Why It's Time to Bridge the STEM Gender Gap

As digital transformation reshapes the future of work, Science, Technology, Engineering and Mathematics (STEM) jobs are also growing exponentially faster than non-STEM jobs. The need to address the issue of gender disparity in the STEM fields has become a critical priority.

Women represent half of the world's population and are touted to be the largest global economic force. Yet, they remain largely under-represented, making up just 25 to 30 per cent of the STEM workforce globally and here in Singapore.

In today's VUCAH world, diversity is key to building more relevant, competitive and ultimately, sustainable societies and businesses. With these in view, the importance of increasing the the number of women in STEM has never been more pressing.

The STEM Gender Gap

Extensive research by industry watchers, including the World Economic Forum, has identified implicit gender bias as a key underlying reason for the STEM gender gap. This, in essence, refers to widely-held unconscious and erroneous beliefs and perceptions that males are more competent in STEM than females.

As such thinking influences STEM education, industry and workplace practices as well as career and economic advancement prospects, women are often deterred from pursuing STEM studies and career opportunities. Efforts to recruit more women in the industry have also been hindered.

Fortunately, cultural beliefs and stereotypes can be changed. The very act of identifying such biases can trigger the change process.

We look at some strategies that organisations in the STEM industry have begun to undertake to achieve greater gender equality.

1. Training female talents for STEM careers

To keep up with the pace of change in today's STEM domains, organisations should focus on talent and passion for lifelong learning. Those that are willing to invest in attracting, retaining and reskilling women for new STEM jobs, as part of their human capital strategy, will have the upper hand in attracting and building a more gender-balanced workforce.

The STEM Returners, a UK-based organisation, is a ground-breaking example of how qualified engineers are being enabled to restart their careers in STEM fields. Women returning after a mid-career break make up an impressive 46% of intake across its programmes to fill many STEM job vacancies.

2. Facilitating female mentorship and self-advocacy

With less than 30% of women in the STEM workforce, organisations need to provide structured mentorships and advocacy programmes that support and empower female employees to champion the design of work environments that are more welcoming to women. Prominent women-focused programmes in STEM companies include Oracle Women's Leadership, Women at Microsoft, Women in Technology @ HP, Women of Lockheed Martin and Cisco's Women Rock-IT.

To counter the effects of male-dominated fields, these programmes provide opportunities for women to engage with their peers and industry leaders to network as well as share ideas and tools for leadership and professional development. They may advocate for gender equity in areas such as pay, recruitment, education and career progression. They can propose employment benefits that motivate new generations of women to pursue STEM careers.

Collectively, such programmes are achieving positive results in recruiting, retaining and supporting the pipeline of women leaders in STEM-related fields.

3. Building the next generation

To tap the tremendous potential of new generations of girls and women, organisations are also embarking on initiatives to inspire interest and build confidence in young women to take on STEM studies and careers. These organisations are also extending collaborations with educational institutions to offer relevant STEM programmes, hands-on internships and employment opportunities.

One such example of this is IBM's global programme, 'EXCITE', which stands for 'Exploring Careers In Technology and Engineering'. The programme enables girls to gain STEM insights by learning about topics such as artificial intelligence, analytics and robots. 'Women Who Code Singapore' is another example of an organisation that offers programmes for girls in primary and secondary schools to spur STEM interest and develop technical talent.

Creating a Brighter Future for STEM

Developing the next-generation of women STEM leaders and innovators requires a mindset change to break down traditional stereotypes. It will also require the concerted effort of STEM organisations, business leaders, educational institutions, teachers, parents, amongst others to create more opportunities to bring about more diversity and inclusivity. These crucial steps will pave the way to a better and brighter STEM future.