

Case study: University of Costa Rica

**Agents International: Transforming
Environmental Education in
Underserved Communities across
Biodiversity-rich Latin America**
TIRIMBINA, HEREDIA, COSTA RICA



The Problem:

In the Huetar Norte region of Costa Rica, adolescents from vulnerable backgrounds and underserved communities face limited access to innovative learning tools, including Augmented Reality. Simultaneously, there is a growing imperative to educate these communities about sustainability and address critical environmental ethics issues, such as solid waste management, climate change, biodiversity, and water resources, in novel ways.

The Solution:

As part of a pioneering effort to enhance environmental education, the University of Costa Rica (UCR), the Institute of Technology of Costa Rica (TEC), and the Tirimbina Biological Reserve have established a groundbreaking partnership with Agents of Discovery. This collaboration aims to create engaging and interactive educational experiences. The initiative includes seven educational centers at La Virgen de Sarapiquí, with a specific focus on amplifying ethical responsibility coursework. Topics covered include recycling practices and the preservation of local biodiversity. To achieve this, Agents of Discovery has been seamlessly integrated into on-site attractions at the Tirimbina Biological Reserve. Additionally, school field trips have been organized for teenagers, granting them access to the Tirimbina Trails Mission.



The main objective of this project is to raise awareness and take action on urgent issues related to sustainable development goals and climate change through fun Augmented Reality (AR) targeted at students of various ages. These challenges encompass hands-on activities, such as the AR Sorter, where students categorize items into distinct recycling containers, depending on whether they are plastics or organics. The research team leading this initiative combines disciplines such as education (Master Marianela González), philosophy and ethics (Dr. Jacqueline García and Master Carlos Rodolfo González), biology (Licda Mariela García), management (MBA Lorian Morales), and communications (Dr. Vanessa Fonseca). At the launch event on June 6, the team emphasized this multidisciplinary approach that promotes intergenerational responsibility through innovative learning.

The 'Forest-Classroom' project combines critical observation of natural environments with cognitive and emotional stimuli relevant for students living in climatically vulnerable areas, where they not only enjoy their great biodiversity but also suffer from the consequences of climate injustice. This partnership among UCR, Tirimbina, TEC, and Agents of Discovery exemplifies how technology can transform environmental education by making it accessible, fun, and multilingual to reach students from rural Sarapiquí areas in Costa Rica.

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