

## Blind Purdue grad works to make science accessible

By Hayleigh Colombo, hcolombo@jconline 9:49 p.m. EST February 10, 2014



Independence Science founder Cary Supalo demonstrates some of the technology that helps vision-impaired people learn STEM, Science Technology Engineering and Math, skills Friday, Feb. 7, 2014, at the Purdue Union Club Hotel in West Lafayette, Ind. Independence Science creates science-access products aimed to help visually impaired students. (AP Photo/Journal & Courier, Michael Heinz) MANDATORY CREDIT; NO SALES(Photo: Michael Heinz)

WEST LAFAYETTE – Cary Supalo always has been a problem solver.

When he attended Purdue University in the late 1990s, Supalo encountered all the standard challenges of an undergraduate student pursuing a chemistry degree — plus one added hurdle.

Supalo is blind. That reality made bench-top lab work a real nuisance, but he didn't let it stop him from pursuing a career in science.

“I got through it here at Purdue initially by working with sighted assistants,” said Supalo, who is founder of Independence Science, a company in Purdue Research Park that creates science-access products aimed at helping visually impaired students.

“Those truly devoted to science will stay with it. The majority of people who are blind or visually impaired will use (sighted) assistants to get the class done and move on to something else. I stayed with it because I really did enjoy it,” he said.

Supalo hopes to make hands-on science a possibility for blind students who are often deterred from STEM — science, technology, math and engineering — fields because of their fears or parent and teacher discouragement about doing experiments.

“You have a whole population of blind people that have had to problem-solve their entire life — to access the printed word, to cross the street, to go to school,” Supalo said. “It just intuitively makes sense to give them scientific problems to try to solve. They’re lifelong problems solvers. We want to tap into that skill set.”

Later this month, Supalo’s company will be honored by the American Foundation for the Blind for its contribution to universal accessibility. Independence Science joins an elite group by earning the Access Award, which will be presented at the group’s 2014 leadership conference. Past winners include Apple, CBS, Google, IBM, McDonald’s and Panasonic.

The goal of Independence Science’s products is to ease the challenge of recording and reporting scientific information for students who have low vision or are blind.

Some of its innovations include Talking LabQuest, a hand-held data collection device that announces scientific data out loud while recording an experiment; Logger Pro App, which offers audible or tactile representations of graphs and data tables; and Adaptation Support Program, a subscription service that equips educators with an accessible laboratory environment.

The company, with 13 employees in offices across the country, was founded in 2009 by the Purdue alumnus. Since the first product was launched, Supalo’s team has sold hundreds of units domestically and globally.

Talking LabQuest costs \$1,500 for each device and also requires 70 sensors, each of which costs from about \$10 to several hundred dollars. It was released in 2011 and is based on years of field research in which prototypes were put in the hands of blind and visually impaired students.

“We wanted to show that giving blind students the ability to collect their own quantifiable data would engage them more in science laboratory, which would then lead to higher feelings that they could become scientists and engineers,” Supalo said. “That’s what our data showed. It’s very rewarding because I could see immediately I was removing barriers to access by their direct engagement in the lab experiments.”

As awareness continues to build about increasing access to people with disabilities, Supalo said he believes companies that create and sell accessible products will see increased success.

“If your product line is more friendly to students with disabilities, it’s going to be a more desirable purchase for schools.”

Supalo said he is grateful for companies, namely Vernier Software & Technology, that have partnered with him. He said science-access products for students with print disabilities — learning disabilities, dyslexia, difficulty reading or who are visually impaired or blind — don't seem to be a priority for many companies.

Access issues for students who are blind are becoming a more public issue. Miami University in Ohio is being sued by Aleeha Dudley, who is blind and alleges that Miami failed to provide accessible textbooks and course materials.

The American Foundation for the Blind also gave this year's Access award to the Metropolitan Museum of Art for its use of descriptive and touch tours; a patent-pending text technology company called Fleksy; and Image Searcher Inc. for its TapTapSee camera app.

“By focusing on making their products and services accessible to everyone, including people with visual disabilities, this year's Access Award recipients have leveled the playing field for the more than 20 million Americans with vision loss,” said Carl R. Augusto, president and CEO of the foundation.

The AFB said Independence Science's work has contributed to universal accessibility by “paving the way for future generations of researchers, thanks to their commitment to ensuring hands-on experiences for all science, technology, engineering and mathematics students, including and especially those with visual impairments.”

“If you make something (accessible) for people with disabilities, by proxy, you make things accessible for everybody,” said John Mackin, AFB's media relations manager. “That's the idea behind universal accessibility and the Access awards.”

Supalo said he is excited to receive the award.

“It really is an honor to know that people out there are acknowledging our work as significant,” Supalo said. “If I died today, I would die knowing that I made a difference.”

Moving forward, Supalo said he wants to expand into mobile technology, along with developing products that help inspire STEM skills in people with other disabilities.

“It's really come a long way from a big desktop computer to this,” Supalo said. “Who knows what the next generation of technology is going to be? I have some ideas.”

Call Journal & Courier reporter Haleigh Colombo at (765) 420-5247