Student-Centered Learning Spotlight

Learning Anytime, Anywhere
Spotlight on FabNewport

Learning Anytime, Anywhere is the principle that structured, credit-bearing learning experiences can take place outside of the traditional school day, or even the school year. They can take place in the community and are not restricted to the classroom.

Examples:

- Expanded Learning Opportunities (ELOs)
- Dual and concurrent enrollment
- Internships
- Community service[1,2]

Learning anytime and anywhere allows students to explore a career or topic of interest, take courses not available at their school or that do not fit into their schedule, and develop important social and emotional skills, problem solving, critical thinking, and strong work habits – all essential to college and career readiness.[3,4,5,6]

FabNewport:
An "Ecosystem of Learning"

FabNewport works to make Newport an ecosystem of learning by:

- Collaborating with teachers throughout the Newport area to integrate "maker-centered learning" experiences into their classrooms.

- Setting up "maker spaces" at partner sites, such as Aquidneck Island libraries, the Jamestown Arts Center, the Martin Luther King Center, and Thompson Middle School.

- Working with the Newport Community School to provide after-school programming on site at FabNewport.

- Offering middle and high school students across the state credit-bearing courses as part of the statewide Advanced Coursework Network. Classes include AP Computer Science Principles, 3-D Design and Digital Manufacturing, and Wearables: Introduction to Embedding Electronics and Clothing.

- Running summer camps in collaboration with the Newport YMCA and the Newport Health Equity Zone.

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.

Learning in the Community

- Heath believes that students learn best when they can take control of their learning and expand their learning into the community around them. Over the summer when FabNewport works with kids from the Newport Health Equity Zone, the students' interests drive the design of the program.

- After developing design, coding, or woodworking skills in the lab, the students walk and bike around Newport and teach their teachers to look at the community through their students' eyes. After exploring the community, the students' questions and curiosity drive their learning. For example, one student's study of a fudge store may lead her to make her own fudge and create a website to open an online fudge store. Another student may build replicas of antiques from an antiques store and create a museum exhibit.

- 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

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References

[1] Nellie Mae Education Foundation. (2016). *Student-centered approaches.* Retrieved August 1, 2016, from www.nmefoundation.org

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[6] *Expanded learning opportunities handbook.* (November 2012). Providence, RI: Rhode Island Afterschool Plus Alliance, an Initiative of United Way of Rhode Island.