***For Immediate Release***

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# SUU Professor and Microsoft Publishes Study on Girls in STEM

Cedar City, Utah —Even with a higher priority placed on science, technology, engineering and math (STEM) throughout education in the US, only a fraction of girls are likely to pursue a STEM career. According to the National Center for Education Statistics, while more than 57 percent of college undergraduates are women, only 18 percent progress into STEM careers. With a clear gap, Microsoft set out to better understand what causes girls and women to lose interest in STEM subjects and careers, as well as what strategies have the greatest potential to reverse the trend.

According to Microsoft’s [Closing the STEM Gap: Why STEM Classes and Careers Still Lack Girls and What We Can Do About It](https://query.prod.cms.rt.microsoft.com/cms/api/am/binary/RE1UMWz), the goal of the study “was to inform our work in this area and to share learnings with schools, government leaders, nonprofits, employers and others. What we learned is that conditions and context can make a significant difference to girls, young women and their interest in STEM. And the solution doesn’t necessarily require a curricula overhaul.”

The study began with focus groups of 44 middle school and high school girls. The girls shared their views, experiences, and feelings towards STEM in a candid environment, laying the groundwork for a quantitative survey of 6,009 girls and young women from ages 10-30 examining attitudes toward STEM, school and the workforce pipeline. The research was bolstered with a number of interviews with experts dedicated to supporting girls and young women in STEM.

[Dr. Shalini Kesar](https://www.suu.edu/experts/profile/?expert=shalini.kesar), associate professor of information systems at Southern Utah University and advocate for women in technology, has known for years that girls and young women are a critical missing part of STEM studies and careers. With that knowledge, she was honored to collaborate on the international research project with Microsoft.

“The stubborn gender disparity in STEM fields has sparked important debates on the underlying reasons,” said Kesar. “Some attribute the gender disparity to social and infrastructural factors, lack of mentors and role models, and lack of awareness about what these fields offer in terms of educational and career opportunities. Others point to studies that indicate traditional mindsets of computing as ‘boring’ and ‘only for boys’ as a major reason why girls and young women do not consider a degree or career in this field.”

According to Kesar, the results of this research provide guidance on how to show girls that these fields give them opportunities to be creative and do good for the world.

“I hope you’ll join me in advocating for the importance of inclusion and diversity in STEM and computing, as well as seeking formal structural changes in policies and programs to ensure as a society we realize the full potential of girls and young women.”

The study found that “we may be able to make significant strides just by showing girls and young women how STEM knowledge is applicable outside of the classroom, and how it can power their aspirations to make the world a better place.”

The main takeaways from the research are:

* Girls and young women have a hard time picturing themselves in STEM roles. They need more exposure to STEM jobs, female role models, and career awareness and planning.
* Girls don’t initially see the potential for careers in STEM to be creative or have a positive impact on the world. But even a little exposure to real-world applications of STEM knowledge dramatically changes their outlook.
* Girls who participate in STEM clubs and activities outside of school are more likely to say they will pursue STEM subjects later in their education. The kinds of experiments and experiences girls are exposed to in these activities can provide insights for how to enhance STEM instruction in the classroom.
* Encouragement from teachers and parents makes a big difference in girls’ interest in STEM—especially when it comes from both teachers and parents.
* Educators can foster a “growth mindset” among their female students by tapping into their willingness to work hard for results.

From their insights, there are a few immediate steps that schools, parents, educators can take to enhance girls’ engagement with STEM. By providing positive role models, generating excitement, demonstrating a clear path forward, providing hands on experiences and encouragement, as well as a growth mindset we can support and bolster girls in STEM.

Above all, Microsoft says to listen to what girls say about their challenges and desires. “We know that some girls and young women thrive in STEM and computer science studies and careers, while others are stymied and choose not to proceed. As we continue to question why that happens and how to address those reasons, we have to keep our focus on the students and act on what they are telling us they need.”

“I was proud to collaborate with Microsoft on this research, which quantifies many of my observations from over 20 years of working to increase the participation of girls and young women in STEM and computing,” said Kesar. “This work is an essential step forward in helping us learn more about how girls and young women currently perceive STEM and computing.”

As an advocate for girls in STEM, Kesar has been spearheading the [Southern Utah Aspirations program](https://www.suu.edu/news/2018/03/southern-utah-aspirations-computing.html) for high school girls across 14 counties in Utah and Nevada. In the last five years, more than 400 high schools have applied to the free online competition.

**About Southern Utah University**  
Southern Utah University (1897) evolved from a teacher training institution to Utah's designated masters university, offering over 140 undergraduate and 19 graduate programs. With world class project based learning, unique undergraduate research opportunities, and a personalized learning environment (18:1) students lead projects mentored by professors. True to the University's core vision, SUU faculty, staff and administrators enable students to honor thought in all its finest forms, achieve excellence in their chosen field, and create positive change in the world.

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