LAB4U

2025 RECAP

Inspiring and Skilling
the Future STEM Workforce

lab4u.co
@lab4u_es
lab4u







"Life is not easy for any of us. But what of that? We must have perseverance and above all confidence in ourselves."

Marie Curie

Physicist & Chemist








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Leadership Message & Purpose

LAB4U

A Message from Our CEO

2025 was not just another year of growth.

It was the year when we asked fundamentally different questions, and Lab4U was ready with answers.

In a world where Artificial Intelligence advances at unprecedented speed, the question is not whether technology will transform education—but what transformation we choose to enable. At Lab4U, we chose to use AI to awaken curiosity, not automate compliance. To expand what's possible, not narrow who belongs. To scale experiential learning, not standardization.

For thirteen years, we've been building toward a future where every student can become a young scientist or engineer, where "I'm not a science person" becomes "Science is how I understand my world." This year, we validated that transformation is real. Students are learning more deeply. Teachers facilitating true inquiry. Schools are discovering that experiential STEM isn't a luxury, but rather the foundation of 21st-century learning.

We believe access to STEM education and experiential learning should not be a privilege. Access to STEM education should not depend on geography or income. The smartphones and tablets that are already in students' hands have the power to turn curiosity into experimentation. To make wonder structurally inevitable. To change the question from "Can we afford labs?" to "How do we unleash what wants to emerge?" When technology is intentionally activated, **curiosity becomes experimentation, and experimentation becomes agency.**

AI is not replacing teachers. It's removing barriers that have kept transformative education trapped at a small scale. Personalized experiments. Real-time pattern recognition. Support that meets each student where they are. **The infrastructure to make experiential learning economically viable for every school, everywhere.**

I am deeply grateful to our team, partners, and communities for the extraordinary work accomplished in 2025. Together, we continued **shifting the paradigm of how science is taught and experienced.**

As we envision 2026, when **agentic infrastructure is being built, we believe Lab4U can become the experiential STEM education infrastructure** for thousands of teachers and students seeking hands-on learning to build curiosity, agency, and scientific thinking at scale.

Thank you to every teacher who believed students could become scientists. To every partner who sees that STEM education transcends borders. To every student discovering that the universe is not something to memorize, but it's something to **explore and flourish.**

Komal Dadlani
CEO/Co-Founder at Lab4U

Beauty

Service

Wonder

Our Purpose

We exist to awaken the young scientist and engineer in every student, not just as a career path, but as a way of being in the world.

A young scientist experiences **beauty**, a butterfly, a chemical reaction, a starry night. It fills them with **wonder**, an innate sense that this matters which then makes them **curious.** "How does it work? How does it smell, taste, feel? Why?" Curiosity leads to **understanding**, and understanding leads to **agency**—the capacity to act in service to that which they love.

The young scientist knows that science isn't about test scores. It's how we care for each other and our world. It's how we create more beauty and wonder and curiosity for the next generation.

This transformation doesn't happen through lectures or textbooks. It happens through experimentation direct, hands-on experience. Lab4U exists to make this accessible to every student, everywhere. Because the world doesn't need more people who can memorize formulas. It needs young scientists and engineers who know how to explore, discover, and create solutions we haven't imagined yet.

Empowerment

Understanding

Curiosity

Mission, Vision, & the Problem we Address

We are committed to democratizing access to STEM education by making experiential learning accessible to every student, everywhere. We believe in a world where every student, regardless of geography or socioeconomic background, can develop the mindset and agency of a scientist.

The sensors in smartphones and tablets—already in students' hands—become a scientific instrument. Curiosity becomes experimentation. And "I'm not a science person" transforms into "Science is how I understand my world." By removing the economic barriers that have kept hands-on STEM trapped at a small scale, we make it possible for every student to become a young scientist.

AI has become a strategic driver in Lab4U's evolution. As we continue to innovate with new tools and experiments, our platform can:

- Recommend personalized experiments matched to each student's learning journey.
- Analyze learning patterns to identify where students need support.
- Generate automated insights for teachers to focus on facilitation, not data entry.
- Propose continuous improvements to the learning experience based on real classroom use.

AI isn't replacing teachers—it's removing barriers that have kept transformative education from scaling. Teachers facilitate discovery. AI handles the infrastructure.

Mission, Vision, & the Problem we Address

The Opportunity Gap

Millions of students, particularly those in underserved communities, lack access to functional science laboratories and basic lab equipment. The result: science becomes something to memorize, not something to experience.

The Teaching Challenge

Educators need tools that make hands-on learning feasible while reducing preparation time—so they can focus on what matters most: guiding students through the process of discovery. Without structural support, innovation cannot sustain itself.

21st-Century Skills

Limited access to experiential STEM learning restricts the development of critical thinking, problem-solving, and scientific reasoning—the capabilities students need to navigate an increasingly complex world.

2

Our Impact in 2025:

The Lab4U Effect

2.1

IDB Study Validates Lab4U's Classroom Impact

Focus

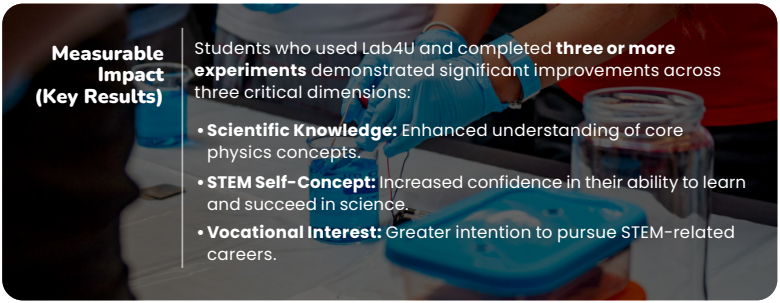
Measuring the effectiveness of mobile, inquiry-based learning.

The Challenge

Despite the central role of STEM in today's world, traditional teaching methods often struggle to actively engage students and develop core competencies needed in the 21st century. A rigorous evaluation was needed to determine whether a low-cost, high-tech solution could produce measurable academic gains at scale.

Methodology

The study was conducted as a **Randomized Controlled Trial (RCT)**—the gold standard for establishing causal impact in the social sciences—by the **Inter-American Development Bank (IDB)**. A total of **4,868 students** participated.



Measurable Impact (Key Results)

Students who used Lab4U and completed **three or more experiments** demonstrated significant improvements across three critical dimensions:

- **Scientific Knowledge:** Enhanced understanding of core physics concepts.
- **STEM Self-Concept:** Increased confidence in their ability to learn and succeed in science.
- **Vocational Interest:** Greater intention to pursue STEM-related careers.

Outcome

The study provides robust evidence that Lab4U's mobile technology is not only a viable alternative to traditional lab equipment, but also an **effective catalyst for scientific learning and motivation** that addresses large-scale barriers to hands-on experimentation and laboratory access.

2.2 In-Depth Case Studies Demonstrate Lab4U's Reach

A. INACAP (Chile): Boosting STEM Education Effectiveness with AI

Chile's leading technical education institution, reaching over 61,000 students nationwide.

Focus

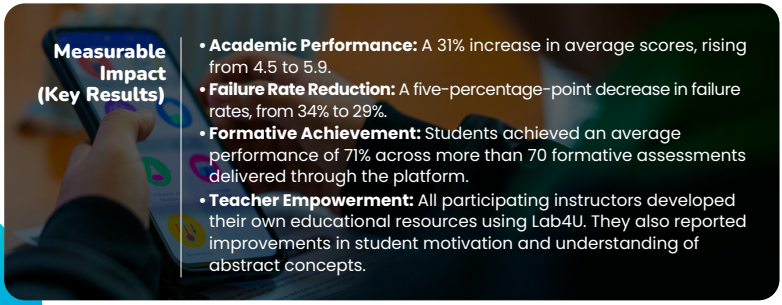
Improving academic performance and retention in STEM-related courses by integrating AI into Technical and Vocational Education and Training (TVET).

The Challenge

Students enrolled in programs like automation, robotics, and mining have historically faced high failure rates in foundational courses, such as mechanics physics. A scalable and innovative methodology was needed to bridge abstract concepts with practical application and to strengthen academic outcomes.

Methodology

Lab4U and INACAP launched an Educational Innovation Pilot across seven campuses in Chile from October to December 2024. The initiative involved 11 instructors and 251 students who used AI-driven tools, such as **TutorIA STEM,** alongside Lab4U's "pocket lab" methodology, which transforms smartphones into scientific instruments for hands-on experimentation.



Measurable Impact (Key Results)

- **Academic Performance:** A 31% increase in average scores, rising from 4.5 to 5.9.
- **Failure Rate Reduction:** A five-percentage-point decrease in failure rates, from 34% to 29%.
- **Formative Achievement:** Students achieved an average performance of 71% across more than 70 formative assessments delivered through the platform.
- **Teacher Empowerment:** All participating instructors developed their own educational resources using Lab4U. They also reported improvements in student motivation and understanding of abstract concepts.

Outcome

The pilot demonstrated that integrating AI technologies with Lab4U's hands-on learning approach is a powerful strategy for closing learning gaps in technical and vocational education. INACAP positioned itself as a pioneer in adopting these tools to promote effective, applied, and industry-aligned STEM learning. Full Case Study: Link Here.

2.2 In-Depth Case Studies Demonstrate Lab4U's Reach

B. Fundación Brillas (Colombia): Strengthening Confidence and Vocational Interest

Fundación Brillas is a Colombian nonprofit organization dedicated to expanding equitable access to high-quality education for children and young people.

Focus

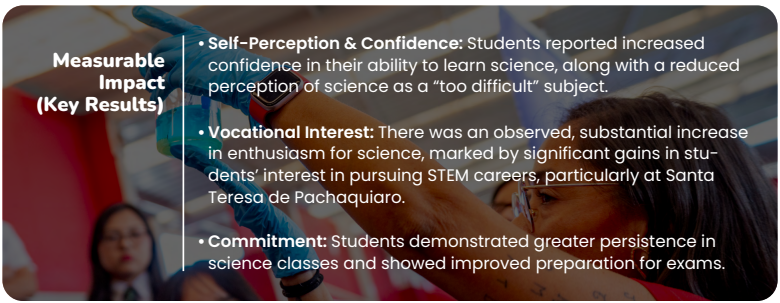
Transforming students' self-perception and motivation within educational communities in the Meta region.

The Challenge

Students in Villavicencio and Puerto López faced limited access to laboratory resources and showed low motivation toward studying science. A solution was needed to make scientific learning more tangible, relevant, and connected to everyday experiences.

Methodology

In February 2025, **Fundación Brillas** conducted an independent impact evaluation of Lab4U, which employed a **Difference-in-Differences (DiD)** design complemented by focus groups at **Instituto Nacional de Educación Media Luis López de Mesa** and **Institución Educativa Santa Teresa de Pachaquiaro.**



Measurable Impact (Key Results)

- **Self-Perception & Confidence:** Students reported increased confidence in their ability to learn science, along with a reduced perception of science as a "too difficult" subject.
- **Vocational Interest:** There was an observed, substantial increase in enthusiasm for science, marked by significant gains in students' interest in pursuing STEM careers, particularly at Santa Teresa de Pachaquiaro.
- **Commitment:** Students demonstrated greater persistence in science classes and showed improved preparation for exams.

Outcome

The program established Lab4U as a key contributor to strengthening students' confidence and motivation in scientific learning, helping create a more engaging, supportive, and inspiring learning environment.

2.2 In-Depth Case Studies Demonstrate Lab4U's Reach

C. Colegio Almendral – Fundación Nocedal (Chile): Transforming STEM Education with Support from Pfizer

Colegio Almendral is a subsidized secondary school operated by Fundación Nocedal serving students in La Pintana.

Focus

Increasing motivation, academic performance, and concrete understanding of scientific concepts in female technical–vocational education, with a thematic emphasis on Antimicrobial Resistance.

The Challenge

Colegio Almendral, located in a high-vulnerability area of La Pintana, seeks to empower more than 980 students enrolled in technical–vocational programs in Administration and Nursing. The key challenges were to overcome the perception that science is "too difficult," bridge the gap between theoretical content and practical experience, and incorporate public-health topics such as Antimicrobial Resistance into students' learning.

Methodology

Lab4U's educational program was implemented throughout 2025 across Natural Sciences, Physics, Chemistry, Biology, and Citizenship Science. The initiative reached 420 students, with 2-4 hours of use per month per subject, and included continuous pedagogical support for teachers.

Measurable Impact (Key Results)

- **Concrete Understanding:** Students developed a clearer, more tangible understanding of scientific concepts through hands-on and experimental activities, particularly in topics related to Antimicrobial Resistance.
- **Motivation & Participation:** An increase in student engagement, motivation, and overall classroom participation.
- **Academic Performance:** Grades improved, driven by higher motivation and deeper conceptual understanding.
- **Teacher Efficiency:** Teachers reported enhanced curriculum alignment and more efficient assessment through quizzes and instant feedback tools.

Outcome

The program became a critical support system for teachers, helping sustain student engagement throughout the year. Based on its success, the school proposed increasing the program's use to six hours per month per subject in the second semester. The initiative strengthened STEM and nursing pathways, better preparing both students and teachers for the future of scientific learning.

Our Impact in 2025:

Key Data & Measurable Results

In 2025, Lab4U directly impacted **15,170 students, 275 teachers,** and **50 educational institutions** across Latin America and the United States.

Reach & Coverage

Curriculum aligned experiences

2024
+200

Experimental tools

2024
9

2025
17
and counting...

Students Impacted

2024
13k

Global total
+60K

2025
15k

Educational Institutions

2024
43

2025
50

4

Strategic Partnerships

Strategic alliances continued to play a central role in scaling Lab4U's mission and expanding access to meaningful STEM learning. Through long-term collaborations with institutions across different educational levels, we strengthened our impact and deepened our support for diverse learning communities. Each collaboration reinforces our commitment to inclusive, equitable, and relevant science education for the 21st century.

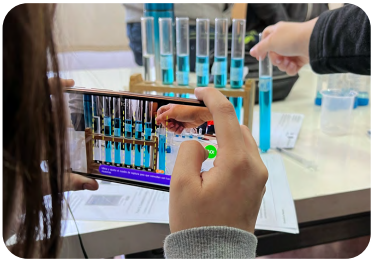
4.1
Educational Partnerships

South Georgia State College
(Higher Education)

This partnership focused on strengthening STEM learning in higher education through use of mobile laboratories. By integrating Lab4U into undergraduate science courses, the college enabled hands-on, inquiry-based experiences directly in the classroom, providing students with practical experimentation opportunities without relying on traditional lab infrastructure.

Colegio Alberto Blest Gana
(K-12)

A foundational partner for more than seven years, Colegio showcases how sustained technology integration can transform science learning from elementary through high school. Over time, we have worked together to evolve teaching practices, support educators, and document long-term improvements in student engagement, scientific understanding, and preparation for advanced STEM pathways.



4.2
Corporate Partnerships

ESCONDIDA | BHP
STEM + Gender Program

This long-term collaboration focuses on promoting STEM learning among girls and adolescents by expanding access to science and technology opportunities. Together, we work to reduce gender gaps in STEM by empowering students with hands-on experiences and fostering confidence in scientific exploration.

BOEING PADF
PAN AMERICAN DEVELOPMENT FOUNDATION

This regional alliance is dedicated to expanding STEM education in underserved communities across Latin America. Through active learning methodologies and practical experimentation, the partnership sparks scientific curiosity, strengthens teaching practices, and equips students with the skills needed for future STEM pathways.

SQM Litio

Lab4U and SQM Litio share a commitment to inspire the next generation of scientists who will shape the future of energy, technology, and sustainability in local Toconao and Antofagasta communities through a territorial and gender-focused approach to transforming science.

5

Global Recognition and Awards in 2025

LAB4U

Global impact

In 2025, Lab4U reaffirmed its position as one of the most innovative EdTech solutions worldwide. We're proud to have been recognized for our impact on STEM education and our commitment to democratizing access to science.

International award organized by QS Quacquarelli Symonds recognizing organizations transforming education through innovative, high-impact solutions.

Lab4U was among those selected for this international award organized by QS Quacquarelli Symonds, which recognizes organizations transforming education through innovative, high-impact solutions. Being recognized at this level is a powerful validation of our mission to democratize STEM education using accessible tools like smartphones.

Global EdTech Grand Prize

Among all the applications submitted this year, Lab4U received the highest distinction in the EdTech category: the **Global EdTech Grand Prize.** We proudly shared the stage with Arizona State University, whose SolarSPELL project earned the **Global Education Award** dedicated to universities. This recognition places Lab4U among the most impactful and forward-thinking education innovators worldwide.

Gold Award
Blended & Presence Learning

Lab4U was also awarded the **Gold Award** in the Blended & Presence Learning category, standing out among more than **1,600 global submissions.** Our proposal was recognized for its innovation, impact, and scalability, advancing through four rigorous evaluation rounds assessed by **1,300 international** experts in higher education and edtech.

We are honored to stand alongside outstanding institutions in this category:

Silver
Southern Cross University (Australia)
The Southern Cross Model

Bronze
National University of Singapore
Integrated Blended Medical Curriculum

Bronze
University of Cambridge (UK)
Learning by Doing Economics

Added to the honors received in previous years

QS Reimagine Education
Best EdTech Prize — Award for outstanding pedagogical innovation.

HolonIQ LATAM EdTech 100
Recognized among the 100 most promising EdTech companies in Latin America.

HundrED Global Collection
Selected among the 100 most impactful educational innovations worldwide.

MIT Solve
TPrize Winner — Awarded for advancing global STEM education through scalable innovation.

World Summit Award
Best Digital Education Solution for excellence in inquiry-based learning.

ASU+GSV Cup
Selected among the Top 200 global semifinalists in EdTech innovation.

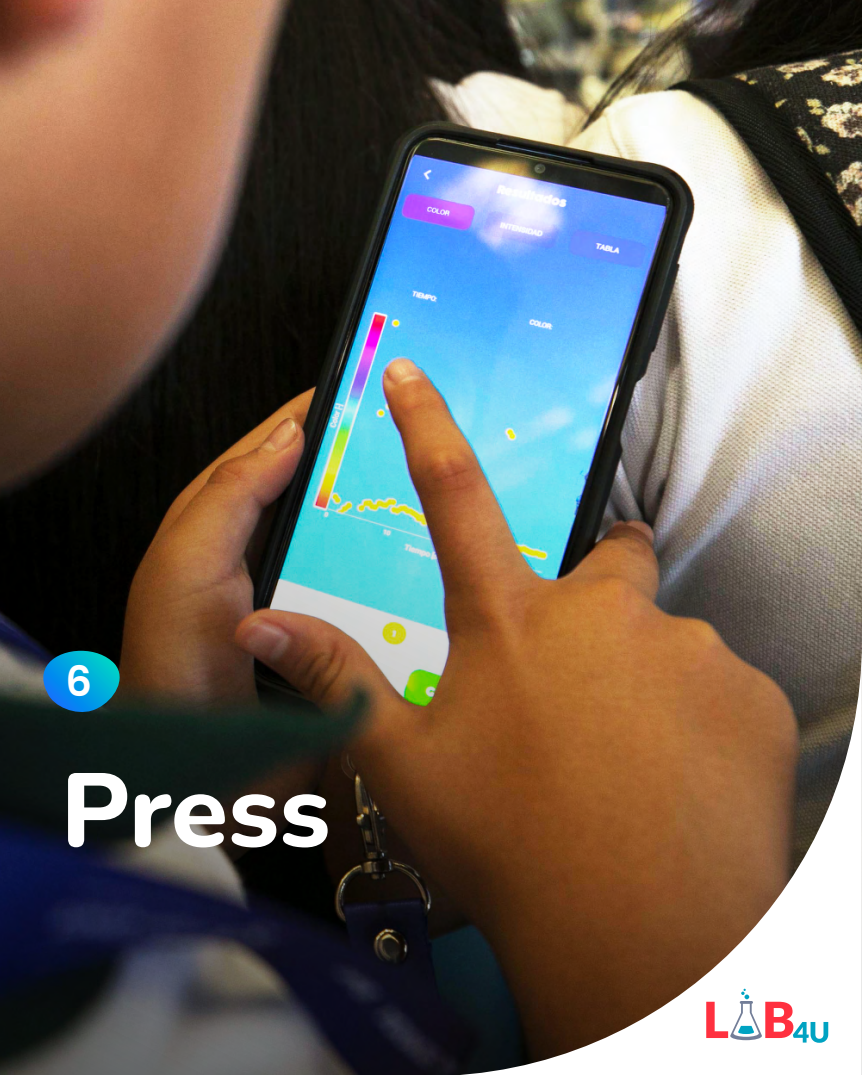
Intel Prize
First place at the Intel Global Challenge for excellence in educational technology.

NewSchools Science Learning Challenge Winner
Recognition for our contribution to mobile scientific learning.

Common Sense Education
5 star rating for pedagogical quality, accessibility, and learner centered design.

"Lab4U is transforming the way students engage with science—connecting curiosity with technology and breaking down barriers to knowledge."

International media and global EdTech partners, 2025



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Press

LAB4U

DF
EXANTE FINANCIERO

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INNOVACIÓN, STARTUPS Y TECH

Lab4U escalará sus laboratorios de bolsillo STEM con IA para educación técnica y superior en Inacap

La startup cuenta un contrato que permitirá a la entidad usar sus herramientas educativas potenciadas con inteligencia artificial para apoyar el aprendizaje de ciencia, tecnología, ingeniería y matemáticas.

INACAP and Lab4U Transform STEM Education with AI: Higher Grades, Lower Failure Rates

Following an outstanding 2024 pilot at INACAP—where we demonstrated the transformative power of Artificial Intelligence to personalize STEM learning and elevate technical and vocational education—Lab4U and INACAP are continuing to innovate together in 2025. Our shared goal: reach more students and drive lasting change across higher technical education in Chile.

Lab4U Joins Presidential Mission to India and Shines at the India–Chile Innovation Summit

Lab4U was part of the official delegation accompanying the President of Chile on a historic State Visit to India, marked by the signing of the CEPA agreement, set to strengthen economic cooperation between both countries. During the trip, Lab4U was invited to present at the India–Chile Innovation Summit, sharing its vision for democratizing STEM learning with authorities and innovation leaders from both nations.

From New Delhi to Mumbai, Agra, and Bangalore, Lab4U's presence highlighted the growing international interest in scalable, high-impact EdTech solutions.

INACAP–Lab4U Conversation: AI, Learning, and the Future of Work

Lab4U and INACAP brought together leaders from the business, academic, and technology sectors for a conversation on the impact of AI in education and the future of work. The panel, co-moderated alongside INACAP's Rector, Lucas Palacios, explored how to navigate FOBO (Fear of Being Obsolete) and framed AI as a catalyst for innovation, adaptability, and talent development in Chile.

Key themes included the importance of learning how to learn, AI as a driver of creativity, and Chile's leadership, alongside Brazil and Uruguay, in AI research, infrastructure, and talent. The session concluded with a hands-on collaborative activity that helped participants experience the potential of applied AI in real time.

7

Testimonials

LAB4U

“

Working with Lab4U over the past eight years has profoundly transformed how our school community experiences science. Students have left behind the fear and expectation that science classes would be tedious. Today, they approach physics, biology, and chemistry in a way that is engaging, practical, and meaningful. What we value most is that they have truly learned how to investigate and now naturally incorporating inquiry-based practices as part of their learning process.

We’ve seen a clear increase in interest in the sciences. More students are choosing science-focused courses, and many are now motivated to apply for STEM programs in higher education.

For our teaching team, the transformation has also been significant. Thanks to the app and Lab4U’s ongoing support, we’ve moved from mostly lecture-based classes focused on abstract formulas to learning experiences rooted in experimentation, observation, data collection, and hypothesis building, before moving on to the mathematical modeling of phenomena.

This year, we also prioritized checking partial learning progress through short quizzes and addressing gaps as soon as they were identified at each grade level. The results have allowed us to make more precise pedagogical decisions that strengthen our students’ learning.

Lab4U has not only enriched our classes; it has changed the way we teach and learn science”

Ricardo Román

Principal, Colegio Alberto Blest Gana

LAB4U

Hi, my name is Molti Espinoza, and I wanted to share our experience using the Lab4U app in our science classes. For us, it was a very helpful tool because it made learning much more hands-on and engaging in chemistry, physics, and biology. One of the experiments I remember the most was the one with eggshells, where we learned about ocean acidification. It was a very concrete and fun way to understand a complex topic.

Molti Espinoza

11th Grade Student,
Complejo Educacional Toconao
(Partnership with SQM Litio)

The STEM+Genero Program reflects our belief that development begins with education. Since 2022, together with Lab4U, we have promoted an innovative and inclusive way of learning science in Antofagasta, reaching more than 20 teachers and nearly 5,000 students. Through an experimentation-based methodology, the program aims to develop regional talent, foster inclusive education, and reduce participation gaps, creating greater opportunities for girls and young people in the region. We hope Antofagasta will become the territory from which Chile's future scientific role models emerge.

Pablo Pisani

Vice President of Corporate Affairs
& Communications, Escondida | BHP

LAB4U

During these past months working with Lab4U, I've seen a very positive shift both in my classes and in my students' learning. The activities and tools offered by the platform have encouraged students to engage with scientific content in a more active, curious, and meaningful way. They've developed greater motivation, understanding, and autonomy, which is reflected in their participation and in the quality of their work.

For me, as a Science teacher, Lab4U has been an essential support. It has given me new strategies to approach curriculum content in an innovative, practical way that feels relevant to my students' realities.

We're excited to continue working with Lab4U next school year so we can keep strengthening our classes and promoting a more dynamic, inclusive, and innovative science education for our entire school community.

Yaritza García

Chemistry and Natural Sciences Teacher,
Colegio La Greda
(Partnership with ENEX)

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Value Proposition

LAB4U

App Features

AI-Powered Labs

The app now suggests and automatically generates experiment variations based on student level, context, and previous results, enabling more personalized and adaptive learning experiences.

Enhanced Metrics Dashboard:

Real-time analytics allow teachers and academic teams to track progress, identify learning gaps, and tailor instruction with greater precision.

Improved Offline Mode:

Smoother performance and automatic synchronization ensure uninterrupted learning, even in low-connectivity environments.

AI-Enabled Teacher Portal:

New tools streamline lesson planning, lab creation, and formative assessment, reducing workload while improving instructional quality.

Innovation & the Future

At Lab4U, we continue to reinvent how science is taught and learned.

Our mission is to democratize STEM education through artificial intelligence, mobile sensors, and learning analytics—so every student can experiment, discover, and learn by doing, no matter where they are.

Expanding into New STEM Areas

Lab4U is preparing to broaden its catalog beyond physics, chemistry, and biology by adding new thematic areas, such as:

- Applied mathematics & experimental statistics
- Environmental science & sustainability
- Basic technology & engineering

These new learning pathways will help connect scientific inquiry with real-world challenges and local contexts to empower students with relevant, future-oriented STEM skills.

LAB4U


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