Inclusion, Technology & Pedagogy

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Origins
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- Social Inclusion
- Equality of Opportunities
- Teaching and Learning

Plan Ceibal is not a ICT Program or Laptops
670,000 users with laptops, tablets and Internet
Equality and Access
Access to a PC by fifths of income by person

- 1st quintile: 5% to 56%
- 2nd quintile: 10% to 32%
- 3rd quintile: 19% to 71%
- 4th quintile: 73%
- 5th quintile: 76% to 87%
Use of Ceibal Laptops at Home by Families

- Yes: 72%
- No: 25%
- Doesn't know: 3%
Plan Ceibal in the Country
Clubs & public squares

194
Neighborhoods with Priority Attention 336
Formation centers

231
Apartment blocks 353
Secondary and technical schools
435
99%
Primary schools

2,221

99%
Educational centers
Year 2013

With optical fiber
1,100
Educational centers
Year 2014
1,300

With optical fiber
Centers with videoconference equipment
Year 2013
800 centers
Centers with videoconference equipment
Year 2014
1,300 centers
Cost per student
• US$ 100 per student per year (includes laptop change every 4 years). US$ 8.33 per month.
• Less than 5% of the budget of Primary and Secondary Education.
• 2011-2015 Year Budget less than 0.12% of GDP.
Costs by Area in 2013

- Support areas: 10%
- Videoconference – R&D: 8%
- Logistics: 3%
- Re-Manufacturing of Laptops: 4%
- Connectivity – S&M: 13%
- Laptop support: 8%
- Socio-educational and Extension: 15%
- Replacement parts: 7%
- Laptops: 32%
Technology and Pedagogy
Why technology didn't have impact in education?

- Technology Adapted to Teachers.
- Pedagogy, Technology and Change Integration.
- The problem is that our pedagogy belongs to the 19th and 20th centuries and our technology to the 21st century.
- There's no solution without pedagogy and technology.
- No more user software training.
- Ceibal enhances in-training constant education in pedagogy for teachers.
Technology can be used in two ways
  • Solve unsolvable problems without it
  • Platform LMS Crea
  • Books
  • Formative evaluation systems
  • English

Pedagogies accelerator
  • Math
  • Logic, programming & robotics
  • New pedagogies for deep learning
Solve unsolving problems
58,710 Total registered users

1,773,581 Monthly visits

35,394 Posts
Reading

Purchase of digital books
Purchase of reading books

More than 500 digital books available
On line Evaluation
On line tests for Science, Mathematics and Reading

On line Evaluation Done

185,000 students from 3rd to 6th grade participated

414,607 in 2014
Available Educational Resources

- More than 3,000 learning objects created by uruguayan teachers
- Khan Academy in spanish
- Maths Videogames
- Chess Videogames
- More than 1,200,000 Visits to Ceibal Web Page
Teaching English

• Partnership with The British Council
• Classes through Videoconference (Remote Teachers working with Local Classroom Teachers)
• 2012: Pilot (50 groups)
• 2013: 1,000 groups at 198 schools
• 2014: 2,000 groups
• 2015: All students from 4th to 6th grade
Ceibal in English
Year 2013
25,000 students
1,000 groups
198 centers
Ceibal in English
Year 2014
50,000 students
2,000 groups
Ceibal in English
Year 2015
100,000 students
4,000 groups
Pedagogies accelerator
Deep learning using technologies

Three key points

• Effective pedagogy
• Knowledge & leadership for change
• Technology as learning accelerator

The challenge

• Transform educational environment into a development environment promoter of skills and interest activator for knowledge generation

• Innovate in strategies for use of technology to activate and deepen knowledge acquisition and skill development
Global alliance for deep learning

Change engine:

• Collective capacity
• Power of alliances, innovation & technology
Adaptative Platform for Mathematics

Platform users: 74,693
Activities performed: 10,005,078
Activities Performed annually

- Primary education:
  - 2013: 2,123,907
  - 2014: 3,222,626

- Secondary and technical education:
  - 2013: 2,284,973
  - 2014: 2,441,325

Active users annually

- Primary education:
  - 2013: 36,694
  - 2014: 58,405

- Secondary and technical education:
  - 2013: 13,529
  - 2014: 15,668
Active classes

Secondary and technical education: 1,954 (2013) / 1,888 (2014)

Active Teachers

Primary education: 2,431 (2013) / 2,188 (2014)
Logic and Programming

- Robotics Kits for Students
- Scratch Activities
- MOOC Programming Course (October 2013)

In which take part:

1,404 students
604 teachers
ICT Appropriation Level at Secondary Education:
- High: 46%
- Medium: 40%
- Low: 14%

ICT Appropriation Level at Vocational Education:
- High: 44%
- Medium: 36%
- Low: 20%
Summary

• Transformation of Privileges into Rights
• Personalization of Education through Collaborative Work
• Individualized Learning through Technology
• New Role for the Teacher
• New pedagogies to enhance learning
Thanks
Lines of Research

The Impact of Plan Ceibal on Teaching Practices at Elementary Schools
Institute: Universidad Católica del Uruguay - Instituto de Evaluación Educativa.
May 2011 – July 2012

Evaluating the Initial Effects of the Project “Support Teacher Ceibal” (MAC), and how these Influence Teaching Practices
Institution: Universidad Católica del Uruguay - Instituto de Evaluación Educativa.
October 2012 – June 2013

Innovation MATHEMATICS
Institute: Pontificia Universidad Católica de Chile – Universidad Católica del Uruguay
Mayo 2011 – Diciembre 2012

Deeper Investigation of the Effects of Plan Ceibal on Students Development in: Mathematics, Reading and Capability to Use the XO.
August 2011 – June 2013

Qualitative Evaluation of the Experiences of Appropriation of XOs in Families and Beneficiary Communities
Institute: Universidad Católica del Uruguay – Universidad Autónoma Metropolitana de México.
June 2011 – November 2012

Plan Ceibal and the Practices of Mathematics Teachers of 1st year Secondary Schools
Institute: Universidad ORT Uruguay – Stanford University.
May 2011 – August 2012

Playing to Estimate: Getting Ready to Learn Maths
Institute: Centro de Investigación Básica en Psicología (CIBPsi) de la Facultad de Psicología de la Universidad de la República.
Junio 2013 - Abril 2014
Foreign Consultancies and Cooperation

**Region: Karabakh**
Implemented by: Eurnekian Group  
Project: NUR  
From November 9th to December 26th - 2010

**Country: Paraguay**
Implemented by: Paraguay Educa Foundation  
Project: Paraguay Educa  
From September 2nd to December 2nd, 2012

**Country: Ecuador**
Implemented by: SITEC (Ministry of Education)  
Consultancy for the Project “Mi Compu” at the Ministry of Education of Ecuador.  
From March to June 2012

**Country: Argentina**
Implemented by: Local Government  
Project: Clickear  
From August 5 to 9th, 2013

**Country: Colombia**
Implemented by: Alcaldia del Municipio de Itagüí  
From October 22nd to 26th, 2012

**Country: Brazil**
Bi-national Seminar Brazil-Uruguay on Technological Modernization of Education.  
From August 29th to 30th, 2013
The problem is global

- “In many countries less than 40% of students in upper secondary education feel intellectually attracted to the school.” Jenkins 2013

- “In the US, 59% of adults between 18 and 35 years old said that they developed most of the skills they use in their work outside school.” Gallup 2013

- In Uruguay the ...% of students leave formal education before ...

- In Spain ...

The challenge is global...
• 10 countries with 100 centers each
• Investigation of a new pedagogical model through the exchange and continuous improvement of educational practices of deep learning
• Co-construction of strategies in the use of technology to accelerate pedagogical results and provide new educational environments
• Generation of new ways to measure, new results