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She's demystifying STEM for adolescent girls

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The Charlotte Ledger

BUSINESS NEWSLETTER

Good morning! Today is Wednesday, June 22, 2022. You're reading The Charlotte Ledger, an e-newsletter with local business-y news and insights for Charlotte, N.C. This post is sent to paying subscribers only.

Seeking tools to spark her daughters' interest in STEM, Abi Olukeye left her corporate job and founded a company to

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When Abi Olukeye (left) sought out to start Smart Girls HQ, she found help at UNC Charlotte's Ventureprise Inc., an innovation incubator at UNC Charlotte. Devin Collins (right) is Ventureprise's executive director. (Photo courtesy of Ventureprise)

by Michael J. Solender

All it took for **Abi Olukeye** to make the career leap from a secure corporate gig to becoming an independently funded solo entrepreneur was an unintended push from her two daughters, ages 7 and 10.

In 2018, Olukeye left her role as global product manager at **Ingersoll Rand**, the Davidson-based international industrial manufacturer, to launch **Smart Girls HQ**, an online-learning platform and suite of products designed to spark an interest in STEM (science, technology, engineering, and math) careers for girls ages 6 to 12.

It was Olukeye's personal experience searching for educational tools for her girls that left her discouraged and convinced her there was a broad market for more focused STEM products — especially for young girls.

"I was frustrated looking for educational toys for my girls to provide broader exposure to STEM and the world of possibilities for them," said Olukeye. "As I shared options with

them, they'd refer to various toys as 'a boy thing,' or 'a girl toy,' whether it was the product such as toy cars, or in the color of a particular toy, such as pink. It became clear there was gender disparity here that kids pick up on at a very young age."

Olukeye began to explore the arena of STEM education for young girls — a space she felt hadn't changed much in a decade. "There was a great deal of conversation in government and industry about the [lack of] female STEM talent at the high school and college level, but limited focus at the younger ages."

'Lightbulb moment': What she found was eye-opening. "Data indicates it's at age 12 when girls started to lean away from STEM compared to their male peers," said Olukeye. "This was shocking to me, because this is the age when they graduate from elementary school. I came to recognize what is happening in elementary school programming around STEM and science at that level is very abstract and not very career-oriented. It was a lightbulb moment for me and sparked the idea for a business."

It's a business that, with the right help, would eventually expand to hands-on learning kits, computer games, an artificial intelligence app and a school-based program that has been piloted at a technology magnet school in the Charlotte-Mecklenburg Schools system.

Bit by the entrepreneurial bug: Making the move from corporate product research and development into a startup arena didn't frighten Olukeye.

"I loved what I did and the corporate role I had," she said. "But it was safe, and I wanted to push myself. I was bit by the entrepreneurial bug, and I saw a big problem that needed solving."

A chance networking introduction led Olukeye to **Ventureprise Inc.**, the **UNC Charlotte** innovation incubator aimed at supporting small start-up businesses in the Charlotte region. The non-profit organization serves as a business development tool for university researchers, students and community organizations and innovation-driven businesses like Smart Girls HQ.

Ventureprise is located at the university's **PORTAL** building on campus and offers an array of resources that help entrepreneurs address startup needs, from managing intellectual property, technology transfer and licensing, to connections and networking with university faculty, researchers and students. The incubator also helps businesses find state and federal

small business grants.

The connection has been a game-changer for Olukeye, who has located Smart Girls HQ at the PORTAL, joining 35 other innovation-driven ventures based there.

“Abi represents the gold standard of how the university partners with entrepreneurs in the community,” said **Devin Collins**, executive director at Ventureprise. “Typically, first time entrepreneurs [rush to] create a business plan, invest in space, hire attorneys and move quickly to establish themselves as an LLC. We believe the best process is to spend considerable front-end time conducting research and market analysis.”

Through the program, Olukeye connected with **Mary Lou Maher**, currently director of the Center for Education Innovation in CCI at UNC Charlotte. Maher’s research overlapped into areas Olukeye was exploring with Smart Girls HQ, and through a collaboration, they were able to secure a Small Business Innovation Research Grant to research and begin development toward a “recommender app” on Smart Girl HQ’s website. The app uses artificial intelligence to suggest topics for exploration and learning sequences for girls expressing interest in various STEM fields.

STEM education outside the classroom: Back when she first began her research that would spark her startup, Olukeye discovered most of the career-oriented STEM education and exposure for elementary school children happened outside the classroom, and thus fell upon the parents to provide.

“My first big hypothesis was parents are an underserved audience for STEM resources for their children, especially young girls,” Olukeye said. “Parents want something easy that could fit into the edges of their day that will fulfill the purpose of helping their children learn in an interesting way, offer a bonding experience and be something they can feel good about.”

It wasn’t long before Olukeye realized there was a true need for not just awareness and education, but actual products and educational tools that parents could use with their children. A newsletter she established, [Raising Smart Girls](#), to share research and resources with friends was an instant success, became Smart Girl HQ’s first product and evolved into [a website](#).

Fun, interactive learning tools came soon after. Among Smart Girls HQ’s most popular

products are hands-on STEM learning kits, including the Dear Smart Girl Electrical Engineer Learning Kit (\$50), which teaches girls about electricity as they (with an adult's help) learn about parallel circuits to build a headband that lights up. Last year, the company sold more than 3,000 of these kits.

A “cosmetic engineer kit” that teaches about chemistry and pH levels came later, and four more are planned.

The global educational toys market is currently a \$68B industry and is estimated to grow to \$132B by 2028 with demand for STEM toys driving growth, she said.

Getting into schools: In addition to her game-based learning, hands-on kits and AI programs, Smart Girl HQ created a program called “Smart Girl Squad,” a 20-week experiential learning program for fifth grade girls that was piloted last school year at **Dorothy J. Vaughan Academy of Technology**, a CMS elementary school. There are more schools signed on for next year, Olukeye said.

Olukeye said she has two big motivators as she grows her business: the excitement of entrepreneurship, and her passion for her mission.

“I want to be involved in delivering the answer to the STEM talent crisis we’re facing and help build the pipeline in a sustainable way. People look at this as a social problem,” she said. “To me, it is much more than that. If we can apply the same rigor that we apply to commercial problems, we can solve this problem.”

Michael J. Solender is a Charlotte-based features writer. Reach him at michaelsolender@gmail.com or through his website, michaeljwrites.com.

South Charlotte residents fight plan for new apartments with drone video of traffic; ‘those school buses — they haven’t moved’

A group of residents near **Providence High School** unleashed a rare weapon in a battle against a developer’s plans for new apartments by their neighborhood: a 2-minute drone video showing heavy traffic congestion.