OCTOBER 2015

BUSINESS TECHNOLOGY OFFICE

Wanted: More women in technology

The founder of Girls Who Code discusses the need for gender diversity in technical fields and ways companies can begin to achieve it.

Kara Sprague

The number of young women completing engineering and technology programs has dropped significantly in the past 30 years. As a result, women are generally underrepresented in technology-related jobs, especially in technical positions and at leadership levels.

The not-for-profit organization Girls Who Code (GWC) was founded in 2011 to improve these numbers. The organization's goal is to expose a million young women to computer-science education and training by the end of 2020. To achieve that objective, GWC is partnering with US universities, elementary and secondary schools, and large corporations to sponsor after-school clubs and summer immersion programs for girls in grades 6 to 12.

According to Girls Who Code CEO and founder Reshma Saujani, the results have been encouraging. By the end of 2015, GWC will have reached 10,000 girls across the United States. Follow-ups with program alumni reveal that 90 percent are planning to major in computer science or mechanical or electrical engineering in college, Saujani says.

In this interview with McKinsey's Kara Sprague, Saujani talks about the importance of fostering gender diversity in technical fields, the obstacles for young women entering them, and the role IT professionals and organizations can play in removing some of those barriers.

McKinsey: *What prompted you to create Girls Who Code?*

Reshma Saujani: I'm a somewhat unlikely person to start up a group called Girls Who Code—I'm not a coder. I majored in political science, not computer science. But in 2010, I was running for congressional

Takeaways

The proportion of women in technology fields has declined dramatically in the past 30 years. Girls Who Code (GWC), a not-for-profit organization founded in 2011 by Reshma Saujani, partners with schools and corporations to train girls in after-school and summer programs in an effort to reverse this trend.

GWC hopes to reach one million girls by the end of 2020. By the end of 2015, 10,000 girls in grades 6 through 12 will have been part of GWC's programs. So far, 90 percent of students who have completed GWC programs are planning to major in computer science or mechanical or electrical engineering in college.

Saujani does not come from a technology background. However, while running for congressional office in 2010, she visited many schools and noticed the gender imbalance among students in technical courses. Recognizing the opportunities that technology offers for today's students, she began the work that led to the formation of GWC.

office, and I visited a lot of schools and met a lot of parents. At that time, New York was becoming a booming city for technology. A lot of established companies were opening offices here, and a lot of entrepreneurs were settling into the city. But in the classrooms of New York, there would be 100 boys in a robotics lab, and maybe two or, worse, no girls. I found myself asking, "Where are all the girls?" That question started this journey for me.

McKinsey: *So where are they? What is preventing young girls from entering science, technology, engineering, and math (STEM) fields?*

Reshma Saujani: There has definitely been a decline in the number of women entering STEM fields since the 1980s. During that period, almost 40 percent of computer-science graduates were women. Today, the number is less than 18 percent. Our team believes that's due to several factors—popular culture being one of the biggest culprits. Girls get messages all the time from the Internet, fashion magazines, social media, and other forms of media that technology is not for them. I mean, teen girls can walk into any Forever 21 store in any mall in the United States and buy a T-shirt that reads "allergic to algebra." And the typical computer-scientist protagonist in a TV show is a young guy with a hoodie in a basement somewhere. Because their perspective is not reflected in what they see, these girls say, "Well, I guess that's not for me."

A second factor is lack of knowledge. I think a lot of people—not just young girls—don't fully understand what it means to be a computer scientist or a technologist nowadays, what people in those roles do day to day, and the impact they're able to have on society. How can you pick a career without exposure to people in these roles? That's what Girls Who Code is trying to provide—opportunities to see and talk and experiment and learn.

McKinsey: *What sort of interventions does Girls Who Code provide?*

Reshma Saujani: We want to reverse the trend. We want more girls to declare a major or a minor in computer science. We believe that if we can get them into the pipeline, we can successfully encourage them to create the next Facebook, Pinterest, or Twitter. So we run two programs. One is a seven-week immersive summer program, where we embed classrooms in technology companies—our partner organizations—and we bring in female students and teach them computer programming on-site. In this way, they learn not only the necessary technical skills but also what it's like to be a computer scientist who works at, say, AT&T, GE, or Google. And because many of their teachers are women, the girls are exposed to potential role models. The second program includes the after-school clubs we sponsor—some 500 clubs in schools in 34 states. We bring in volunteers to teach girls computer programming and some math. Often these volunteers are industry professionals.

Reshma Saujani

Vital statistics
Born November 1975
in Illinois
Married, with 1 son

Education
Received a master's degree in public policy from Harvard University's John F. Kennedy School of Government, a juris doctorate from Yale Law School, and a bachelor's degree in political science and speech communication from the University of Illinois at Urbana–Champaign

Career highlights
Girls Who Code
CEO, founder
(2011–present)

City of New York
Deputy public advocate
(2011–12)

Fortress Investment Group
Deputy chief operating officer, deputy general counsel
(2008–09)

Carlyle–Blue Wave Partners Management
Associate general counsel
(2006–08)

Fast facts
Author of *Women Who Don't Wait in Line* (Houghton Mifflin Harcourt, 2013) and contributor to *The Huffington Post* and WNYC radio; has also been featured on CNBC, Fox News, and MSNBC

In 2015, was named to *Crain's New York Business*'s "40 Under 40" list of top entrepreneurs and business professionals in New York City; in 2011, was named to *City Hall News*'s "40 Under 40" list of young influential members of local politics

In 2010, became the first Indian American woman (and the first South Asian American woman) to run for Congress

McKinsey: *What sort of results are you seeing?*

Reshma Saujani: Some of the stories are really remarkable. I'm thinking about a young woman named Helen who attended our summer immersion program. Her family had migrated from the Soviet Union to Staten Island. This was a bright girl with an audacious goal—to eradicate world hunger. She had never really thought about computer science as a career, but she did recognize technology's potential to help solve big problems. She had a successful turn in the summer program—so much so that she started a [GWC] club at her school in Staten Island, where she was teaching coding skills to other girls and really leading the club. Eventually she applied and got accepted to Brown University, where she is majoring in computer science.

Helen's a star. But so are all the other girls. Make no mistake, they are learning something that is very difficult. It's *hard* to write code—I'm learning along with them, so I know. Even if they don't completely understand computer science, they are seeing the value in using it to tackle important challenges and find new answers. A girl may have a mother who's obese, and she's thinking about how to build an app to help make families eat better. Or she may have a brother who's dyslexic, and she's wondering how to help him read. Or she may have a cousin who can't afford high-priced SAT tutoring, and she wants to create an app for that. They're constantly thinking about their world and their community and how to make it a better place.

“. . . about half of technical women leave the industry within ten years. We need to do a better job of encouraging women to stay and rise to the highest levels in technology companies.”

McKinsey: *The program is having some impact, but what areas still need to be addressed?*

Reshma Saujani: Once women get into the pipeline, we need to make sure they stay there. There was a study a few years back that noted that about half of technical women leave the industry within ten years. We need to do a better job of encouraging women to stay and rise to the highest levels in technology organizations.

McKinsey: *How can corporations and organizations do that?*

Reshma Saujani: Apart from participating in programs like ours that are committed to building a pipeline of young talent, companies could also consider ways to convene firm-specific groups for women in technology and build a sense of sisterhood and support. There is still some sexism in tech companies that we all have to work on fighting together. Some members of our board have had a hand in such initiatives. Some companies have formalized programs in which technical women—and men—teach computer programming to other women and to nontechnical employees, who also need to learn how to navigate and communicate in a high-tech environment. Nowadays, we *all* need to learn how to code. ■

Kara Sprague is a principal in McKinsey’s San Francisco office.