

“Necessary for women to dare to face challenges”

ADDA AVENDAÑO

For Yesenia Eleonor González Navarro, a faculty member at the Unidad Profesional Interdisciplinaria y Tecnologías Avanzadas (UPIITA) of the Instituto Politécnico Nacional (IPN), Polytechnic women, regardless of their role, must trust themselves, follow their instincts, pursue what brings them the most happiness, dare to face challenges, and create support networks “to strengthen ourselves as women and grow together within this great institution.”

Although she has observed greater female participation in administrative, research, and teaching positions, she believes that personal and social challenges remain in balancing professional demands with family life, which requires organization and time to establish the right conditions for growth.

Recalling the discrimination she faced during her professional internship as an Electronics Engineer, Gonzalez Navarro

emphasized that women must always seek alternative paths to freely pursue what makes them happy. In this regard, she acknowledged the hard work of the women who came before her, who have closed gender gaps and enabled more women to access better education, financial independence, and overall well-being.

As a specialist in artificial vision, machine learning, and robotics, she highlighted that one of her greatest satisfactions as a professor is recognizing each student's abilities and guiding them to generate their knowledge in an environment equipped with first-class infrastructure but, above all, with the human warmth that characterizes Polytechnic classrooms.

“A recurring experience when I first started teaching was that my students—both male and female—were very curious and engaged. They asked a lot of questions and raised doubts that I had not considered before. That motivated me to improve my knowledge and teaching techniques,” she recalled.

Artificial neural networks and fuzzy logic are some of the subjects she teaches at UPIITA, a school she believes has gradually progressed toward gender equity, as the number of female students enrolled in its programs has increased over time.

From an academic perspective, she noted that female professors have become more aware of the importance of their participation, especially in STEM fields (Science, Technology, Engineering, and Mathematics). Their vision, proposals, and approaches to addressing challenges perfectly complement the collaborative work carried out with the rest of the faculty.

“It is important to observe the actions of women in positions of power and decision-making, as from their perspective and experiences, they can contribute to the creation of inclusive and equitable policies to build a fairer society,” emphasized Maldonado Reynoso.

Meanwhile, the head of the Research Department of UPGPG, Yohana Castro Bibiano, considered that when women have held important decision-making positions, women's participation has been enhanced.

DAILY CHALLENGES

“Despite the progress women have made in the public sphere, a persistent issue in the lives of women is the double and triple workday, as in addition to their activities in any professional field, they must also play the role of mother, caregiver for children and elderly adults,” emphasized Norma Patricia Maldonado Reynoso, member of the National System of Researchers (SNII), Level I.

In addition, there is the issue of wages. According to the Mexican Institute for Competitiveness (Imco), women earn on average 15 percent less than men. Furthermore, according to INEGI, women spend many more hours per week on unpaid household chores and caregiving, highlighting the significant disparity that exists today.

Gabriela Riquelme, also a specialist at Ciecás, added that the pandemic brought new forms of work for women that have yet to change, have not been eliminated, and prevent them from fully exercising their rights, for which mutual respect must advance.

Furthermore, she pointed out that education is a fundamental element that allows society to change, and would lead to men and women being treated equally.



She emphasized that the presence of women at IPN is significant, because "in addition to being mothers, educating children, we train students and bear double or triple workloads. We are intelligent and hardworking, and what pleases me the most is that we have now entered all areas of science and technology."

CULTURAL TRANSFORMATION

Norma Patricia Maldonado Reynoso highlighted the actions the Polytechnic Institute is taking to achieve cultural change and address stereotypes among its student population, such as addressing violence with specific protocols and the creation of the Violentometer.

She also considered it important to include subjects with a gender perspective in the Polytechnic curriculum that would contribute to the formation of the student community.

"We must update ourselves on sociocultural topics that will help us prevent violence, misogynistic and micro-machismo comments, as well as some statements that only reinforce gender stereotypes."

Meanwhile, Gabriela Riquelme encouraged new generations to fight for knowledge and to take advantage of everything that public education offers them. "We are fortunate in Mexico because we have first-class institutions, such as IPN, where public education is still a right."

Castro Bibiano, from UPGPG, urged young polytechnic women to believe in themselves because they will encounter obstacles along the way, but they will also find women ready to support them, creating bonds to move forward together.

CÁRDENAS, A PROMOTER OF RIGHTS

Gabriela María Luisa Riquelme Alcantar, professor and researcher at Ciecás and a scholar of the role of women in historical narrative, detailed that during the presidency of General Lázaro Cárdenas, an important change was made to support and recognize women's rights.

"My Passions Are Developing Science and Forming Polytechnic Students"

CLAUDIA VILLALOBOS

From an early age, Blanca Estela García Pérez knew that education was the only path to progress.

However, she never imagined that at the Instituto Politécnico Nacional (IPN), she would have the opportunity to become a scientist who, with passion and discipline, contributes her research to society while helping shape her "academic sons and daughters," whose mission will also be to bear fruit for humanity.

Originally from Progreso de Obregón, a town in the state of Hidalgo, young Blanca asked her mother to enroll her in primary school a year early so she could learn to read. At first, the school principal refused, but her persistence paid off, and she was eventually admitted, marking her first academic achievement.

She completed her secondary education in her hometown and attended high school in a nearby town. However, when her parents did not grant her permission to pursue an undergraduate degree in Mexico City, she enrolled at the Universidad Autónoma de Querétaro to study Pharmaceutical Biological Chemistry. After graduating, she worked for three years in the pharmaceutical industry in that region.

Scholarship by the former National Council of Science and Technology (Conacyt), she pursued a Master's and a Doctorate in Immunology at the Escuela Nacional de Ciencias Biológicas (ENCB) after discovering her passion for this field during her undergraduate studies. Her dedication to learning, combined with effort and discipline, opened doors for her at the National Institute of Rehabilitation (INR), where she gained experience in the field of electron microscopy.

Although grateful for the opportunity to acquire new skills and knowledge there, García Pérez—now a Level III member of the National System of Researchers (SNII)—felt that research was missing from her professional journey to achieve a well-rounded career. With the support of her thesis advisor, Dr. Julieta Luna Herrera,

and the recommendation of the graduate studies department, she joined her alma mater, the ENCB, as a professor and researcher, roles in which she is now approaching two decades of service.

"I can't see myself working anywhere else. The Politécnico has given me countless opportunities, including the flexibility to fulfill myself as a mother. Moreover, I have established myself as a researcher, and I now seek to contribute to applied science. As a professor, I have helped train many young people, and it brings me great satisfaction to see that some of them have already become members of the National System of Researchers (SNII)."

With her characteristic bright smile, Dr. García Pérez emphasized, "By chance, most of my students have been women, and that fills me with pride. I feel that men tend to be more pragmatic, while women have a deep passion and dedication to science. That is why our role in society is so important. We don't need to be like men in this field—our unique perspective as women allows us to contribute in different and valuable ways."



Among other actions, he created a series of secondary schools where women could participate as students in boarding schools, although they did not have the same rights as men.

She clarified that during the Cárdenista period, when the National Council for Higher Education and Scientific Research (CNESIC) was created and IPN was in its early operational stages, women created their own fronts, and it was a time of great activity in the fight for their rights across all political, social, economic, and cultural spheres of the country.

On September 1, 1937, Cárdenas del Río requested the Legislative Power to promote reforms to Article 34 of the Constitution, which would grant full civil and political rights to Mexican women. Despite Cárdenista's support, the right to vote and be elected was not granted until October 17, 1953.

Women students cycle 2024-2025/1



91,881

Academic women as of December 2024



6,694

Women Educational Support and Assistance Personnel (PAAE) as of December 2024



5,100

Women researchers SNII as of December 2024



613

Women graduates period 2023-2024



8,353

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*Gabriela María Luisa Riquelme Alcantar,
professor and researcher at Ciecás*