Why Hidden Figures Still Exist in STEM

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Reframing careers to spark the imagination of next-gen young women.

GUEST COLUMN | by Maggie Whitman

Out of all the movies slated for awards at this year's Oscars, Hidden Figures was surely the most thought provoking. Set against the backdrop of NASA's space race with the Russians, the movie tells the story of the amazing – and unsung – contributions of three African American women. It's an amazing story, but I wish we could say such figures are characters of the past and way more represented in today's technical industries. Sadly, that is far from true.

Six decades after the movie's characters battled male dominated workplaces, sexism and societal norms for the recognition they deserve, there is still an incredible amount of work to be done to help young women in STEM fields and workplaces truly flourish. In fact as our economy becomes focused around jobs where technological skills are increasingly favored, women still hold only 26 percent of these kinds of jobs.

If we, as educators, don't take action now, young women will continue to be left behind in the evolving workplace and U.S. employers will miss the rich diversity of approaches, ideas and skills women bring to their chosen roles.

What can be done?

Teach middle school girls that STEM jobs are theirs, too

New initiatives to promote careers in STEM fields to high school girls have been underway for some time, but it's clear we need to expose younger, middle school aged students, to the notion of jobs and careers in STEM fields. According to recent research, girls as young as nine or ten begin to self-select out of technical subjects, internalizing a belief that they lack the skill or aptitude to succeed in these kinds of fields. By the time they enter high school, societal barriers such as parental attitudes and peer group preferences help to widen this gap further and many girls will explore careers that tap into skill sets more traditionally associated with femininity and women.

Reframe STEM careers to motivate girls in the right way

It's critical to fight traditional gender stereotyping by showing young girls there are many ways to make the world a better place, often a motivating factor for girl's career choices. We need to demonstrate that they can make just as significant impact on the world and people's lives by being engineers, or architects and auto-mechanics as opposed to the more traditionally selected teacher, caregiver and nurturer roles. A number of technical industries are already taking the lead in this approach: engineers without borders promotes global engineering support in

third world countries and clever ideas like The Lift Garage are designed to help people out of poverty by providing free auto service and car repair; programs too like the University of Southern California's School of Architecture offer innovative home design for the homeless. The future must in some ways be about reframing STEM careers as beneficial to society to spark the imagination of the next generation of young women.

Experiential, single-gender teaching as a new approach

A number of colleges, Dunwoody among them, have developed a more immersive approach to teaching technical subjects where a rigorous academic instruction is paired with ongoing experience with the tools, methodology, techniques and environments that provide real workplace familiarity. The aim here is simple: prepare all students and particularly young women for the still-challenging industrial workplaces so they can begin their first day on the job with comfort and confidence.

Lastly, some high schools are now experimenting with single-gender, opt-in classes in subjects such as automotive and engineering to encourage girls who perhaps may be intimidated by male dominated classrooms and topics. This is in no way a return to the gender-bias teaching of earlier generations, but it's one more step in understanding educators and institutions need to be more attuned to helping girls and young women overcome the societal barriers associated with STEM career paths.

*Source: http://www.truechild.org/Images/Interior/learnthefacts/__femininity%20&%20stem.pdf

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