and Barry Svigals, Originally published in the Washington Post on July 8th, 2020

Students will be heading back to school in the era of covid-19 and the killing of George Floyd. What will safety mean for them? While struggling to protect students from a life-threatening disease, we need to acknowledge the elephant in the room. We are ignoring a greater and growing threat to the lives of our children: their sense of feeling safe as well as being safe.

In 2019, it was 200 times more likely that a student would take their own life than have it be lost in an incident of school violence. This inconceivable reality has not gone away. Recent research since March from Sandy Hook Promise suggests that suicide is now even more likely ... by nearly 150 percent. As students experienced seclusion at home in the new age of social distancing, their Say Something Anonymous Reporting System revealed a frightening increase of serious suicide tips from 7 percent before covid-19 to 18 percent now.

Pre-pandemic, our national obsession was the rare instances of extreme violence, while far greater problems stemming from an inattention to emotional well-being were often marginalized. But who would believe they were greater?

The numbers are clear: In 2018, fatalities from school shootings represented one-tenth of a percent of all fatalities in young adults from the ages of 10–24. Suicides represented nearly 25 percent. On top of that, more than 160,000 students stayed home from school each day for fear of bullying. Somehow, these extraordinary statistics of trauma in our schools escaped us, overshadowed by the very rare, but highly publicized acts of extreme violence.

They are now obscured by our new obsession: the fear of covid-19.

As plans are being made to once again return to school, there is an urgency to understand what we mean by “safety” and how it affects the lives of our students.

Here are three critical components →

We have made the mistake of ignoring a greater threat before... when school shootings were the problem.
If we fail to understand this distinction, our schools will lose their meaning: students cannot learn if they don’t feel safe. Well-being needs to be a priority. Pre-covid-19, safety was most often thought of as “hardening” the school’s architecture, providing security personnel, improving emergency protocols along with adding special “safety features” such as surveillance devices and metal detectors. Those efforts often brought with them unintended consequences: many actually made students feel less safe, particularly students of color.

Some of these same unintended consequences are already apparent in solutions now being proposed for a “safe” return to school. Early planning in a number of schools has been characterized by protected ways to stand in line outside, sparsely furnished classrooms, and regular sanitizing of surfaces. Besides the question of whether these strategies can be realized or will be effective at preventing the spread of the virus, how will they make students and teachers feel?

These well-intended efforts contain little or no mention of how the students, already fragile, will be affected by this altered learning environment. While these strategies rightly have an importance, they are overlooking the impact they have on the emotional lives of the students. Given the research, ignoring that could—at the very least—further traumatize many young people.

Being safe and feeling safe are not the same thing.

Another threat is largely unseen. Safety measures will not be experienced by all students in the same way. Black students are disciplined more severely than their peers for the same behavior. Rules and protocols requiring masks, distancing, and hygiene would be difficult to enforce in the best of circumstances. We can predict from years of data that new rules regarding “social distancing” will not be enforced equally. For students who have been exposed to recent acts of police violence toward themselves and members of their communities, this has the potential to cause even more psychological pain.

Already, the emotional needs for students of color and those from impoverished communities are even greater. We know that hundreds of thousands of students—disproportionately black and brown students—are suffering. It is likely students will be returning to school soon, but if resources are not identified to address these challenges, a safe and equitable return will be difficult to achieve.

These are questions that should be foremost in the minds of all educational designers looking at transitioning back to school.

We might ask:

- What care is in place for students who have lost family members to the coronavirus?
- Who will support students whose families are undergoing severe financial hardship, those who have no food, those who are homeless?
- How might issues of racism and school safety be raised in an open and supportive environment?
- How could new protocols impact different students differently?
- How might they exacerbate existing emotional trauma or depression?
- What will the emotional impact be for students having to wear masks and maintain social distance?
- How will separated desks and remote teachers feel to students?

All students need to feel safe.

K12 Lab members published over a dozen original articles in the last year on topics ranging from the racial biases of AI bots to how we might rethink school safety during a pandemic.
A strong inclusive decision-making process will be crucial in the ever-changing landscape of threats, remedies, and challenging decisions that lie ahead. Initiatives will be tried and adjusted; openings and then closings because of outbreaks seem inevitable; public response could be volatile. With respect to solutions, no one size fits all. Each school is unique in its architecture, school culture, teaching, and administration. This necessitates a process that can sustain a balanced and comprehensive approach.

Most importantly, students must be at the forefront of reimagining school safety and what it means for them. Young people have been at the forefront of recent protests. Solutions created without them will lack the buy-in and ongoing support that they will inevitably need. Our strategic planning should also include school psychologists, school nurses, social workers, teachers and families.

By drawing input from all affected constituencies, responses to evolving realities can be more strategically connected to real needs and more sustainable over time.

One of the authors of this piece led the process of designing the elementary school for Sandy Hook in the wake of the unspeakable tragedy that occurred there. Decision-making might easily have been overwhelmed by grief and fear. Instead, gathering a wide cross-section of the town, they asked what they loved most about their community and what they deeply wished for their children. In that embrace, a path forward was taken to create a school that was founded upon joy rather than fear.

Well-being, equity, and community process.

Seen in this holistic light, back-to-school strategies around safety could be transformative. Every decision, every interaction, every collaboration would aim to nourish well-being, inspire inclusion and equity, and strengthen the school community as a whole. Everyone participates, everyone contributes, everyone is responsible for the well-being of every student and every student is cared for.

Coming back to school in the era of covid-19, in the wake of George Floyd’s murder, and the global uprising that followed, we have a unique opportunity. Can we expand our understanding of school safety to put well-being and delight in learning at the heart of all our efforts? Students then could both be safe and feel safe.
“This is the real secret of life—to be completely engaged with what you are doing in the here and now. And instead of calling it work, realize it is play.”

— Alan Wilson Watts
NEW TOOLS WE’VE DEVELOPED

We make resources free. Our lab focuses on creating high-quality, creative, and delightful resources that allow people to start doing design work now. Downloadable, editable, and contextual, our resources provide people with usable how-to guides and materials. Whether educators are thinking about reflecting on their design work, building a bot, or reimagining student safety, our tools give them the nuts and bolts of how to get started.

Island in the Storm Guidebook
Designed by Louis Montoya and Jess Brown

K12 Lab team members developed a toolkit for educators who are driven by equity and are already determined to interrupt oppressive systems that marginalize students based on race, ability, gender identity, and sexual orientation in our schools. This resource can be used to interrogate and develop a strategy for their own equity work in school. You can find the complete toolkit and many more resources on the K12 Lab website.

SELF CARE

Island in the Storm

The cerebral cortex has about 20 billion neurons in the human brain which carry out the highest levels of mental functioning.

How will you use these neurons to continue to learn about equity?

The cerebellum receives information and then regulates motor movements.

What do you need to keep moving forward in this work?

Your body can only go 3 minutes without oxygen.

What do you do to catch your breath, and take in fresh oxygen when you engage in this work?

The heart does not need a body to beat as it has its own electric impulse.

What is a healthy rhythm for balancing this work with your life?

One of the many jobs of the liver is to filter out harmful toxins.

How will you filter out hurtful, and harmful things that this may work may bring upon you?

The job of the small intestines is to absorb most of the nutrients from what we eat and drink.

What nourishes you when you are stressed or uncertain?

Muscles take up to 14 days to recover from an intense workout.

How will you give yourself enough time to recover from strain?
NEW TOOLS WE’VE DEVELOPED

Trend Cards
Designed by Ariel Raz and Laura McBain

What might the world look like in a few years?
How could those changes impact our education system? How do we shape the education system to ensure a more equitable future for each child? These questions, among others, are part of an ongoing exploration the K12 Lab is navigating at the intersection of design and futures thinking. This resource offers a rapid introduction to the basic methods of designing for equitable futures. Any education stakeholder—be it a teacher, student, guardian, administrator—can use this tool to think through how school might change in their lifetime. The resource allows for a quick overview of core components of equitable futures, including: understanding macro trends, visualizing tangible changes, crafting prototypes, and exploring the power dynamics of change.

TREND CARDS

The ethics of what we choose to buy, consume, and throw away play a formative role in how we choose to spend our money. A market for ethical consumerism increases.

The increasing frequency and severity of climate catastrophes pose imminent and long-term threats that require collective action to address. Climate unpredictability impacts the economic welfare of nations.

Increased economic and national globalization has led to increased tribalism at home. Citizens lose trust in one another, and militias spread rampantly across the U.S., causing a rise in domestic terrorism.

Internet enabled devices empowered by artificial intelligence become more and more common. Data rich algorithms gather more information as they seek to optimize human life and behavior.

You can find the complete resource on the K12 Lab site here: https://dschool.stanford.edu/resources/2027
“We live in a country where those who know the most about education have the least say, and those who know the least have the most say.” — Pedro Noguera
SECTION 6: GETTING INVOLVED

K12 LAB FUTURESFEST AT THE D.SCHOOL, JANUARY 2020
Learn about our newest offerings and experiments on our website at K12lab.org and stay up to date with our community by signing up for our newsletter and engaging with us on Twitter @k12lab.

Share your K-12 design work with us and/or attend our office hours by emailing K12@dschool.stanford.edu.

Over the last decade, individual and institutional donors have made gifts to the K12 Lab to build creative confidence and spread design training in the K12 sector.

**With thanks**

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