CLARITY OF VISION

BY KAREN LEWIS TAYLOR

YOUNG ENTREPRENEUR MOLDS PASSION FOR SCIENCE AND SOCIAL RESPONSIBILITY INTO EYE CARE SOLUTIONS FOR DEVELOPING NATIONS

(above) Field-testing of the ViFlex prototype in Nepal. *Photo courtesy of Access Healthcare Nepal.*

Field-testing of the ViFlex prototype in Nepal.
Photo courtesy of Access Healthcare Nepal.

IT ISN'T EVERY DAY THAT AN IDEA first bounced around in a college dorm room catches the attention of the Clinton Global Initiative University (CGIU).

Of course, making prescription eyeglasses easier to customize and distribute to remote areas isn't just any idea, and the organizers at CGIU aren't the only ones to see its potential to improve the lives of the millions of people in developing nations who have vision problems.

"[IT'S IMPORTANT TO] ENGAGE WITH THE WORLD BEYOND THE CLASSROOM AND LAB, TO PUT MY HEAD UP AND LOOK AROUND AND SAY, 'WHAT CAN I DO FOR MY COMMUNITY?'"

"I was thinking about how to change the focal power of a lens without changing out the lens itself," Nathan Brajer '10 said of his initial idea. That led to a conversation with roommate Evan Madill about eyeglasses and barriers to vision care for people who live in rural areas of poor countries, where even basic health care is often difficult to secure.

Since that first spark of inspiration in their junior year at St. Louis's Washington University, Brajer and Madill have devoted countless hours to understanding and addressing the challenges of getting affordable eyeglasses to people in remote locales. Their work began in earnest when they realized an earlier effort, AdSpecs, had failed to make what Brajer calls "a significant, lasting impact."

NATHAN BRAJER '10 (at right) and ViFlex co-founder and CEO Evan Madill at the 2014 Dutia competition. *Photo courtesy of Whitney Curtis.*

"It's not just the issue of cost per pair. There's a shortage of eye doctors to diagnose eye conditions and prescribe corrective lenses. There's also the cost of distributing customized frames and lenses," he explained. "The AdSpecs idea addressed the lack of optometrists — at the expense of dramatically increasing the cost per pair of eyeglasses — but failed to address the distribution cost barrier. That realization was the starting point for us."

Brajer and Madill's solution: frames designed to accommodate any lens.

"Instead of locking the lenses into the frame at the manufacturing plant and having to produce and ship many extra pairs for all the different combinations of prescription strengths" — which presents significant obstacles for cash-strapped clinics serving smaller rural populations — "you wait to fit the lenses into the frames until the point where you're handing them to the user," Brajer said.

Their product has been in development over the last two years. As their startup, ViFlex, gained recognition — in 2014, they took second-place honors in the Suren G. Dutia and Jas K. Grewal Global Impact Award, presented by the Skandalaris Center for Entrepreneurial Studies at Washington University, and were international finalists for the James Dyson Award, among others — they secured funding and put together a team of engineering students at Duke University, where Brajer is enrolled in medical school.

How does Brajer find time to serve as chief technical officer (CTO) of ViFlex while attending medical school? Co-founder and CEO Madill says Brajer, who earned a bachelor's in biomedical engineering, magna cum laude, is in his element managing complex and dynamic projects.

"Nathan has a lot of strengths, but one that stands out is his ability to get things done regardless of the issues that come up," he said. "For startups, time is at a premium. To be able to move a project forward in the face of unexpected issues that span a number of domains is an extremely valuable skill. Nathan does this well, which is a big part of why ViFlex has progressed to this point."

Brajer credits the rigor of his studies at Ravenscroft, where he first explored his passion for science, for helping him develop discipline and time management skills. He adds that the school's emphasis on community service helped fuel his dedication to solving public health challenges in the developing world.

"That experience has encouraged me to take what I'm learning in school and use it to help the community," he

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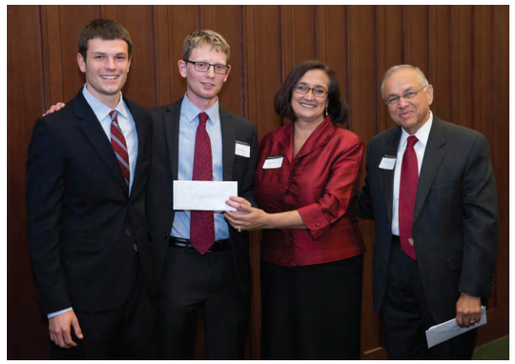
says. "[It's important to] engage with the world beyond the classroom and lab, to put my head up and look around and say, 'What can I do for my community?'"

Upper School Science Instructor John Karny, who taught Brajer's AP Chemistry class, says he is "not at all surprised" that his former student is an entrepreneur with a strong sense of social responsibility.

"Even in chemistry, he was generous with his time when opportunities arose for collaborative work or when others needed his help. He had an ability to find solutions to problems without being explicitly told how to do it," Karny said. "He has learned how to use his mind to solve problems, which is what scientists and engineers do. It's also what our school desires to instill in all its students — to use one's talents to make the world around us better."



NATHAN BRAJER '10 (left) and ViFlex co-founder and CEO Evan Madill took second-place at the 2014 Dutia competition. *Photo courtesy of Whitney Curtis.*

Yitaek Hwang, a Duke engineering student who serves as ViFlex's chief engineer, cites Brajer's leadership as a critical component of their accomplishments.

"More than seeing ViFlex succeed, he wanted it to be a great experience for everyone [on the engineering team]," he said. "I would at times get impatient with slow progress, but Nathan would ground me and remind everyone that we are all students first… Personally, I am thankful for the opportunity he granted me to grow not only as an engineer but as a student, leader and person."

ViFlex's innovative, low-cost frames have been field-tested in countries including Ghana, India, and Thailand, and their third-generation prototype is being readied for large-scale testing. The company was invited to present their work at the CGIU in March, even joining a select group for lunch with Clinton Foundation Vice Chair Chelsea Clinton.

As Brajer looks to the future and a career in clinical practice, he knows he wants to continue to push science and technology to provide better solutions for healthcare challenges.

"I've developed a desire to make things better at a system-wide level — through research or more business-related routes, I'm not sure," he said. "Over the next few years I hope to figure out more of a plan of what that will be."

Learn more about ViFlex at **viflexglasses.com**.