Breaking Barriers: Empowering women in STEM in 2023

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Our world is evolving quickly, and significant technology breakthroughs are reported virtually every day. A move to digital technology and extraordinary technology are the characteristics of the so-called fourth industrial revolution. The physical, digital, and biological worlds are rapidly fusing. We must ensure that we are going forward in an integrated and inclusive way, although this is a period of great opportunity and enthusiasm for the future. The success of this revolution depends on placing women at the forefront and putting a strong focus on equality.

As we move forward, it is certain that the STEM fields at the forefront of technological developments, such as engineering and computer science, will dominate the global economy. These industries are also anticipated to produce future occupations with the greatest wages and the quickest growth rates. According to research, the average STEM worker already earns more than twice as much as a non-STEM worker, and this tendency is only expected to grow.

Bridging the Gender Gap

As a result, we must ensure that women and girls are extensively represented at all levels as we advance, with STEM industries setting the pace. It is more important than

ever to eliminate stereotyped biases in engineering and to promote young girls who want to pursue STEM careers. There is still a sizable gender disparity in the European Union (EU), with just about 19% of ICT professionals and one-third of STEM graduates being female.

Only 20% of engineering graduates worldwide are believed to be women, and women of color still make up fewer than 2% of all engineering professionals. Women are underrepresented at all levels, but they are especially underrepresented in leadership positions, where they hold roughly 24% of leadership positions in technology and as few as 16% in infrastructure. These figures are just unacceptable, and we must use the technology revolution's momentum to revolutionize women's roles in STEM.

Women Role Models in STEM

The next generation of women must be given role models that they can look up to for inspiration and all the resources necessary to succeed in their chosen industries to encourage them to pursue careers in STEM fields. In the fields of science, technology, engineering, and math, women are just as capable as men, but due to outside forces, they are increasingly excluded and the gender gap is being widened.

One way to address this issue is by showcasing successful women role models in STEM fields, who can serve as inspiration for young girls and encourage them to pursue careers in these fields. For example, Marie Curie, was the first person to win two Nobel Prizes in two different scientific fields, Physics and Chemistry, and paved the way for women in science.

Another great example is Grace Hopper, a computer scientist and naval officer was one of the first programmers of the Harvard Mark I computer and also co-developed the first compiler. Further, Sheryl Sandberg, who is the COO of Facebook and has been a strong advocate for women in the tech industry, and so is Tracy Chou, a software engineer, and diversity and inclusion advocate.

In addition to having role models, it is crucial that girls are provided with the resources and support that they need to succeed in STEM fields. This includes access to quality education, opportunities for hands-on experience and internships, and a work environment that values and respects their contributions. By investing in the next generation of women in STEM, we can help to close the gender gap and create a more diverse and inclusive future for all.

A smaller proportion of women pursue STEM careers or study due to cultural norms, lack of role models, and gender prejudices held by families or communities regarding girls' aptitude in the field. Because of this, it is crucial that we assist girls in STEM fields while also considering their surroundings, culture, and history.

Rising STEM Education for Women

Global Engineer Girls (GEG), which recently debuted in Kosovo and North Macedonia, has this precise goal in mind. The GEG assists in stemming the flood of passivity, injustice, and stigma. This international initiative, which is currently running in four nations, educates, empowers, and encourages women to consider professions in STEM. GEG strives to address bias among girls' families and communities in addition to aiding girls in obtaining a STEM education and career mentorship. Progress will be gradual unless bias is addressed, and the stigma associated with women in STEM is eliminated.

Numerous initiatives, such as GEG, are essential to bringing about major improvements. Another group like this, GirlHype, works to promote youth and girls' ICT empowerment in South Africa. Girls Who Code, which is "working to shut the gender gap in entry-level tech jobs by 2030 in the US, Canada, UK, and India," was mentioned in the Davos 2023 report published by the World Economic Forum (WEF). Girls Who Code is one such organization devoted to empowering girls and young people to pursue tech careers. "Initiatives like these are vital to encouraging females in STEM and reducing gendered prejudice in the business," the report stated.

Steps to Further Advance STEM

Employers in the STEM field should try recruiting and hiring female employees to improve diversity. This not only provides other women and girls with crucial role models to show that STEM fields are open to all and reachable, but it also has additional advantages. The diversity of opinion and experience, which are essential for innovation, creativity, wise decision-making, and ultimately profitability, is brought by the diversity of people. According to research, diverse teams make better judgments 87% of the time, and companies with varied workforces are 70% more likely to gain market share, which increases revenues.

Women in STEM have made a very modest and insufficient amount of progress thus far. The time is now to take advantage of the technological revolution and move our societies ahead together, leaving no one behind. The world must take more initiatives and dedication to achieve gender equality goals.

Although ground-breaking work is undertaken by groups such as "Girls Who Code" and "GEG," these programs cannot alter the world on their own. For a sustainable, inclusive, and future-proof economy, we must encourage gender equality in business, government, legislation, and culture. It is important to recognize that achieving gender equality is not just a matter of fairness, but also brings significant economic benefits.

Studies have shown that companies with gender diversity in leadership positions tend to perform better financially. Additionally, bridging the gender pay gap could lead to significant economic growth and a reduction in poverty levels too. Governments and businesses alike have a responsibility to address gender inequality and create a uniform and level playing field for all. The steps we take now will shape the future for generations to come, and it is crucial that we take action to ensure that this future is equitable and prosperous for all.

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