| WOMEN IN TECH |

Even before the first computer was built, English mathematician and writer Ada Lovelace published instructions for the world's first algorithm that a computer could process, becoming the first computer programmer in history. Years later, Susan Wojcicki became the 16th employee of Google, and the company worked out of her garage for its first few months. She spearheaded Google's YouTube purchase and she has been head of Youtube since 2014. Yet, women are under-represented in the computer science industry, especially in developing nations like Bangladesh. This under-representation includes not only women professionals but also students in universities.

"In co-curricular programming events and festivals, the number of female participants is significantly low, even though I have seen that many girls have immense

PHOTO: COURTESY

potential in technology and computing," says Nusrat Sultana Kakon, a computer science and information communication technology (ICT) student at Asian University for Women, Chittagong.

It appears that many women in Bangladesh tend to give up or not opt for studying and working in the computer science field, despite having an interest in the subject. There are complex reasons for this, beginning with deeply embedded societal stereotypes and cultural preconceptions. "Generally, families and teachers discourage girls from pursuing challenging jobs in computer science, engineering, mathematics, and technology because girls are told that they are not supposed to be good at these subjects. Rather, teachers and families always try to fit girls into safe, pigeon-holed jobs or homemaking," remarks Mirfat Sharmin, senior software engineer at IP Vision Limited, and one of the founders of Code It, Girl!, a non-profitable community that works to inspire young girls to learn the art of programming.

Mirfat further argues that from their childhood, children start to pick up gender stereotypes in colours, toys, and cartoon characters from their homes, schools, television shows, and other socialisation agents. "Eventually, girls stop showing interest in science-oriented toys, in technological subjects, and in anything that has a 'boys only' trademark," adds Mirfat. Unenthusiastic attitudes of families about girls working in computer science, and negative societal perceptions that the technology industry does not offer appropriate jobs for women, lead many to shy away from this field. Such perceptions need to be broken. "Teachers and parents have to be more careful about discriminating children based on gender. Schools need to encourage girls to participate in math and science challenges. Toy manufacturers should emphasise how they can make female-friendly science toys," says Mirfat.

It is key that families of girls who are interested in the technology industry provide them with full freedom and practical and emotional support. Nusrat, who has been in love with computers and science from a very young age, says that her parents always inspired her to fulfill her intended goals and to even attend international conferences on computer science abroad.

Despite tremendous strides made by women in Bangladesh over the last few decades, the tech industry continues to be male-dominated. "On many occasions, I have felt that my male colleagues were able to build better networks and stronger relationships with my bosses. I didn't have the chance to network as much, and have had to pay from my own pocket for research," says a lecturer of the department of electrical and computer engineering at North South University.

WHY SO FEW?
UNDERREPRESENTATION OF WOMEN IN TECH

SHABABA IQBAL

Similarly, Syeda Amatul Baki, an IGSCE ICT teacher at Academia School, and former programmer at Southtech Limited, shares, "Even if women enter the ICT sector, they often end up in administrative or secretarial jobs rather than becoming engineers." Syeda, who started her first job as a programmer in Southtech Limited in 1996 and was the first female employee in the organisation, also says that women in this profession are often underestimated for their capabilities and achievements, cast aside for being too ambitious, and have to work much harder to prove themselves. "So, women in this field really need to be persistent," she adds.

Preparing for and joining the field of computer science and technology is no easy feat. Afreen Hossain, senior software engineer in ICT would be largely in Electronic Arts, and founder of Code it, Girl! says that it is difficult for female ICT professionals to thrive in their careers because they often cannot spend as much time as their male counterpart learning the required skills as they are overloaded with housework. "Certain social structures need adjustments, for instance, men and women need to share their responsibilities at home," says Afreen, when

asked how can female ICT professionals can manage their work during early employment, marriage, motherhood, and throughout their career.

Offering a more positive outlook on the industry, Afreen also says that if women are competent and skilled, then despite their gender, they will be able to succeed. By the same token, Achia Nila, founder of Women in Digital, a social enterprise that aims to support and promote achievements of women in ICT and empower women in the digital platform, asserts, "Working women in the ICT field need to have determination, an interest in learning challenging things, a willingness to speak up against unfair judgment, and a 'can-do' attitude."

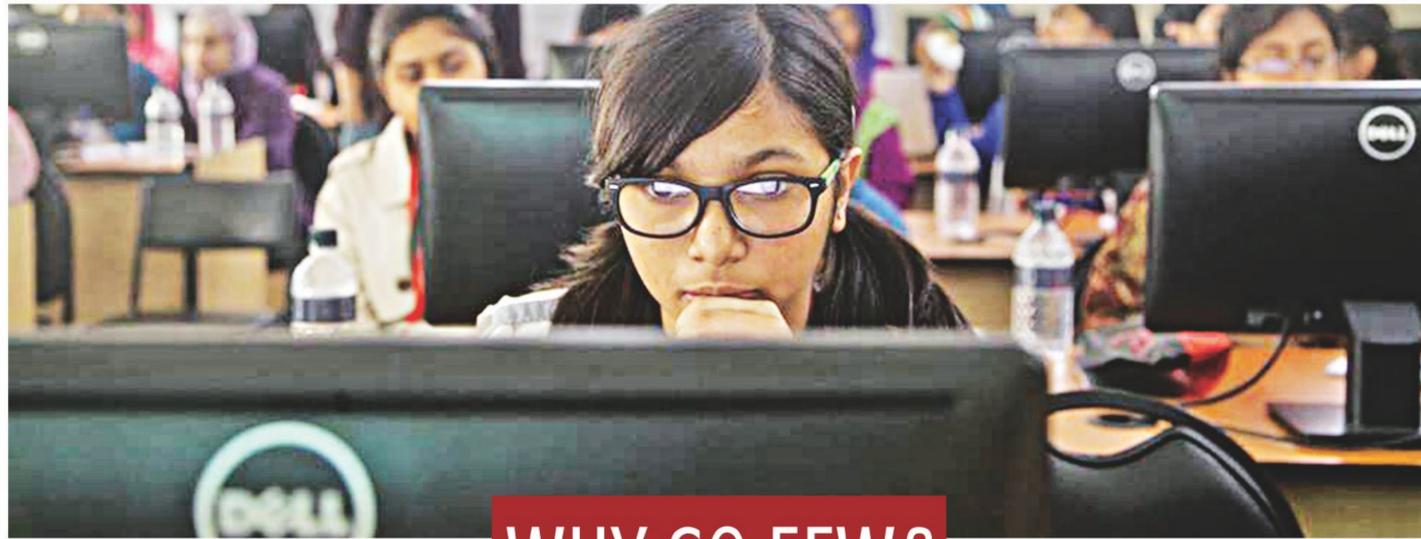On the other hand, organisations need to implement policies to create more compassionate and nurturing working conditions for women. For instance, they need to provide transport facilities for employees who work long hours, promote employee diversity, and discourage gender stereotyping in the ICT sector. "Increasing women's participation in executive roles and committees, providing promotions and increments to anyone who deserves it, developing an action plan to promote growth opportunities, raising awareness among women through campaigns and seminars, and promoting careers in ICT to school-going girls are good ways," explains Hridi Reza, a recruitment specialist at Augmedix, a telemedicine charting service for healthcare providers.

Today, attitudes in Bangladesh are changing and more and more women are being motivated to join the ICT industry. A number of groups, including Bangladesh Computer Council, World Bank, and Bangladesh Women in Technology, recognise the need for female participation in the ICT sector, and have been working to provide support and opportunities to women who want to learn and improve their technological skills. The government's ICT Division began a three-year project in January 2016 to provide ICT education to 2.4 lakh women who cannot have access to resources and training due to socio-economic hurdles.

ICT is presently an emerging sector in the country and there are a variety of merits of joining this industry. More female engagement in ICT would be largely useful at all levels, and for all stakeholders. "ICT is a great industry for women because there are a multitude of sections to choose from and specialise in. Additionally, there is an abundance of flexibility, growth, self-improvement, and work-from-home opportunities," says Achia. It is only a matter of breaking the myths and negative perceptions, and allowing more women to join and prosper in this field.

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| YOUTH |

PHOTO COURTESY: BYLC

WE NEED CLASSROOMS THAT UNITE, NOT DIVIDE

SHAVEENA ANAM

"*Apnar ki kono savings acche?*" I asked a slum dwelling beneficiary of a poverty alleviation project, to gather information for case studies that showcased the success of the intervention. One of the field officers who was accompanying me quietly whispered to me that the Bangla word for savings was *shonchoy* and then turned to his colleague to explain, "*Apa toh English medium*". "Ah" he said, and everyone around me in the tin-shed home nodded in unison—my accent, clothes, my entire being making sudden sense to them. Embarrassingly, I had never come across the word *shonchoy* before. I had attended an English-medium school and had the opportunity to go abroad to study. My education had made it easier for me to keep up with the indie film watching, Derrida quoting, vegan burger eating hipsters at my liberal arts college, but when I had returned in 2011 and started working at an NGO, I was suddenly rendered unintelligent and unintelligible because I couldn't hold intellectual conversations in Bangla with my colleagues. I hadn't read the same books, watched the same films, or listened to the same music. During school, Bangla lessons had been confined to hourly classes, three days a week. We might have shared space in the same city, but we certainly didn't share the same experience of Bangladesh.

This division in our social fabric is made more palpable to me through my work at a leadership institute that brings together students from all three mediums of Bangladesh's education system. Students from Bangla and English medium schools, and madrasas share a classroom, and have to work together in small groups on different

activities. I notice the hesitation with which they approach each other: I've spotted sniggers and nudges at the affected accents and mispronunciations, I've watched them roll their eyes at each other when they exhibit their assumed stereotypical behaviour. English-medium students think those from Bangla-medium schools are "*khaet*", traditional and close-minded. Bangla-medium students assume English-medium kids to be westernised "*farmer murgi*" who know little about Bangladesh and its culture. Madrasa students, possibly the most marginalised of the three, are perceived to be disconnected and overly religious, with no knowledge about anything outside Islam. Once when I was telling an acquaintance about my work and colleagues from madrasas, she looked at me with shock and exclaimed, "They can do math?!" These reactions are natural when they have gone through most of their lives in separate silos, living parallel lives that rarely intersect. With little to no exposure to each other, they grow up with an assumed image of the "other", constructed from stereotypes, suspicion, and resentment.

Tomorrow, August 12, is International Youth Day, this year's theme being Youth Building Peace. There are going to be exciting campaigns, discursive articles, creative social media content, and talk shows about how the country is experiencing a demographic dividend and how the youth are the key to the future. But recent examples of campus violence and involvement in militancy have demonstrated that growing inequality and intolerance has led to an erosion of social cohesion in the country. It's easy to blame it on moral decay instigated by social media and grumble about "*ajkalkar chhele meyera*", but we also have to take a look at the kind of examples being set for the youth.

Intrinsic to building peace are upholding values of empathy and compassion. But do we, as a nation, exemplify such values? Do we teach tolerance? Do we encourage empathy? Do we champion kindness? The duty of instilling morality is often relegated to parents and families. And while they do have a responsibility, education institutions also have a significant role to play in exemplifying such values in a structural manner. We have seen that education alone does not ensure open-mindedness or respect for diversity; therefore, we need to take active measures to strengthen social cohesion.

One possible way to do so is to restructure our current divisive education system to create a more inclusive one, where students from different backgrounds can learn in the same language, and access the same quality of education. Criticism of our education system usually focuses on the lack of facilities and poor quality of education, but little attention is paid to the damage perpetuated by the partitioning of people from a young age. This division may not be the only source of inequality and conflict, but it's definitely an important factor. And it is one that can be resolved over time, with methodical planning, training, and adaptation. If we want to build a pluralist, tolerant, and peaceful society, we will never achieve it by preserving a system that divides children according to their socioeconomic backgrounds.

There is mounting evidence that inclusive institutions have positive impact on a country's growth and progress when marginalised groups gain better access to education, higher learning opportunities, and gainful employment. I have seen first-hand from the interactions in our leadership classes,

how exposure to people from diverse backgrounds can yield positive results. Though sceptical at first, students eventually shed their inhibitions and take the opportunity to learn about and from each other. They become more open to different opinions and comfortable with having difficult conversations. For instance, a madrasa student teamed up with students of other mediums that he met at the programme, and worked to develop Think Twice Act Wise, which is an online platform and app that promotes tolerance and empathy, and combats online extremism. They recently won the Peer-to-Peer Global Digital Challenge at Facebook.

If such inclusive classrooms are conceptualised and constructed on an institutional level, students will be able to

> If we want to build a pluralist, tolerant, and peaceful society, we will never achieve it by preserving a system that divides children according to their socioeconomic backgrounds.

communicate with each other better, compete on the same level, and have equal opportunities when entering the job market. Most importantly, they will stop seeing each other as adversaries. This is not to say that simply putting them all together in the same room will solve all our problems. Inclusive mechanisms also have to be coupled with structural changes in curriculum that promote critical thinking and ethical leadership.

This idea might seem completely unrealistic and could be rejected as the machinations of a naive and idealistic mind. But idealism is always a good place to start. I have personally seen the obstacles created by division, and the benefits borne by inclusion. It's time we took a systematic approach at overhauling the structures we have created that harm us and start the process of building new ones that can ensure peace, justice, and prosperity.

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