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TIG Case Study

### Goals

Identify teacher leaders to build the solutions necessary to change, such as changes to existing structures and mindsets.  
Develop nascent ideas from teacher leaders into innovative, executable logic models and action plans.

### Summary

The goal of this project was to prototype an educational experience that encompassed student-driven learning and engagement, maker philosophy, and the design-thinking process. It centered around the idea that *innovation is learning* and that we need to rethink the classroom model and structure to create this new cultural outlook and shift in students and teachers. This meant creating opportunities for students to fully invest in both the process and the outcome of learning, as they are the driving force of both, and leveraging teacher leaders to build and test these solutions.

We initiated this cultural shift by creating a makerspace and by using the design thinking process as both a teaching tool and as a model to structure the gifted curriculum. We prototyped this model throughout the year in our gifted classroom and provided pull-outs for elementary students. We also incorporated the design model to structure all after-school programming, and we created an after-school Makerspace Club for students in grades K–2 and 5–8. In our second year, we are developing a whole-school professional development program to teach the design and engineering process to all teachers and explicitly incorporating this process into all middle school science classrooms. We are also developing design challenges in which all students will participate during their unstructured free time known as “Brain Break.”

### What I Did

Authentic learning requires one to take risks, challenge assumptions, and actively search for meaning. The student voice is central to this process. It is the responsibility of the teacher to foster a learning environment that elevates student individuality through a growth-mindset culture manifested in the language and attitude that surrounds discussion, development, and feedback. This can be achieved through the design process.

This year, I implemented a makerspace into my classroom with a variety of high- and low-tech materials. My students and I used the design-thinking process to address challenges we identified in our class novels, in our own lives, and in our local and global community. The identified challenge, the big problem, was at the core of our classroom, and students systematically designed their way through complexity and worked toward simplicity. They prototyped ideas, provided feedback, and tested possible solutions.

The 4th grade students prototyped solutions for teachers to address reading fluency in their elementary classrooms. With the Junior Achievement Company Program, the 7th and 8th grade students were entrepreneurs, building a business from the ground up. The 5th grade students prototyped survival tools for the main character of *The Island of Blue Dolphins*.

We created a classroom culture of growth by deliberately creating a class of possibility. We did this by agreeing to the improvisation tenet of “Yes, and.” This is the idea that all ideas are possible and that our job is to accept them as they are and think of ways to make them better. This approach enabled us to successfully navigate the brainstorming process when trying to create solutions to sticky problems. We used maker feedback that is specifically tailored to providing solutions, not additional obstacles to our thinking.

We centered the core of our time on various design challenges and then ended the day in stations. This is where students could choose to deconstruct old tech, code and build robots, tinker with snap circuits, or work on individual maker projects initiated by their own curiosity.

## THE CHALLENGE

A great challenge in this project was training and collaborating with teachers to implement design projects into their own curriculum. My goal at the end of this year was to have all students and all teachers using the design process in the classrooms. Change takes time. I decided to identify a few early adopters with whom I could work closely and create strong projects.

I chose the Teacher Impact Grant because it placed hope in the hands of the teacher voice, and I think that is rebellious and disruptive. You need disruption to enact change.

## THE RESPONSE

The Teacher Impact Grant provided me the voice and autonomy to make my own decisions in the change process. It also gave my school permission to trust the concept that teachers *can* make change and *should* be given the ability to do so as the experts of what students need.

## THE RESULTS

The Teacher Impact Grant first honors the idea and the individual who it inhabits, not the institution, network, company, or systematic problem. This is unique and rebellious, and I admire that. The Teacher Impact Grant is a small-scale investment in ideas in their testing phase. This is the essence of innovation and the truest form of community development. Of all the teachers involved in the project, 100 percent reported that they believed the project results were good to excellent.

## CALL TO ACTION

Teachers are experts. They have the greatest insight into the needs of their students and their community. They are the ethnographers and fieldworkers, constantly collecting and analyzing data, responding to challenges with innovative and powerful solutions. They are the listeners and navigators, activists and learners, leaders and reflectors, all at the same time. They are so powerful, yet oppressed and silenced. It is vital that all teachers explore opportunities that afford them a seat at the table. The Teacher Impact Grant is one of those opportunities. Go for it.