From November 5-15th, 2019, three representatives from the Ministry of Education of the Province of Santa Fe, Argentina, in partnership with the National University of Rosario, and three representatives from the Secretariat of Education of Medellín, Colombia engaged in a two-way Cooperation Exchange sponsored by the Inter-American Teacher Education Network (ITEN), with the goal of sharing their respective experiences and achievements, as well as exchanging ideas on how to solve common challenges in the area of STEM education in their respective countries. Ultimately, the Exchange aimed at strengthening STEM education practices in each country’s educational systems, highlighting the connection between STEM and human development to ensure sustainable educational, social, and economic development.

The Cooperation Exchange was a continuation of the representatives’ ongoing collaboration as members of an ITEN Project Team, which started in May, 2019, and aims to produce a STEM+H teacher education course, available to teachers in Colombia and Argentina, that includes both in-person and online components, and that advances a more global, humanistic vision for STEM education.

**USD $10,000**

Awarded Funds

*For the Cooperation Exchange between Santa Fe, Argentina and Medellín, Colombia in Nov. 2019.*

**Nov. 5-8, 2019**

*Ministry of Education of the Province of Santa Fe visits Medellín, Colombia*

**Nov. 12-15, 2019**

*Secretariat of Education of Medellín, Colombia visits Rosario in the Province of Santa Fe, Argentina*
In turn, the Colombian Team’s trip to Rosario, the largest city in the Province of Santa Fe, Argentina took place from November 12-15, 2019. The visit aimed to share knowledge gained from Medellín’s STEM+H ecosystem to collaboratively reconsider how to prepare teachers in STEM methodologies. Throughout their visit to Rosario, the Colombian Team gave presentations and held discussions with the Minister of Education of Santa Fe, Claudia Balague, as well as with over 40 teachers, administrators, and business leaders from the Province, sharing with their Argentinian counterparts the mechanisms, policies and initiatives that have been instrumental in the successful creation of a STEM+H territory and which has resulted in Medellín winning a global competition to become the headquarter of the Fourth Industrial Revolution Network in Latin America.
STEM as Public Policy

The city of Medellín, Colombia was declared STEM+H Territory by its mayor in 2014, making it a place where civil society, the educational system, government and the private sector collaborate to promote the sciences and innovation, with a focus on the individual and the community, in order to create the conditions that result in social and economic development while preserving the environment.

As an educational approach, STEM+H seeks to promote learning through projects related to science, technology, engineering, math and the humanities. This means that students are encouraged to use STEM methodologies to solve problems that impact the students themselves and/or their communities.

STEM+H in Practice

Established in 2014, this approach has been implemented in 172 of 229 of the city’s public high schools and includes methodologies such as:

- Problem-based Learning
- Project-Based Learning
- Student as the Researcher
- Design Thinking

Under the STEM+H approach, students are encouraged to identify a problem derived from their community, institution, or everyday lives to work on as their interdisciplinary capstone project. With the guidance and theoretical instruction from teachers, students spend their final 2 years of high school working on developing a solution to the identified problem through STEM+H methodologies. Students are encouraged to work collaboratively in groups and given the space and tools to think critically and creatively about how they can improve their communities through their projects.

"Quinceañera" and STEM

High in the hills of Santo Domingo, one of the poorest communities in Medellín, the Institución Educativa Antonio Derka is using STEM to help underprivileged girls have a quinceañera, while learning skills that prepare them for the workforce and empowering them to change their communities.

A quinceañera is a young girl’s right of passage into adulthood in Latin cultures, and most of the students from the such communities cannot afford the party, which leaves them feeling excluded. To help address this issue, the school works with the private sector and gov’t agencies to secure donations of the various services and materials necessary for the party, the parents contribute with a small donation so they get to attend, and the students work in groups to collaboratively create something that benefits the entire community, while learning new skills and feeling empowered.

In Nov. 2019, 22 students celebrated their 15th birthday with a party they had only ever dreamed of. As part of their capstone project, and with interdisciplinary guidance from their teachers and administrators, the students designed and sewed their own gowns. Through this project, the students learned about geometry while designing their gowns, about chemistry and physics as it relates to color, fabric and fabric dye, among many other subjects and skills.

In addition, students from Events Coordination and Electronics, two technical concentrations within the Institute, executed as their capstone projects the decoration of the auditorium, catering, as well as lighting and sound for the event.

The project culminated in a community party attended by over 300 people from the community.