

Engaging Austin-area students in hands-on projects to promote complex problem-solving and critical thinking



Classrooms are not the only places that kids learn, and academic learning is only part of the whole child development needed to help youth discover the interests and talents that lead to success in the classroom, career, and beyond. More than 80% of Texas students' time is spent learning outside of school. High-quality out of school time (OST), which includes afterschool, summer, and enrichment programs, provides hands-on learning opportunities that help kids develop critical life skills as well as nurturing mentor and peer relationships that accelerate academic learning and prepare youth for their futures.

OST is a critical component of the functioning ecosystem of support necessary for whole child development and whole communities. Community-based providers are essential, offering in-person care and learning, while also connecting families to critical services and resources, such as food, technology, and healthcare. Strong partnerships between schools and these community-based organizations are vital to our state's successful recovery and future.

"A Wicked Problem has innumerable causes, is tough to describe, and doesn't have only one right answer," says Phyllis Henderson, the creator and mastermind behind [Wicked Workshop Youth Architectural Program](#). In 2017, the program began introducing design thinking and project- and problem-based learning opportunities to K-8 students in the Austin area.

"The curriculum aids in addressing a rise in anxiety amongst today's students as staff help them understand that their projects will not be perfect. Not only is this acceptable—it's expected. "They don't know what projects will be from week to week, what materials we will use, or how much better their friend's mushroom house will be! It's a way of confronting fear head-on, but in small ways that aren't dealbreakers," says Henderson.

This afterschool and summer program engages students in hands-on architecture projects to solve real problems while learning academic content and developing vital life skills. "Wicked" issues like environmental degradation or homelessness are embedded in the program projects and gradually introduced to students. For example, a stacked house project to address population growth and overcrowding makes concepts like building up instead of building out tangible, giving students the chance to creatively address complex challenges as they make, tinker, and create.

Wicked Workshop was created, in part, to help build the pipeline of students who want to pursue architecture, which requires introducing design thinking at a young age. Their human-centered approach encourages empathy, creativity, and collaboration, and their promotion of an iterative process to accomplish goals fosters resilience in students.



Youth Demographics, Impact, & Outcomes

Youth Served: 415 students weekly

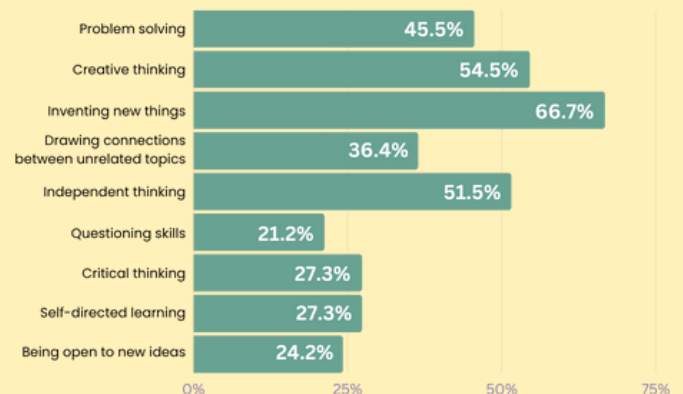
Grades: K - 8

Ages: 5 - 13

Outcomes:

I have personally seen improvement in these areas based on my child's experience with Wicked Workshop:

Based on 2023 Parent Survey



The program engages more than 400 children in 32 weekly afterschool classes and hosts multiple week-long summer camps where students are exposed to architectural concepts, allowing them to explore design, construction, and the built environment. The curriculum is based on design thinking and modeled after architecture school, where students are introduced to a problem or project and asked to find solutions utilizing their own thoughts and interests.

A typical day in Wicked Workshop includes a 10-12 minute video connecting architecture to something familiar like Marble Run, Gravity Falls, or Minecraft. Students are shown real architecture and exposed to real architects doing original and interesting projects. Henderson stresses the importance of finding fun and engaging examples—a mushroom-shaped house in the Netherlands or a toilet-shaped museum in South Korea.

In one project, young people built dragons' lairs after exploring real-world architecture based on the mythical world in How to Train Your Dragon. In another, they designed self-sustaining, floating playgrounds based on biomimicry and modeled after real architects' placement of nature and animals at the forefront of design innovation.

Once the project is defined and the students have been given suggestions for getting started, they jump into creating solutions by applying their knowledge to design and construct their own creation. Students learn about building structure, how different materials work, construction techniques, culture, environment, geography, and geometry with each project.



Designed to be open-ended to support learners of all ages, Wicked Workshop's projects bring big ideas to a younger audience, encouraging independent thinking, self-directed learning, and iteration in an environment that is friendly, stress-free, and fosters creativity. Staff facilitate new ways of thinking and doing as students take projects in directions that engage them based on their own ideas and interests.

Henderson says, "We're looking for resilience, for decision making, for the ability to work independently and not have somebody stand at the front of the room and show you how to do stuff. So we're essentially wanting kids to have to face minor challenges so that over time they will become comfortable with being challenged. They will be able to look at something and say, 'I have no idea how I'm going to start this, but I know I can.'"



Design thinking in real life.

To continue programming during COVID, Henderson, who had experience teaching online but not creating videos, recognized the need for asynchronous programming. Embracing an iterative process herself, Henderson began producing videos to share Wicked Workshop's curriculum. "I'll admit that honestly, some were really terrible. But we have come a long way, and we have gotten so much better!" Now videos are central to their programming, allowing them to expand their reach and improve consistency.



"I love how much the kids love it, and how they are 100% encouraged to be daring while also being thoughtful!"

– Wicked Workshop Parent



The Texas Partnership for Out of School Time (TXPOST) is a statewide intermediary whose mission is to convene, educate, and advocate to improve the quality and increase the availability of out of school time (OST) opportunities, like those offered by Wicked Workshop Youth Architecture Program, for Texas youth. TXPOST works in partnership with vital local and regional organizations, which invest deeply in their own communities to offer professional development opportunities, engage in system-building work, advocate for the OST field, and support local programs.



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