An Executive Director’s Perspective: Students are Makers

Steve Heath is the founder and Executive Director of FabNewport, which gives Newport County residents “alternative pathways to science, technology, engineering, arts, and math (STEAM) through mentoring and personalized education.”

FabNewport provides classes, workshops, and after-school programs for students who want to learn how to use tools, including 3-D printers, laser cutters, vinyl cutters, and hand and power tools, to make things. According to Heath, “Once students become “makers” in a lab or classroom space, they build the skills they need to make their lives happen.”

Heath believes it is critical to understand that learning can happen anytime and anywhere. He says, “Kids need things they can hang their hat on, such as sawing wood, coding, designing a website, or tap dancing.” Heath suggests asking students, “What is it that you can do that makes you feel good about yourself and that you can demonstrate mastery over that gives you confidence to act in the world on your own behalf?” If schools don’t offer a wider range of engaging learning opportunities, they will shortchange children and may leave them feeling like they are not “good” at learning.

Heath’s goal is for students to engage with the community with confidence and act in the world on their own behalf.
A Teacher’s Perspective: Collaborating with the Community Improves Learning

Amie Shinego teaches technology at Thompson Middle School in Newport. She started collaborating with FabNewport several years ago when she worked at the FabNewport summer camps. “I used to be very strict, rigid, and structured,” Shinego said, “but Steve completely changed the way I teach.”

Collaborating with FabNewport inspired Shinego to:

- Bring project-based learning into her classroom.
- Let her students choose how they learn content.
- Assign projects to students that connect to the community around them. (For example, the Newport Fire Department “hired” some of Shinego’s students to design and print initial decals for their safety helmets. The students created the stickers using a vinyl cutter they received from a grant in collaboration with FabNewport.)

Shinego has advice for other teachers who want to work with community-based organizations:

- “Community members and community organizations really do want to be a part of the schools. It is just a matter of who is going to ask who first.”
- One partnership will lead to more. In four years, “I went from no community partnerships to working with FabNewport, the Newport Public Library, Tech Expo with Newport City Council, and the Newport Fire Department.”

According to Shinego, when students engage in project-based learning that is connected to their community:

- They are more likely to remember what they learn because they are applying their knowledge.
- They develop problem solving, collaboration, and critical thinking skills.
- They take more ownership of their work and are proud of creating something from start to finish.

A Student’s Perspective: Hands-On Learning is Rewarding

Seventh grader Jacob Long is a student in Amie Shinego’s General Technology Education class at Thompson Middle School in Newport. Attending two consecutive summers of camp at FabNewport sparked Long’s love of Scratch, a programming language designed for children ages 8 to 16. He continued to build his skills by reading books about Scratch and by experimenting on his own at home.

Long has shared his knowledge of Scratch in many different venues throughout the state, including maker faires, professional development programs for teachers, family nights, and various community events. He has assisted Steve Heath by creating a video to help teach adults and children how to use Scratch.

Long appreciates the type of learning he does with FabNewport because it is “more hands-on and more fun.” He has enjoyed learning new skills, such as using the laser cutter, learning how to code, and learning how to do 3-D printing. This type of learning is rewarding for Long. He says, “When I get to make things and see something I made, I feel pretty accomplished.”

Long believes that learning skills through FabNewport will make it easier for him to get a job after school, especially since he plans to do concept art for the game industry.

Next Steps

For other community-based organizations that want to make connections with schools, Heath advises “finding ways to first connect with kids and families outside of school that will impact their lives and create inroads into the school.”

Heath says FabNewport is always looking for volunteers and mentors who want to learn alongside the students and share their own expertise. They are also looking for host sites in the community where students can learn the many facets of running a business. To find out more, visit https://fabnewport.org.

Acknowledgements

Rhode Island KIDS COUNT thanks Steve Heath, Amie Shinego, and Jacob Long for sharing their perspectives.

References

2,3 Beyond school walls: Earning credit for expanded learning opportunities. (May, 2016). Boston, MA: Rennie Center for Education Research and Policy.