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Fixing the leaky pipeline for women in STEM | Expert column

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Businesses in the Hampton Roads region and across the nation face a serious challenge getting and keeping employees in science, technology, engineering and math careers. Furthermore, the Center for Talent Innovation found that women leave STEM fields in droves, with 52% of highly qualified women working in the field abandoning their jobs. The result is a "leaky pipeline" for women in tech fields where we are already facing a severe shortfall.

As the CEO of a systems engineering and cybersecurity company who wants to hire and retain A players, I find this leak distressing. Why are women leaving the workforce, and is there anything we can do to patch it up? Are there barriers we are not aware of? I am committed to helping more women start and maintain a successful career-long experience in STEM.

My interest in technology started as a teenager after hearing my father speak of his work at the Naval Safety Center — now the Naval Safety Command. He described rooms filled with analysts and computers, crunching numbers to figure out how to make flying safer. His encouragement and my love of math led me to study computer science at Virginia Tech. The playing field seemed level in the '80s, with my graduating class comprising 40% women.

The Institute for the Future predicts that 85% of future STEM jobs won't even exist until 2030. Our country will need 3.5 million more people to fill STEM jobs by 2025, but we're likely to have 2 million positions go unfilled because of the lack of qualified candidates of any gender or race.

There's no better time for women to enter STEM fields. Some companies set internal goals to diversify their workforce even though recruiters struggle to

fill the openings they have. Thankfully, I'm part of a growing wave of women in leadership positions making hiring decisions and shaping workplace dynamics to be positive for women.

We also need to continue encouraging girls to enter STEM fields. According to the United Nations and World Economic Forum, 74% of girls in the United States express an interest in computer science and STEM fields, but they hold only 18% of computer science degrees and 26% of computing jobs. The reasons include perpetual underestimation of girls' ability in math and science by teachers and parents and fewer role models.

Tips for women to succeed in STEM

Regardless of the industry, role or career path, women need the right perspective to succeed in STEM fields. I always urge women to align on a few important personal characteristics.

Enjoy the ride. I initially chose computer science because of the jobs and growth potential. Looking back, I realize a love for the work kept me energized and on track — not money or fancy titles. Do work you enjoy.

Lead. Go first. Women in our field must be bold and stick their necks out at times. Yes, it can be risky, but nobody ever won the prize by playing it safe.

Make SMART goals. Write down specific, measurable, attainable, relevant and time-bound goals. Have a way to know if you're on track, or they won't make a difference.

Don't take shortcuts. Long-term success depends on integrity. Don't cut corners in your work, career or personal life.

Don't expect chivalry. There won't be any coats thrown over puddles for you. You will have to work hard and earn everything on your own.

Grow your STEM career

If you have all or most of those characteristics, you're a good candidate for a job and a successful career in STEM. Be mindful of the many options in your job search; it doesn't have to be at a technology company because STEM positions exist at most companies. Figure out your passions. Maybe you're interested in health care, banking, retail, publishing or advertising. There are so many directions.

Once you set your STEM career in motion, here are some practices to help you grow it.

Develop emotional intelligence. You must have the ability to stay calm under pressure and understand the body language and emotions of others.

Be authentic. A woman who has achieved success in STEM is more likely to bring her authentic self to work as 78% percent of successful STEM women say they are their authentic selves at work.

Build your intellectual curiosity. STEM is frequently rooted in innovation and efficiency. Always seek to know the why, such as how developing a tool or rolling out an application is going to boost the company's competitive position.

Develop confidence in yourself. Among women who have achieved success in STEM, only 39% report a high level of confidence. It should be much higher! STEM women are more likely to underestimate their abilities despite performing as well as men. Be bold, appear confident in your body language and be unapologetic in decision-making.

Take credit. Most women in STEM, 82%, say their contributions are ignored. Speak up, take credit and be proud of your work. Never be silent or silenced.

Become a lifelong learner. You must stay in-the-know about your field. STEM is always changing. Read journals, attend conferences, take courses and join professional associations to keep up.

There has never been a better time for women to enter and stay in STEM, but the pipeline is still leaky. I, along with many other women in STEM, am committed to shifting that leak from a steady stream to a thin trickle, then a drip, and we won't stop until we fix the women-to-STEM pipeline.

Tracy Gregorio is CEO of Virginia Beach-based G2 Ops, an IT engineering and cybersecurity company serving the Department of Defense and other government and commercial firms. Gregorio chairs the cybersecurity committee of the Virginia Ship Repair Association, serves on the technical advisory board of the Virginia Commonwealth Cyber Initiative and serves as the assistant treasurer of the Virginia Maritime Association.