

SMALL BUSINESS

Classes offer new take on tech

Families line up for fast-growing programs in areas from robotics to video-game design

BY DIANE HESS

RoboFun Chief Executive Laura Allen has built a fast-growing firm that teaches children about technology via hands-on activities such as designing a robot that can hit a golf ball.

Youngsters flock to the 3,000-square-foot RoboFun studio at West 102nd Street and Broadway to build robotic bald eagles with movable wings and Rube Goldberg devices with multiple moving parts, and take classes in Lego robotics, video-game design and stop-motion animation. RoboFun also offers its workshops at 70 city public and private schools.

"Families in Latin America, England and Africa have contacted me about opening branches overseas," said Ms. Allen. "It's great to be able to grow a business in a way that allows me to support children and connect

them to what is important to them."

RoboFun, winner of *Crain's* Perfect Pitch Competition in 2012, is one of more than a dozen tech-focused educational businesses in New York City that are part of the quickly expanding "maker movement," a global community of inventive types devoted to do-it-yourself projects that embrace technology. The number of maker-related educational programs has exploded in part because parents increasingly recognize that American children lag their international peers in science, technology, engineering and mathematics—the so-called STEM subjects.

Maker Faires and magic wands

"Research suggests STEM education develops critical-thinking skills and science literacy, which drives innovation and economic expansion," said Ari Ginsberg, a professor of entrepreneurship at New York University. "The business world has signaled its need to hire people with substantial STEM expertise, and parents want to make sure those opportunities are available to their children."

Ms. Allen projects revenue for her 16-year-old firm will reach \$1.3

million this year and 20% growth next year. Meanwhile, she expects \$140,000 in grant funding in 2015, plus new revenue from licensing her curriculum. That will help her expand her team of six full-time and 20 part-time employees by 55%.

"Businesses like RoboFun are successful because they provide young people an opportunity to explore science, technology and engineering by undertaking projects that have meaning to them," said Margaret Honey, chief executive of the New York Hall of Science in Flushing, Queens, which hosts an annual Maker Faire and recently added a \$4 million Design Lab.

Brooklyn Robot Foundry, a three-year-old business in Park Slope, teaches students to understand the engineering aspect of design. Youngsters learn to power a light-emitting diode with a battery pack and wires, and then use their imaginations to add decorative materials.

"The children could turn their LEDs into a magic wand or the trunk of an elephant that lights up," said founder and CEO Jenny Young, a mechanical engineer. "Our mission is to allow 8-year-old children to take whatever it is that interests

them and to build along those lines."

Brooklyn Robot Foundry in March opened a second location, in TriBeCa, and aims to launch multiple branches across the country. The profitable firm predicts \$600,000 in revenue in 2014 and estimates 20% growth in 2015. Summer camp generates three-quarters of its revenue.

Going national

Not far away, in Cobble Hill, Brooklyn, Mike Fischthal, a former designer at Nickelodeon, is chief executive of the year-old Pixel Academy, which focuses on computer programming, video-game design and 3-D printing. The profitable business charges a monthly membership fee of \$25 per child, plus \$35 a visit. Mr. Fischthal, who expects revenue to double to \$1 million next year, plans an Upper West Side outpost.

"We have seen a huge demand from people all over the country to open additional locations," he said.

More competition is coming. Jon Santiago, an MIT graduate, co-founded HTINK, a cooperatively owned business that holds classes in digital fabrication, electronics and computer programming at museums, libraries and schools across the city.



MASTERMIND: Former painter and computer teacher Laura Allen created RoboFun to educate children about technology.

He spun off an LLC, called the Makery, which in two years has built 10 successful pop-up spaces devoted to tech learning. He plans to soon open a permanent location in Brooklyn.

"We view technology as the blending of atoms and bits, and we encourage students to test their ideas," said Hsing Wei, a founder of the Makery. That's a valuable skill in any STEM career. ■

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