How might my classroom be redesigned to better meet my students’ needs?

Michael Schurr, a 2nd grade teacher in New York, realized that he never asked his students what would make them comfortable in the classroom. He decided to talk directly with his students to figure out the best design for their environment.

Based on his students’ input, he was able to redesign his classroom to better address the needs and desires of his students. He lowered the bulletin boards so that his students could actually see the content he’d spent hours assembling, and created a more comfortable semi-private space for the students to study by rethinking the student cubby space. His students are more engaged and move more fluidly in the classroom space. Now Michael consistently engages his students in helping him more effectively shape their learning experience.

Michael is using design to re-imagine his classroom through the lens of his students’ eyes.
How might we create a 21st century learning experience at our school?

The faculty at Ormondale Elementary School in California wondered if they were preparing their students well for the future. They decided it was time to collaboratively design an approach to teaching and learning that they felt was updated and relevant for the 21st century.

Collectively, they embarked on a design journey and came to an approach they call “Investigative Learning,” which addresses students not as receivers of information, but as shapers of knowledge. The faculty continues to evolve and share this approach with new teachers through the creation of a Manual of Investigative Learning to keep track of their philosophy and methods. They have gained support from their school board, and have become recognized as a California Distinguished School.

The faculty at Ormondale Elementary School uses design to address the needs of their evolving student body.
How might we redesign our approach to curriculum development and delivery to center around the needs and desires of our teachers and students?

With a movement toward student-centered and personalized instruction, the Howard County Public School System in Maryland is using Design Thinking to tackle next generation curriculum redesign incorporating 21st Century skills. Currently, there is a disconnect between the existing paper-based curriculum and the interactive digital resources that are now available anytime, anywhere for teachers and students.

Tapping into teacher, parent, and student behaviors in and outside of school, the design team collected inspiration around the ways that people engage with information and interact with curricular materials. Understanding the desires of teachers, students, parents and administrators has helped the team rethink curriculum delivery as well as develop resources to replace, augment, and enhance current curriculum documents.

Howard County is using design to re-conceptualize curriculum creation and delivery to meet the needs of all learners.
How might we redesign our high school to elevate student engagement and academic outcomes?

Consistent low student achievement results at Castle High School in Hawaii demonstrated the need for a redesign and restructure of the school. Design Thinking Hawaii, a non-profit organization that engages volunteers to apply Design Thinking to big challenges, partnered with the Hawaii Department of Education to reimagine the Castle High experience.

Through a series of mini-charettes, Design Thinking Hawaii has collected the needs and interests of learners, teachers, and families and engaged the larger community to imagine new solutions that could help the school be more effective. The adopted plan captured the community’s priorities in new content and structures, and Complex Area Superintendent Lea Albert is enabling the school and community to prototype and iterate core curriculum, character education, and support services. This is the first public-school model in Hawaii to co-design its offerings with community, targeting systemic educational problems.

**Design Thinking Hawaii is using design to provide the state with input that will shape the redesign of Castle High and other schools in the community.**
“Students just aren’t interested in learning about fractions.”

“There is no teacher community network.”

“The pick-up and drop-off process at school is a nightmare.”

“Communication with parents isn’t effective.”

“The school pick up and drop off process is chaos.”

“I just can’t get my students to pay attention.”

“The classroom organization doesn’t accommodate different learning modes and shifting class sizes.”

“Effectively managing multiple learning-levels in one classroom feels impossible.”

“Current communication between administration and teachers doesn’t give everyone a voice.”
The needs of today’s learners are evolving as rapidly as the technologies that compete for their attentions. At the same time, our organizations and systems are stretched to their limits to keep up with the changing demands of the times. As an educator, you are distinctly positioned to keep a pulse on students’ evolving needs… making you uniquely qualified to understand and design for the changing needs of our schools. But, because you understand your students and your school like no one else, it is your opportunity—and your responsibility—to create solutions for the challenges you and your school face everyday. As Einstein famously said, “We can’t solve problems by using the same kind of thinking we used when we created them.”

Wherever they fall on the spectrum of scale—from an interaction with a student to engaging parents to managing your schedule to developing whole new approaches to system-wide reform—the challenges facing educators are real, complex, and varied. And they need new answers. As such, they require new perspectives, new tools, and new approaches. Design Thinking is one of these approaches.

“I feel so alone in my work.”

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I have seen teachers start to redesign their classroom spaces by interviewing their students...and develop new curricula by brainstorming and then prototyping out a unit...The fact that teachers are using human-centered design techniques to understand their students better makes students feel more engaged in the changing learning environment.

The fact that the teacher is becoming the designer of his or her own classroom experience professionalizes the role of the teacher and allows for the most valuable change-authentic change driven by the students’ needs rather than a school or district mandate.

Design thinking is a creative act and lets teachers understand that the act of creating a really effective learning environment is an art that is both reflective and intentional. If we want to change education and learning to make it more relevant, more effective and more enjoyable for all involved, teachers need to be the entrepreneurial designers and redesigners of the “systems” of schools and of the schools themselves.
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This toolkit is for you.

This toolkit can help you create solutions for everyday challenges.

The toolkit offers you new ways to be intentional and collaborative when you are designing new solutions for your classroom, school, and community. It hones your skills and empowers you to create desirable solutions. In this toolkit, we have laid out a series of steps that can help you develop new, innovative solutions designed with people at the center.

This toolkit equips you with the process and methods of design so you can be more intentional about facing and solving for your current challenges. Businesses, social entrepreneurs and other innovators have used these methods for decades to create solutions for many different types of challenges.

As educators, you are already designing every single day—whether it’s finding new ways to teach content more effectively, using your classroom space differently, developing new approaches to connecting with parents, or creating new solutions for your school.

We know that your time is precious and demands are high, and it may often feel that the system in which you educate is not as nimble as necessary to keep up with the rapidly evolving demands. However, you already possess the skills to solve for these kinds of challenges.

The methods in this toolkit are adapted specifically for you and give you the flexibility to work within your existing constraints.

This is an invitation to experiment with design processes. Let it inspire you to approach challenges differently and experience how Design Thinking adds a new perspective to your work.
What is Design Thinking?

Design Thinking is a mindset.

Design thinking is about believing we can make a difference, and having an intentional process in order to get to new, relevant solutions that create positive impact.

Design Thinking gives you faith in your creative abilities and a process for transforming difficult challenges into opportunities for design.

It’s Human-Centered. Design Thinking begins from deep empathy and understanding of needs and motivations of people—in this case, the students, teachers, parents, staff and administrators who make up your everyday world.

It’s Collaborative. Several great minds are always stronger when solving a challenge than just one. Design Thinking benefits greatly from the views of multiple perspectives, and others’ creativity bolstering your own.

It’s Optimistic. Design Thinking is the fundamental belief that we all can create change—no matter how big a problem, how little time or how small a budget. No matter what constraints exist around you, designing can be an enjoyable process.

It’s Experimental. Design Thinking gives you permission to fail and to learn from your mistakes, because you come up with new ideas, get feedback on them, then iterate. Given the range of needs your students have, your work will never be finished or “solved.” It is always in progress. Yet there is an underlying expectation that educators must strive for perfection, that they may not make mistakes, that they should always be flawless role models. This kind of expectation makes it hard to take risks. It limits the possibilities to create more radical change. But educators need to experiment, too, and Design Thinking is all about learning by doing.

In short, Design Thinking is the confidence that new, better things are possible and that you can make them happen. And that kind of optimism is well-needed in education.
**What can I use Design Thinking for?**

You can use Design Thinking to approach any challenge.

However, there are a consistent set of challenges that teachers and schools seem to face, and they center around the design and development of learning experiences (curriculum), learning environments (spaces), school programs and experiences (processes and tools), and system strategies, goals and policies (systems).

**CURRICULUM**

Every day you design ways to interact with your students around content. You can follow a design process to be more intentional about connecting this content to the interests and desires of today’s learners by finding out more about the things that they do outside of school and connecting that to the content you are bringing to them.

- How might I inspire students to engage in concerns of the environment?
- How might I engage my students in compelling ways around learning world history?
- How might I develop students to be active seekers of knowledge in subjects that they have little knowledge of?
- How might I help children from disadvantaged backgrounds to increase their vocabulary?

**SPACES**

The physical environment of the classroom sends a big signal about how you want your students to behave. Right now we tend to think of our classroom spaces as standard — kids in rows, sitting in desks. By rethinking the design of our spaces, we can send new messages to our students about how they should feel and interact in the classroom.

- How might I use my classroom space in different ways to help set my students at ease?
- How might I create a comfortable space that meets the many needs my students have throughout the day?
- How might we reimagine our school’s library for the needs and interests of today’s learner?
- How might we create an exciting and effective space for teachers to collaborate?
- How might we design our high school campus to best engage and support today’s learner?

**PROCESSES AND TOOLS**

Your school has already designed a set of processes or tools that may or may not be setting up your school for success. This is typically outside of the classroom and specific interactions around learning, and more around how the system operates. Every process is already designed, and thus can be redesigned! Sometimes creating tools can be essential to supporting newly designed processes.

- How might I engage parents as an integrated part of their students’ learning experience?
- How might we recruit the best teachers to our school?
- How might we re-envision arrival and departure procedures at our school?
- How might we design ways to keep ourselves balanced and well?
- How might we redesign our school schedule to be centered around the needs of today’s families and teachers?

**SYSTEMS**

Not everyone can always make decisions for the system that they exist within, but everyone can contribute to the design of that system. Designing systems is about balancing the complexity of many different stakeholder needs with the needs of the operation. When designing systems, we’re often setting high-level strategy such as stating visions, priorities, policies, and key communications around these ideas.

- How might we redesign our school schedule to be centered around the needs of today’s families and teachers?
- How might we reinvision curriculum for an entire district while providing for individual schools’ differences?
- How might we track the development of students’ character traits over time to help shape our school philosophy more intentionally?
- How might we connect more with our neighborhood community?
- How might we use our school as an R&D hub for schools nationwide?
What does Design Thinking look like in action?

How Ormondale Elementary School redesigned their approach to teaching and learning

**Discovery**
A 2-day summer workshop kicked off the challenge, with an exercise which entailed teachers imagining one of their current students in the year 2060. Based on understanding the goals and dreams of their students and families, coupled with the books they read about 21st century skills, the teachers collectively discussed the skills necessary for the students to succeed in the future. For further inspiration, the group visited outside organizations facing analogous challenges.

**Interpretation**
The group synthesized the research creating generative questions, such as “How might we enable the globally aware student?” and “How might we provide opportunities for interest-driven learning?”

**Ideation**
Initial brainstorm ideas included tools and classroom design and expanded to include curriculum and the educational system as a whole.

**Experimentation**
Several brainstorm ideas were prototyped which resulted in the emergence of a pattern across all the prototypes: the team was passionate about a teaching and learning approach they called Investigative Learning. The approach addressed the students not as receivers of information but as shapers of knowledge. They developed short- and long-term plans for ideas they could try out, and the things they'd like to learn more about in order to continually build out this new approach over the school year.

**Evolution**
Over the course of a year, many solutions were tested including diverse approaches to curriculum that integrated project- and theme-based learning in the classroom. The teachers created new communications for parents, and one teacher even received a grant to renovate a classroom and create a different learning environment for her students. Dedicated time in their weekly meetings was set aside to discuss what was happening and support and learn from each other.

In the second year, the evolution continued with another workshop to make sense of the experiments they had conducted around the school. They developed a framework for Investigative Learning experiences that integrated everyone's approaches, created commonly shared standards unique to their school that build upon state standards, and created new assessment approaches. They created a “Manual of Investigative Learning” to help everyone have a shared reference and have become recognized as a “California Distinguished School.”
The Design Process

The design process is what puts Design Thinking into action. It's a structured approach to generating and evolving ideas. It has five phases that help navigate the development from identifying a design challenge to finding and building a solution.

It's a deeply human approach that relies on your ability to be intuitive, to interpret what you observe and to develop ideas that are emotionally meaningful to those you are designing for—all skills you are well versed in as an educator.

Methods are the core piece of this toolkit: they offer the actual instructions that help you put Design Thinking into action.

There are many, in order to provide you with a rich variety to choose from: every challenge requires a different approach and a different set of methods.

It often makes a lot of sense to follow these steps in a linear way, especially when you’re starting out. But don’t feel restricted by that: only you know how to best use this toolkit. Use it along with other methodologies and theories you find useful to develop ideas. Adapt it, annotate it, cut it up, reconstruct it and make it your own.
Design Process

PHASES

1
DISCOVERY

2
INTERPRETATION

3
IDEATION

4
EXPERIMENTATION

5
EVOLUTION

I have a challenge. How do I approach it?

I learned something. How do I interpret it?

I see an opportunity. What do I create?

I have an idea. How do I build it?

I tried something new. How do I evolve it?

STEPS

1-1 Understand the Challenge
1-2 Prepare Research
1-3 Gather Inspiration

2-1 Tell Stories
2-2 Search for Meaning
2-3 Frame Opportunities

3-1 Generate Ideas
3-2 Refine Ideas

4-1 Make Prototypes
4-1 Get Feedback

5-1 Track Learnings
5-2 Move Forward

The Design Thinking process oscillates between divergent and convergent thinking modes. It can be helpful to be aware of the mode that corresponds to the design phase you are working through.
If you only remember a few things...

You are a designer.

Become more intentional about your design process.
Be confident in your creative abilities.
Be strategic about what needs attention first.
Listen to your stakeholders and be inspired to design for them.

It’s your opportunity, and your responsibility, to have an impact on the lives of your students and be part of changing and growing the system.

Embrace your beginner’s mind.

Approach problems as a novice even if you already know a lot about them.
Let yourself learn.
Be willing to experiment.
Be ok with not having the “right” answer.
Trust that you’ll find one.

Stepping out of your zone of comfort = learning.

Get unstuck.
Break your routine.
Use the world outside your classroom to invigorate your work.
Analogous inspiration is your best friend.
Leave your classroom.
Collaborate with others.

Problems are just opportunities for design in disguise.

Have an abundance mentality.
Be optimistic.
Believe the future will be better.
Start with, “What if?” instead of “What’s wrong?”
The design process has helped me see that I have a responsibility to be a change agent for teaching and learning. I don’t need to have all the answers (or be perfect), but I need to be willing to try new things, dare to dream big, and be patient as I experiment with the designs that emerge in the process. Design Thinking has given me the tools and empowerment to create meaningful educational change.

—Meg Krause, 5th Grade teacher