

Women and Girls in Science

Equality and parity in science are vital to strengthen peace and development. This was recognised by the United Nations during the International Day of Girls and Women in Science last February in New York in partnership with the Government of Malta. Over the past years, international bodies such as the UN and the EU have realised that despite the advances that have been made in science throughout the years, there is, nonetheless, a gender gap in science. In fact, the advancement of women and girls in science has not only stalled, but is sliding backwards.

Women face considerable challenges in paving their way in the spheres of science, technology, engineering and mathematics (STEM), in particular the stereotypes they face which begin from an early age, leading to girls and boys to follow traditional roles. Indeed, the 2015 Programme for International Student Assessment (PISA) study demonstrates that, from the young age of 15, boys are more than twice as likely as girls to aspire for a career as an engineer, scientist or architect by the time they are 30; more than five times more likely than girls to aspire for a career as software developer or applications programmer and almost four times as likely as girls to aspire for a career as an electrical or communication engineering technician.¹

¹ These results are from the Programme for International Student Assessment (PISA), which is an international comparative survey of educational achievement of 15-year-olds.
https://curriculum.gov.mt/en/international_studies/Documents/PISA_2015_Malta%20Report.pdf

This is not a recent development. In fact, there is a lack of female role models in the STEM fields, that also act as an impediment for aspiring STEM professionals. Throughout compulsory education students mostly learn about the achievements of famous male scientists, such as Pythagoras, Leonardo da Vinci, Galileo Galilei, Darwin, Isaac Newton and Einstein. On the other hand, the great contributions of Mary Anning, Marie Curie, Rosalind Franklin and so many other lesser-known female scientists are not given the right and necessary importance and visibility. So much so that, upon obtaining a doctorate in engineering in 2015, Dr. Marija Cauchi stated in her graduation speech that “As a Gozitan female engineer with seemingly all the odds against me to break through the glass ceiling, I hope I will serve as a role model to show that you should never let anyone diminish your dreams”.²

It should be common place that female engineers graduate and work in these fields. However, as Ms Atefah Riazzi, Assistant Secretary-General and chief Information Technology Officer of the UN Office of Information and Communications Technology, stated³ men dominate the fields of science, technology, engineering, and math. Indeed, gender segregation in education is also evident at the University of Malta and MCAST. While 59% of the overall graduates were female in the year 2016-2017 at the University of Malta, only 9.7% out of all graduates were STEM female graduates.⁴ This

² <https://www.timesofmalta.com/articles/view/20151203/local/female-engineer-breaks-the-glass-ceiling-to-realise-dream.594337>

³ <https://www.youtube.com/watch?v=x7ttYqguAY>

⁴ https://www.um.edu.mt/__data/assets/pdf_file/0019/350911/graduates16-17.pdf

is being said in a context where Malta had the highest percentage of ICT graduates in the EU in 2015, yet also the highest gender gap with 15.4% male graduates and only 2.8% female graduates.⁵

This gender gap is then reflected in the labour force. In Malta, women are underrepresented as scientists and engineers, as well as in the sector on ‘information and communication’. This is also due to the difficulties that women experience in reconciling career and private life. Women still carry disproportionate responsibilities with regard to caring and household duties. Moreover, women are still expected to work in an environment designed for men. In effect, although 85.5% of women aged 25-29 years are in employment⁶, such participation gradually decreases from age 30 onwards due to the ensuing, increasing family responsibilities.

In order to address this gender gap in employment, the government is committed to further enhancing digital literacy by providing training to the workforce, raising awareness and strengthening infrastructure through the National Digital Strategy 2014-2019. Digital literacy is also addressed in education via the National Literacy Strategy for all in Malta and Gozo 2014-2019. In addition, the Centre for Entrepreneurship at the University of Malta and the Microsoft Innovation Centre have started to provide training in this area.⁷

⁵ European Union, 2018. Women in the Digital Age.

⁶ EUROSTAT. Employment rates by sex, age and citizenship (%) [lfsa_ergan]

⁷ http://eskills-monitor2013.eu/fileadmin/monitor2013/documents/monitor_final_report.pdf

To support these initiatives, the government is also continuously working to strengthen family friendly measures. The free child care for all working parents or undertaking full-time studies, the Breakfast Club and the maternity leave fund, among others, encourage women to re/enter the labour market. Moreover, in partnering with the UN, Malta was also the first country to commemorate International Day of Girls and Women in Science.

In addition, the National Commission for the Promotion of Equality (NCPE) provides training to various stakeholders on gender equality in STEM. Furthermore, a set of initiatives have also been undertaken to combat gender stereotypes through a number of educational activities for students with the aim of encouraging girls and boys to make their own choices according to their individual aspirations and abilities..

To ensure equal opportunities for all members of society, NCPE is empowered to investigate complaints of alleged discrimination on the grounds of sex/gender and family responsibilities, sexual orientation and gender identity in employment, education and vocational training as well as by banks and financial institutions and provides the necessary assistance and information in the compilation of a complaint.

The digital gender divide can be brought to an end through the empowerment of young girls in the classroom and young women at the workplace where they are given the same platform as boys and men to be able to reach their aspirations.



National Commission for the Promotion of Equality

NCPE can be contacted on 25903850 or equality@gov.mt or on our Facebook page.