

FACT SHEET: EDUCATION & WORKFORCE

Although great strides have been made in the education of women and girls worldwide, many countries in both the developed and developing worlds have a dearth of women in SITE fields – particularly in the physical sciences, technology and engineering – and few women represented in SITE leadership or at policy-making levels. Even in countries where large numbers of women are educated in SITE, this often does not translate into equal numbers of women in the workforce; reasons for this “leaky pipeline” need further investigation, but a large part of the trend can be attributed to social and cultural demands on women at home, such as childcare, cooking and cleaning, combined with inflexible workplace policies and norms. Institutional policy reforms are recommended to help women advance at every level of SITE careers.

HORIZONTAL INEQUALITIES IN SITE

With respect to the general education of women and girls at the primary, secondary, and even tertiary levels, many countries in both the developing and developed worlds have made significant advances in recent years. With the exception of certain parts of Africa and the Middle East, the education gender gap at the first two levels of school has nearly or completely closed in most countries, and at the tertiary level, women actually outnumber men in many countries¹. In SITE disciplines, however, women still have far to come. Even in advanced nations with large numbers of women enrolled in college, these women do not tend to enter SITE fields, with the exception of the biological sciences where women can often be a majority. In engineering, physics, and computer science degrees, women represent less than 30% of enrollees in most countries².

VERTICAL INEQUALITIES IN SITE

Equal education also does not translate into equal participation in SITE careers. Studies show that even in fields with high numbers of women graduates, women remain underrepresented in the workforce. In South Africa, for example, women earn 49% of tertiary degrees in the sciences (excluding engineering) and 28% of degrees in engineering, construction or manufacturing – yet they make up only 16% of the science and engineering workforce^{2,3}. In Europe, there are fewer than half as many women in the science and engineering workforce as men⁴. And in the United States, where women make up 56% of university graduates in the sciences (excluding engineering)⁵, they represent only 41% of employees in life and physical sciences⁶. It is clear that expanding educational opportunities for women and girls is not enough to bring about gender parity in the workforce as well. Sectors and disciplines in science where women are represented equally or in greater numbers than men – as in Argentina and Brazil² – can provide greater understanding of the factors influencing women’s participation in these fields.

In the EU, women were 46% of Ph.D. graduates in 2010 overall – but only 40% in science, math and computing and 26% in engineering⁴.



Only 1 in 20 deans or department chairs in science in the U.S. are women⁷.

CULTURAL AND INSTITUTIONAL FACTORS

Women who do pursue careers in SITE fields face unique challenges as well. In many cultures, raising children and tending the home are commonly regarded as women’s responsibilities, forcing women to divide their time between work and domestic obligations. Laws and institutional policies concerning time off for infant and childcare often reinforce these roles, providing more flexible leave policies for new mothers than for new fathers, for example. This sets many women back in the early stages of their careers; but even as they advance, women are promoted to fewer high-level faculty positions², and are less commonly found as members of scientific academies or in leadership roles in scientific organizations. A number of different factors, such as compounding disadvantages, systemic gender discrimination in SITE fields, and biases in career review processes have been identified as contributing to this discrepancy, suggesting that there is not one easy solution, but that a combination of cultural and institutional reforms will be necessary to effect change.