



Lisa Quast, Contributor

Smart, strategic, and sometimes sassy career advice for women.

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Women And STEM Careers: How Microsoft Is Building A Bridge To Future Innovation -- One Girl At A Time

An unusual job paradox has occurred in the United States. The U.S. continues to face high unemployment rates ([7.8%](#) as of September 2012) yet American companies cannot find enough workers to fill all the available STEM positions. According to the [Brookings Institution](#), a nonprofit public policy research organization based in Washington DC, *“American companies urgently need professionals trained in science, technology, engineering and mathematics (STEM) fields, but there are not enough workers with the necessary skills and too few Americans earn post-secondary STEM credentials.”*



DigiGirlz Camp, courtesy of Microsoft

How can companies bridge the gap and be able to fill all those available STEM jobs? Microsoft is an example of one company not only seeking today's answers, they are looking into the future and focusing on the group believed to be a key solution: **Women**.

Companies are beginning to target women for careers in science, technology, engineering, and mathematics (STEM) because women are currently tremendously under-represented in these areas. *“Although women fill close to half of all jobs in the U.S. economy, they hold less than 25 percent of STEM jobs. This has been the case throughout the past decade, even as college-educated women have increased their share of the overall workforce”* ([U.S. Department of Commerce](#), 2011).

The question for Microsoft became, *“How can we engage and inspire young women toward a career in STEM, especially given it's been a historically male-dominated industry and culture?”* said Rane Johnson-Stempson, a research director at Microsoft who is leading the company's efforts to grow the pipeline of women in research, science, and engineering. *“What we realized is we needed to build a bridge to the future by getting girls excited in STEM*



Rane Johnson (rt) and Katie Doran, courtesy of

early in their lives, and then keeping them engaged and supporting their learning all the way through their college education, internships, and into their careers.” Microsoft

Microsoft believes they need diverse teams to encourage innovation and ensure technological advancements. With women accounting for only **18%** of the Bachelor’s degrees awarded in computer and information sciences and support services in the U.S. as of 2009-2010, Rane and Microsoft realize the need to grow interest at a younger age to attract more women to the field of technology. Working with their communities, governments, NGOs/IGOs, and academic and research institutions, they inspire women with creative thinking skills to pursue technical careers.

Out of this creative process came programs Microsoft now offers and supports both domestically and globally to engage and encourage young women in the technology field. There is **DigiGirly High Tech Camp**, which targets girls 13 years and up. The camp is a three-day program giving young girls an opportunity to gain hands-on experience with technology, participate in technology tours and workshops, listen to executive speakers, and network with those in the industry. *“During the camp, we work to dispel the stereotypes of the high-tech industry and help girls overcome fears that technology is ‘geeky’ and not for girls,”* added Johnson-Stempson.

There is also **DigiGirly Day**, a one-day event held at Microsoft locations around the world, that allows middle school and high school girls to participate in fun and thought-provoking technology exercises, interact with Microsoft employees and managers, gain an inside look at the many career opportunities in business and technology, and explore future career paths. Additional Microsoft programs and partnerships that support women interested in technology careers include summer internships, award competitions (**Kodu Cup**, **Imagine Cup**, and the **NCWIT Award for Aspirations in Computing**), and mentoring programs such as **Women’s TechConnect**.

Kara Fong is an example of one young woman who was interested in technology, but wasn’t sure how she could make a career out of it. She attended a DigiGirly High Tech Camp in 2005 when she was 14 years old and it gave her the inspiration she needed. *“I originally thought the tech industry wasn’t really for women and pictured a bunch of geeky males with pocket protectors hunched over computers. At the DigiGirly camp I learned ways I could use my math skills that were much more interesting than what we learned in school, such as to create fun, interactive games.”*



Kara Fong,
courtesy of
Microsoft

A year later Fong completed a summer internship at Microsoft, then an internship in Silicon Valley, and in December 2011, she graduated from the University of Washington with a degree in Information Science with a concentration in Human Interaction. She has now been employed by Microsoft for five months and is already working to give other women the same type of support and encouragement she received. *“I think the reason why a lot of women are discouraged about getting into technology is because there still aren’t a lot of women in the industry. But I like the challenge of standing out and making a difference. I had so much help and encouragement from Microsoft that I realized the only one who could hold me back from achieving my dreams was me. I want young women to know that if they’re interested in a technology career there are all kinds of people*

and resources available to support their dreams.”

Emmanuella Stimphat is another example of how these types of programs help young women in their pursuit of STEM careers. On January 12, 2010 when a 7.0 earthquake devastated Haiti, young Emmanuella lost her mother and her future seemed in despair. Then NetHope, in partnership with technology companies like Microsoft, helped set up the first NetHope Academy in Haiti, to give young students technical and on-the-job training to prepare them for technology careers. Emmanuella was one of the Haitian’s to enter the academy’s very first class of 39 students. She attended the free six-month program, learned IT skills in the classroom and on the job in an internship with Save the Children, and earned valuable Microsoft Certifications from Microsoft Learning.



Emmanuella Stimphat, courtesy of Microsoft

Emmanuella is also a mentee in *Women’s TechConnect*, a program offered by NetHope that provides role models, training, and mentoring to women and girls in developing countries who are interested in STEM careers. *“Many people think a career in technology is not a ‘woman’s affair’ and this makes it harder for women to launch a technology career,”* Emmanuella explained. *“The Women’s TechConnect program helps make a woman’s career sustainable because it provides mentors who help women improve their computing skills, offers helpful resources, allows young women in technology to connect with each other through social media channels, and provides interaction with other communities of women in computing.”* Since her graduation from the NetHope Academy in Haiti, Emmanuella worked at Inveneo, helping to build out broadband in Haiti, and currently works as an IT officer with [Save the Children](#).

A big incentive for young women to seek STEM careers is pay. *“Women with STEM jobs earned 33 percent more than comparable women in non-STEM jobs – considerably higher than the STEM premium for men. As a result, the gender wage gap is smaller in STEM jobs than in non-STEM jobs”* ([U.S. Department of Commerce](#), 2011).

Yet good pay is not enough. There are still gender stereotypes and social biases that must be overcome for the U.S. to fill all the available STEM jobs. [Studies](#) have debunked the myth that boys are biologically better at math than girls by proving differences in math performance are more related to social and cultural factors.



DigiGirlz Camp, courtesy of Microsoft

Now more so than ever, parents and teachers need to encourage girls to consider careers in science, technology, engineering, and math. *“When a daughter is creative, collaborative, and likes to solve problems, parents should encourage her to consider computer science, even if she isn’t great at math,”* recommends Rane Johnson-Stempson of Microsoft. *“Being fantastic at math isn’t a prerequisite for success in computer science. Yes, you need math basics, but programming is all about creativity, collaboration, and problem-solving, things most girls are great at.”*

The U.S will face an even greater crisis in the lack of skilled STEM workers if, as a country, we cannot work together to find solutions. Women like Kara and Emmanuella are helping bridge that deficit not just through their own career

choices but in the work they're doing with other young women to pay it forward and change the equation, one mentee at a time.

~ [Lisa Quast](#)

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