Build Tech Success With Students' Help

STUDENTS TAKE PRIDE IN HELPING TEACHERS INTEGRATE TECHNOLOGY IN THIS CALIFORNIA ELEMENTARY SCHOOL.

By Aaron Brengard

When Katherine Smith Elementary School launched a schoolwide redesign three years ago, we had to build a great deal from the ground up, including our technology. Our tech implementation was no fairy tale. Reinventing a school culture put a lot on our plate: establishing a new school culture of empowerment; designing engaging and rigorous projects; and infusing the $500,000 worth of new technology, including tablet carts, laptop computers carts, and interactive whiteboards.

We might not have completed this journey without discovering an untapped resource to support teachers, integrate technology in classrooms, and encourage 21st century learning outcomes: the students.

Bulding a 21st Century Learning Environment

Katherine Smith Elementary is a K-6 neighborhood school in the Evergreen School District, which is on the east side of San Jose, California. The urban neighborhood surrounding the school faces many challenges. Household incomes are well below the poverty level and crime rates are the highest in the county. Years of "back to basics" strategies resulted in minimal academic gains, and the culture of the school and community were suffering.

Our schoolwide reinvention focused on making a real transformative change. It included reinventing our school community as a 21st century learning environment where students are being prepared to think, learn, work, collaborate, communicate, and contribute now and throughout their lives.

To begin, we adopted a "no excuses" attitude (based on the No Excuses Network) to create a college-bound culture and goals for our students that reached far beyond any test. We implemented project-based learning to engage students in hands-on, authentic learning experiences, and elicited the support of the Buck Institute for Education and the New Tech Network to build our capacity.

Finally, we added new technology across the campus to give our students the tools they needed to access information, personalize learning, and create high-quality work. Although we weren't able to reach a 1:1 ratio of computers to students, approximately 300 new devices were added to our campus of 650 students. We created a technology leadership team consisting of teachers from every grade. Led by fourth-grade teacher Doris Malmin, the technolgy team monitored and supported both the technical aspects and the instruction integration.

It's Intuition, Not Technology

It wasn't long, though, before we realized we might have taken on too much. To keep our eye on our main priority of building a new school culture and the capacity for project-based learning, something had to give.

At that point, the technology piece of this work moved to the back burner. Malmin remembers, "We knew we needed to do more, but at the time it was just the best we could do." Our tech team established a basic strategy: Just get the devices into the hands of students. The plan was to deploy the devices and to do our best to provide just-in-time support.

There were better and more explicit technology implementation models, but at

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that point it just felt like a matter of survival. Oscar and Randy, two sixth-grade students, recall what it was like prior to adding more technology. "Before the change, we had to go to a specific room to use computers," said Oscar. Randy added, "Teachers were the only ones using technology in classrooms. Most of the time it was just projecting stuff." That needed to change. Even with the limited access to technology they had been given, many of our students knew, sometimes intuitively, how to use the devices. Our only option was to take advantage of that knowledge.

With devices in the classroom and interactive whiteboards installed, the tech team led small professional development opportunities such as an after-school meeting focused on the interactive boards, spending a few minutes at the beginning of a staff meeting to share a new app, or providing some one-on-one support from a tech-savvy staff member. Yet that was not enough. The same old constraints kept getting in the way: money and time. We did not have more money to bring in experts to train us and, more importantly, we had no additional time to allocate with all of the other work being done to build a 21st century school culture.

And then it hit us: The resource we needed was in front of us the whole time. Our students are digital natives, and they are an incredible resource ready to be empowered in any 21st century classroom.

At the end of our first year, we knew our students were the answer to our technology integration dilemma. The students had advocated for more technology use in the classrooms, they were naturally troubleshooting problems with our teachers, and they had been the ones giving the best just-in-time support.

Tech Geniuses Are Born

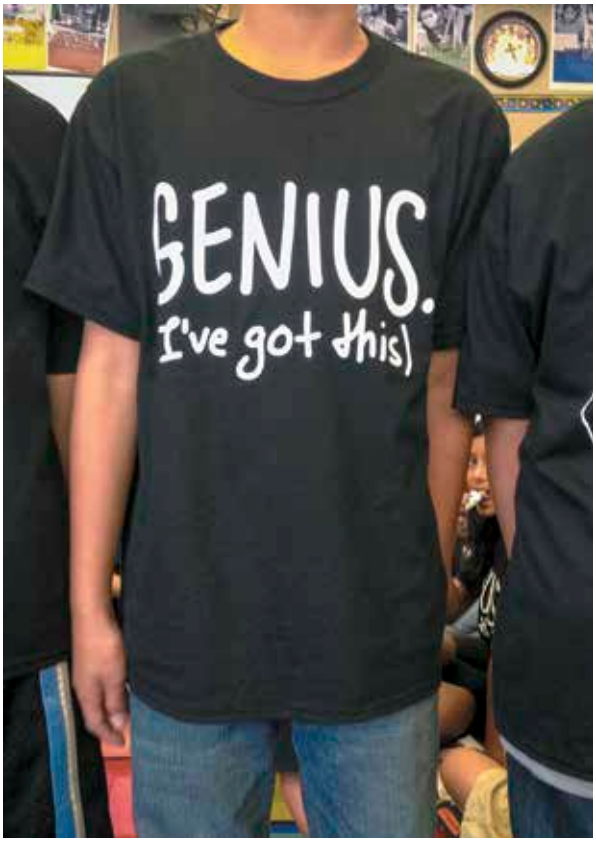
Borrowing from models such as the Mouse Squad and other student leadership programs, and sprinkling in the feel of the Genius Bar in the back of every Apple retail store, the K. Smith Tech Geniuses were born.

The summer before our second year, students attended a summer program led by Malmin. The model was to train students to not only troubleshoot common classroom technology issues such as connecting the interactive whiteboard or installing a printer, but also to create modules to support better technology integration within projects such as lessons for students on taking pictures and movie-making.

Annamaria, a then fourth-grader, remembers one project from that summer: "We made a video that taught students how to take care of technology." The video included cleaning, storing, and handling the technology in each classroom. They also practiced different troubleshooting strategies and role-played scenarios of common problems.

In our second year, a tech genius was assigned to each classroom to support the teacher and to deliver tech lessons to their peers. The tech geniuses met regularly on Tuesdays after school to learn new skills and to discuss any issues they were finding.

Ivy, a sixth-grader, loves that she is able to help. Like all of the tech geniuses, she uses breaks to check in on her assigned classrooms. "At recess, we would come to Mrs.



CLOCKWISE FROM ABOVE: THE K. SMITH GENIUS UNIFORMS PAY RESPECT TO THE LATE STEVE JOBS. TOOLS ARE IN THE HANDS OF STUDENTS FROM KINDERGARTNERS IN SMALL GROUPS REINFORCING LITERACY TO FIFTH-GRADER ALONDRA FINDING RESEARCH ON NATIVE AMERICANS.

TECH TOOLS

Want to implement the ideas in this article? Try these innovative tools.

- **Kidblog** Teachers, parents, and students can use this secure blog space.
- **Common Sense Media** Digital citizenship resource that features sample student contracts.
- **WeVideo** Easily create, edit, and share video presentations.

Malmin's class and check the whiteboard by her door to see if our classroom needed help," she said. "If so, we grabbed our badge and went to them. When problems were too much, we were able to come back to our team and get new ideas."

"I was proud to help teachers and students," added Randy, a tech genius who worked with Ms. Peralta. Recounting a time that he helped her with her interactive whiteboard, Randy explained, "It was hard to fix; but I searched on her computer and made a change on the system preferences. I figured it out. I felt proud of myself." The tech geniuses were authentically using critical thinking, problem-solving, communication, and collaboration skills—all essential elements of a 21st century school.

Turning the Tables

Fast forward to this year: We've expanded the role of the tech geniuses to not only troubleshoot and teach lessons to other students, but also to lead professional development for our teachers. Recently, we implemented a new digital portfolio tool. Although teachers understand the importance, we faced many technical challenges. So we did the only thing we could: We called in the tech geniuses.

"We were all lined up on the side of the room. We were all really nervous," recalled Alexis, a tech genius. "Then, Mrs. Malmin introduced us and we went and sat with teachers. I worked with a fifth-grade teacher. He asked a lot of questions I was able to answer. I felt like the tables had turned."

Alexis was right, the tables had turned. Tech geniuses are not the only example of student leadership at our school. We now use student help for everything—from student-led tours of the campus, to upper-grade reading buddies for younger struggling readers. It is this empowerment of students, creative problem-solving, and authentic collaboration that helped us earn the distinction of being named by P21 as a 21st Century Learning Exemplar School. The prestigious award is handed out to a handful of schools each year that demonstrate sustained schoolwide commitment and success to several principles of effective education for students in the 21st century.

The reality is clear. As a principal I am constantly handed an initiative or idea with an "ideal" implementation plan. However, nothing ever seems to go as planned. The pressure, demands, and reality of the job create a real need to use everything we have. In our story of integrating technology, we did what every school does. We fought to survive, and in that fight we found a resource in our students that served an authentic need for our school. More importantly, it fit our mission to prepare them for the challenges of the world.

The tech geniuses are true, empowered leaders on our campus. Our school's technology integration thrives with them. We regularly see these confident students walking the campus during breaks with their badges and cool, black T-shirts. The front of the shirt says it all: Genius. I've got this. P

Aaron Brengard is principal of Katherine Smith Elementary School in San Jose, California.
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