Gobierno de Colombia

"Computadores para Educar" Testbed in Colombia

Problem Statement

While digital solutions in education have expanded rapidly, a significant gap remains between the provision of technology and the institutional capacity of schools to integrate these tools with meaningful pedagogical intent. In many contexts, technology is treated as a technical object rather than a lever for educational transformation. Colombia currently faces a significant challenge in ensuring that digital infrastructure and teacher training contribute to enhancing learning outcomes. This is particularly evident in diverse and rural territories, where complex institutional, territorial, and individual barriers often impede the adoption of new technologies to support learning. Without structured, evidence-based insights into 'what works, for whom, and under what conditions,' digital strategies risk being reduced to mere hardware delivery rather than helping promote genuine pedagogical transformation

Objective of the Testbed

The "Computadores para Educar" (CPE) Testbed is a structured institutional learning infrastructure designed to generate actionable evidence for national policy. To achieve this, the initiative focuses on a purposefully selected subset of 15 educational institutions across diverse regions. The objective of this selection is comparative learning, allowing the team to identify patterns, variations, and "early signals" of success or failure that are critical for CPE's strategy improvement and future scaling decisions.

What We Aim to Learn

Central Research Question: What early signals indicate that teachers and students are transitioning toward a more active and creative use of technology and what specific conditions enable this shift?

- **Territorial Dynamics**: How do local conditions such as infrastructure, institutional leadership, and connectivity act as enablers or barriers to the successful deployment of the strategy?
- **Pedagogical Support**: What specific types of training and ongoing support do teachers require to move towards a more intentional and transformative use of technology in the classroom?

Testbed Stages

The initiative is organized into three distinct phases designed to ensure the systematic generation of evidence and the translation of field data into national policy recommendations.

1. **Conceptual Design & Readiness** To establish a robust framework for learning, monitoring, and systematization, specifically tailored to handle a diverse range of digital projects and territorial contexts.

2. **Operational Deployment & Evidence Generation:** Capture consistent qualitative and quantitative data regarding the implementation of pedagogical projects supported by digital solutions across 15 selected schools in diverse regions.
3. **Knowledge Systematization & Strategic Scaling:** Synthesize collected data into clear, actionable insights that inform national-level decision-making regarding program adjustments and scaling strategies.

Learning Instruments and Methods

To achieve a holistic view of the educational ecosystem, the testbed utilizes a triangulation of internationally recognized frameworks:

- **DigCompEdu:** Measures the progression of teacher digital competencies from basic use to innovative practice.
- **DigCompOrg & SELFIE:** Assesses institutional readiness, leadership, and the school's capacity to sustain innovation.
- **PICRAT:** Analyzes the quality of pedagogical use and student agency, mapping whether tech integration simply "replaces" traditional methods or truly "transforms" learning.
- **Data Collection Methods:** Evidence is generated through structured classroom observations, surveys, semi-structured interviews with leaders, and focus groups with students and families to capture the lived experience of the community.

Key Questions for the Virtual Session with WISE

What are the most relevant good practices and lessons learned from your experience designing and implementing testbeds?

- **Policy Influence & Uptake:** Based on WISE's experience with national education strategies, how can testbed findings be most effectively communicated to ensure high-level policy buy-in and systemic uptake?
- **Cost-Efficiency:** Which metrics have proven most valuable in your evaluation framework to assess the long-term cost-efficiency and financial viability of tech-enabled pedagogical models?
- **Sustainability:** How do you foster a "sustainable community of practice" that maintains the momentum of innovation once the formal testbed testing cycles conclude?