

Tec presents studies on humanities education in Japan



Professors and researchers have presented seven projects on active learning in engineering programs in Tokyo.

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Gerardo González

The **Monterrey campus** has sent a delegation of professors and researchers to the **PAEE/ALE' 2026 International Conference**, held at [Taisho University](#) in **Tokyo, Japan**, to present a proposal that positions the **humanities** as the cornerstone of **engineering education**.

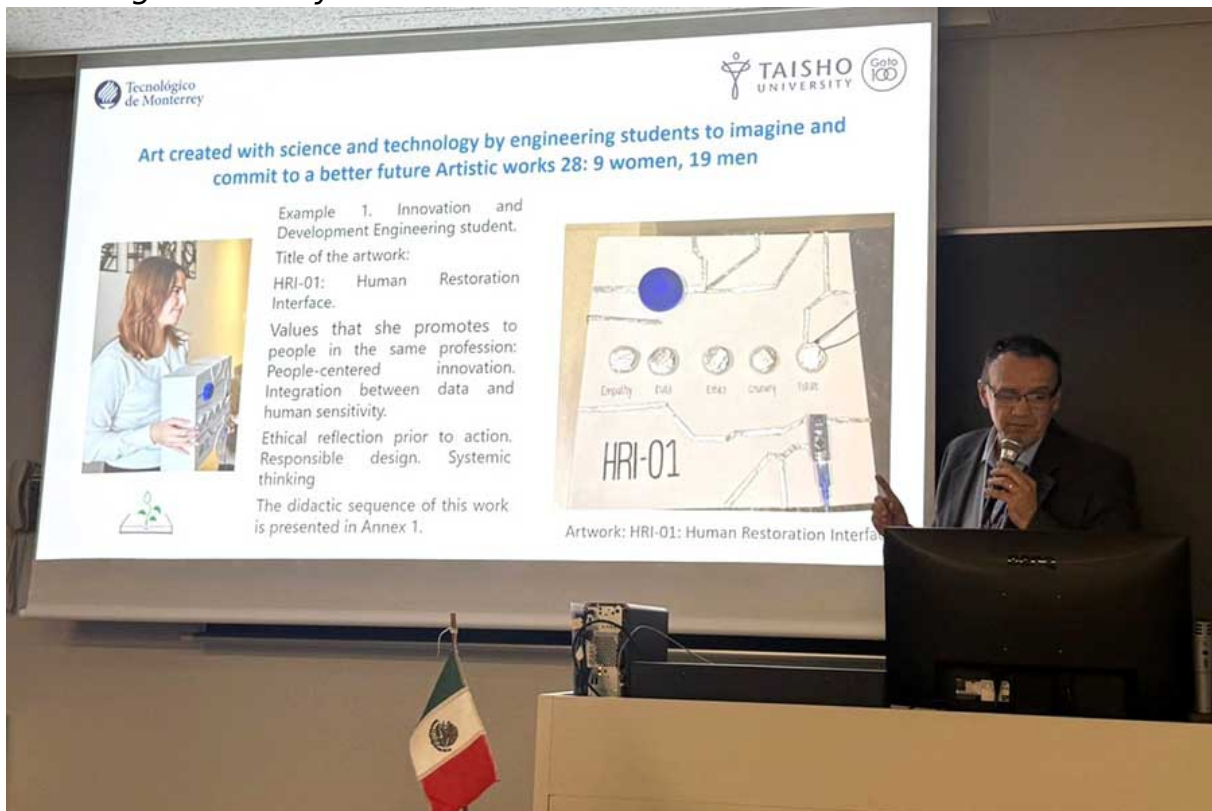
During the global conference on active learning in engineering education, the team from the Tec presented seven research papers that examine how **humanities-based education** should evolve in the face of the rise of **artificial intelligence**.

Luis David Cabrera Fraire, National Director of **Humanistic Education**, pointed out that traditional subjects can no longer be taught in isolation.

*"It's not simply a matter of incorporating ethics into engineering or artistic appreciation into business; we're suggesting an **epistemic infrastructure**. In other words, the skill set of the humanities—critical judgment, the weighing up of values, and social responsibility—are the foundations upon which every profession in the digital age is built," he said.*

He emphasized that this approach addresses current challenges, in which technology is advancing in leaps and bounds but urgently requires the human factor to ensure **ethical decisions** with a **social impact**.

A total of seven projects were presented at the conference held in Tokyo, including the one by Professor Gerardo González. Photo: Gerardo González



Educational innovation from Monterrey to Tokyo

The research projects presented by the Tec in Tokyo included active methodologies applied to disciplines ranging from the social sciences to engineering.

“Our participation in Tokyo allowed us to showcase the interdisciplinary nature of the humanities in Tecnológico de Monterrey’s educational model on an international stage, highlighting how the Mexican academic world is aligning with global trends in higher education,” Cabrera said.

These were the presentations given by the delegation at **Taisho University**:

- **Art Created with Science and Technology by Engineering Students to Imagine and Commit to a Better Future.** *This explores how integrating art, science, and technology enhances the education of engineering students. Authors: Gerardo González Lara, Axel Castruita, Luis David Cabrera Fraire, and María Guadalupe Villarreal Bretado.*
- **Global and Collaborative Learning in Engineering Through Cross-Innovation Between Art, Science, and Technology.** *This presents a comprehensive and collaborative learning model that integrates art, science, and technology. Authors: Tania Alejandra Martínez Báez, Marina Sandoval García, and Gerardo González Lara.*
- **Leaders of Tomorrow: An Innovative Social Inclusion Project for Vulnerable Students that Promotes Engineering Careers.** *This analyzes the Leaders of Tomorrow program as a social inclusion strategy that promotes students’ access to engineering majors. Authors: Pablo Ayala Enríquez, Gerardo González Lara, and Arturo Rodríguez Rodríguez.*
- **Transversal Humanistic Formation in Engineering Education: Humanities as Epistemic Infrastructure for Active Learning.** *This proposes humanities-based education as a key element in strengthening active learning in engineering programs. Author: Luis David Cabrera Fraire.*

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- **Multidisciplinary Integrative Block on Nanosatellites.** *This describes a multidisciplinary educational experience based on the development of nanosatellites as a tool for active learning. Authors: Antonio Hernández Gómez, Marvin Montoya Rangel, Gerardo González Lara, Rubén Eduardo Sánchez García, Carolina B. Rodríguez Garza, Luisa Fernanda Chaparro Sierra, Gerardo*

Antonio Castañón Ávila, Rodrigo Salmón-Folgueras, Francisco Javier Montes Montejo, and Mauricio Alberto Garza Castañón.

- **Active Learning of Central Pattern Generators Implementation in Bioinspired Robotics: A Structured Hands-On Methodology.** *This presents a practical methodology for teaching bio-inspired robotics by implementing central pattern generators. Authors: Daniel Alberto Arriaga Ventura, Israel Ulises Cayetano Jiménez, and Rogelio Bustamante Bello.*
- **Humanistic Education for Engineering Faculty and Students. Alfonso Reyes Chair: A Constant Dialogue Between Science, Technology, and Humanistic Reflections.** *This presents the Alfonso Reyes Chair model to strengthen humanities education for engineering professors and students. Authors: Gerardo González Lara and Perla Aurora Cano Gaona.*

In addition to presenting projects, doctoral student **Daniel Alberto Arriaga Ventura**, from the **Mexico City campus**, won **second place for the best paper at the conference**.

The delegation visited the Mexican Embassy in Japan to talk about the Tec's projects. Photo: Gerardo González



Strengthening ties in Asia

During the trip, the delegation held a strategic bilateral meeting at the **Mexican Embassy in Japan** with First Secretary Cosme García, who is in charge of **International Cooperation, Academic Affairs, Science, and Technology**.

At the conference, the **Tec** had the opportunity to showcase its academic achievements and to explore future partnerships for **scientific, cultural, and educational exchange** between Nuevo León, Mexico City, and Japan.

"The working session we held with the Mexican Embassy in Japan was a very important milestone. It not only strengthens Tec de Monterrey's presence in Tokyo but also establishes strategic outreach for future academic and diplomatic collaborations," Cabrera said.

Upon conclusion of the event, the PAEE/ALE' organizing committee officially announced that **Tec de Monterrey's Mexico City campus will be the official host site for the conference in July 2027**.

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