

Tec leads global alliance to promote women in STEM careers



MakerWomenSTEM is a new initiative to foster access to STEM careers in Mexico, Columbia, and Ecuador

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Doménica Segovia

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Researchers and educators from **Europe and Latin America** have formed an alliance led by [Tecnológico de Monterrey](#) to open more doors to **women in science** in regions where the **gender gap** continues to be an obstacle.

The initiative, called [MakerWomenSTEM](#), seeks to improve women's access to **science, technology, engineering, and mathematics** (STEM) disciplines in Latin America.

"This initiative makes an important contribution as it enables the exchange of knowledge between universities on two continents," said Edgar López, a researcher from Tecnológico de Monterrey and manager of this project, who added:

“It’s an initiative that brings together teachers, researchers, public authorities, and civil society representatives to impact over 500 women who will benefit from the implementation of three projects.”

The **MakerWomenSTEM initiative** financed by the **European Union** aims to benefit women in Mexico, Columbia, and Ecuador who want to take up careers in science.



This initiative had its first in-person meeting on May 5 at the Tec’s Mexico City campus. Photo: Doménica Segovia

According to figures from the United Nations, the **global percentage of female science researchers is nearly 30%**. The figure is higher in Latin America, standing at 45%, but they continue to be **underrepresented** at higher levels of their disciplines.

What’s more, less than **4%** of **Nobel Prize** winners in STEM disciplines have been women.

The **MakerWomenSTEM** was chosen from among 14 initiatives in Latin America in a call from [Erasmus+ Capacity Building in Higher Education](#), a program that aims to strengthen higher education institutions and reduce social gaps through international collaboration.

“It brings together teachers, researchers, authorities, and civil society representatives to impact over 500 women.” - Edgar López

Network of science institutions

[MakerWomenSTEM](#) is a project in which **nine institutions** on two continents are implementing **educational tools** that facilitate women’s access to STEM disciplines.

It includes several activities: developing a training program for **female mentors**, implementing **specialized workshops** in the three participating countries, and **creating a network** to foster training, research, and exchange of good practices between researchers and teachers.

The results generated will be available to the education community, enabling other institutions to adapt these tools to their own contexts.

MakerWomenSTEM includes a diverse network of institutions, with the following participating alongside **Tecnológico de Monterrey** as coordinator:

- *TEC Foundation for Innovation and Entrepreneurship, Spain*
- *University of Potsdam, Germany*
- *University of Eastern Finland, Finland*
- *University of La Guajira, Colombia*
- *Ceipa University Foundation, Colombia*
- *Bolivarian University of Ecuador, Ecuador*
- *University of Intellectual Development, Mexico*
- *And the General District Coordinator’s Office for Education, Health, Science, Technology, and Innovation in Hidalgo, Mexico.*

Silvia Bustamante, Director of Internationalization at the Bolivarian University of Ecuador, explained that the expected benefits of this collaboration are:

“Adapted training, recognized certifications, and international partnerships. It’s an opportunity to transform realities, reduce wage inequalities, and build a future in which Latin Americans lead innovation.”

Edgar López said that this collaboration will enable the development of a pedagogical framework designed for the Latin American context, adapting educational proposals to the regional setting.



The project is based on workshops in which participants develop proposals to be implemented in Mexico, Colombia, and Ecuador. Photo: Doménica Segovia

Maker methodology as educational tool

MakerWomenSTEM is based on the **Maker educational methodology**, a pedagogical approach that combines several disciplines to achieve **practical learning**.

It distinguishes itself from traditional teaching methods by promoting the creation of physical or digital objects to solve specific problems.

The main objective is to develop skills such as problem solving, critical reflection, and perseverance through practical experiences.

According to **Frederic Matthe**, a researcher at the University of Potsdam and project participant, the results of this approach could be more inclusive.

*“It supports non-hierarchical learning situations that can be more inclusive and attract girls and **underrepresented groups**.”*

By changing the focus from omnipresent competition to collaborative exploration and the solving of real-world problems, we break stereotypes and prejudices and foster the confidence of young people in STEM fields.”

The project seeks to contribute to the development of educational strategies that facilitate women’s access to areas of knowledge by combining the Maker methodology with an international collaborative approach.

Enter [**MakerWomenSTEM**](#) to find out more about the initiative.

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