

Not blaming women is key to increasing their presence in tech professions, says researcher

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Women account for only 34% of graduates in the EU in the fields of science, technology, engineering and mathematics (STEM). The percentage is even lower in the STEM fields that are not directly related

to care. The fact is that girls are systematically discouraged from studying these disciplines throughout their education, which limits their opportunities for access to these fields as adults.

Putting an end to this situation is one of the main objectives of UN Women. The organization, which receives input from experts in a range of knowledge areas, has been assisted by Milagros Sáinz, the lead researcher in the Gender and ICT research group (GenTIC) at the Universitat Oberta de Catalunya (UOC) Internet Interdisciplinary Institute (IN3).

Sáinz was invited to contribute to the United Nations Commission on the Status of Women, with the article entitled How to Address Stereotypes and Practices Limiting Access to STEM-Related Education for Women and Girls. The researcher also participated as a guest speaker at the Expert Group Meeting of UN Women. In her study, she examines the causes and consequences of the barriers that prevent equality in STEM, and offers various recommendations to end stereotypes and achieve equality.

Women are undermined in STEM disciplines

Girls and women are under-represented in the STEM sector in most western countries. As a result, they are not involved in the development of scientific and technological breakthroughs on equal terms with their male peers, and their needs and problems are not addressed in the design and production of services and products.

In addition, due to their lack of representation in this field, they receive less recognition. This helps to consolidate the idea that STEM careers, which are often linked to higher salaries and more leadership than careers with more female involvement, are a predominantly male field.

This inequality originated in complex social and cultural phenomena, and is influenced by both personal factors (the perception that women themselves have that their abilities are limited in some fields), their environment (based on stereotypes) and their education (teachers' attitudes and [educational policies](#) can discourage girls from studying STEM disciplines).

Stereotypes are particularly important, since they influence girls' choices of educational paths. The idea that women are less talented than men in some areas is reiterated in many family environments, educational models, media, [social media](#) and video games, among many other examples.

For this reason, in the search for solutions, it is important that the responsibility for overcoming sexism and inequality in education and at work does not lie solely with girls and women. "They must not be held responsible for the existence of a gender gap in education, so that it seems that the problem of the lack of women in some areas of science and technology is something that only concerns them," said Sáinz.

"We live in a misogynistic society, based on strong sexist beliefs, in which men have a privileged position. Men have systematically been placed in better personal and professional positions than women, while women have been deprived of those privileges. This has to change, and the changes must take place at all levels, involving all the agents of socialization and society as a whole."

Recommendations for change

Measures and initiatives to eradicate sexism in education should ideally focus on various aspects: those that are related to the students' personality (such as their abilities and attitudes), to [social aspects](#) (such as roles or stereotypes) and to the role played by other agents (such as

families and teachers).

Some strategies involve families understanding that educating girls in STEM is an advantage and an opportunity. Others entail training teachers in issues of equality, and creating educational models with non-sexist teaching materials and women as role models.

To achieve this, Sáinz is leading the new Horigestem project funded by the Spanish government, which examines the influence of leading women in STEM fields on inspiring young girls' interest in STEM fields. It is also important to promote gender balance in advanced studies. To that end, the GenTIC group is coordinating INSPIRE, a new European project that seeks to promote gender equality in [scientific research](#) and innovation.

"It is essential to place women at the center of scientific and technological breakthroughs. In other words, they must not only be beneficiaries of those breakthroughs, but also their designers and producers," said Sáinz. "Their skills, their abilities, their interests and their concerns have been underestimated for too long. It's also time to highlight the various contributions that women have made to the different fields of knowledge, and to stress their major role in care in both the family and social spheres, and their importance in innovation linked to those areas."

According to Sáinz, it is essential to convey the message that equal opportunities between men and women will not be fully achieved until the social stakeholders come together and work in the same direction. Achieving this, and placing women at the forefront of scientific and technological breakthroughs, would be a major contribution to addressing the main challenges facing the world today, such as social injustice and [climate change](#).

More information: How to Address Stereotypes and Practices
Limiting Access to STEM-Related Education for Women and Girls, UN
Women: [www.unwomen.org/sites/default/ ... 022-12/EP.3 Milagros
%20Sainz.pdf](http://www.unwomen.org/sites/default/.../022-12/EP.3_Milagros%20Sainz.pdf)

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