



ARAHUAY - PERÚ





ICT and Systemic Reform Case Study



The Starfish on the Beach

Why OLPC for the poorest and most remote?

...

and how?

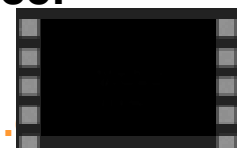


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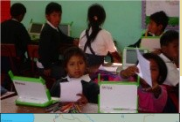
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Constructionism in Peru



- ... it all began because Marilyn Schaffer wanted to see Machu Picchu...

...the late
80's

- ... and over the years one of his students became Minister of Education...
2006-2008





Public Education in Peru



- 45,000+ Schools
 - 7M students
- Very low level in key areas: Reading, Math
 - Not only students
 - Poor teacher training - motivation
- 300,000 public school teachers
 - Frustrated
 - Underpaid (100% raise did not work)
 - Politically oriented union
- Poorly coordinated initiative
- 2007 major breakthroughs
 - Census evaluation for teachers
 - OLPC agreement
 - OLPT program
 - “New teacher” development program
 - Integrated learning space concept



The Problems...

- Meaninglessness in formal Education
 - Lots of how's but very few why's
- Absenteeism
 - Why go to a place like that, better help at home/farm
- Multiple grades sharing a room
 - Individual attention is non-existent
- A long way from home
 - 4 hours walk is not unusual (with no breakfast)
- Poor and scarce educational material
 - Lack of teacher development



Our Response: Strategic Planning not Emergency

- Massive systemic change: the only way to make Education a key success factor for development
- Strong pedagogical foundation of ICT use
- Incremental approaches: mostly too little-too late
- Poverty ecosystem: a constant threat to peace

Better teachers – Better Students – Better Communities

- It is possible to reverse the vicious



Better Teachers

Teachers need to get their dignity back:
a better human being will be a better teacher

Training in out of reach complex tools
increases the gap and frustration:
slow and costly

Self development potential in a
nurturing environment

OLPC gives teachers ownership and reachable access
XXI Century Teacher Program: one laptop per teacher
“New Teacher” Development Program: Long term shift
key success factor



Improved Educational Materials: OLPC

Goal: Leading edge educational technology to the poorest

- One laptop per child initiative in primary schools
- Computer labs for secondary schools
- Internet access
- Satellite Educational TV for sensible contents
- Digital texts to make reading accessible

Close to 1'000,000 XO laptops over 2008

- Feasible connectivity
- Opportunities to change the world

XO in Perú at a Glance

- Full integration with National Curriculum
- New architecture: Most of them to poor electricity areas (be realistic with alternate sources)
- Selected learning applications: Low threshold/no ceiling
- Local texts preloaded: Spanish – Quechua – Aymara – Amazonic languages
- Mesh under 30 – Servers over 30 – Generators
- Little training – Self supportive



OLPC Guiding Principles in Action

- Ownership: Laptop as educational material : 24x7
- Primary: 1-6 for one-teacher schools. 2/3-6 for multi-teacher
- Saturation: Every child and teacher. One USB key per school
- Connected: Synchronous/Asynchronous Internet connections
 - 3 tier initiative: Local mesh, Server, Internet access
- Poorest first: 210,000 one classroom schools and teachers
- Regional initiatives with 600,000





Arahuay, Canta





Arahuay Test Project



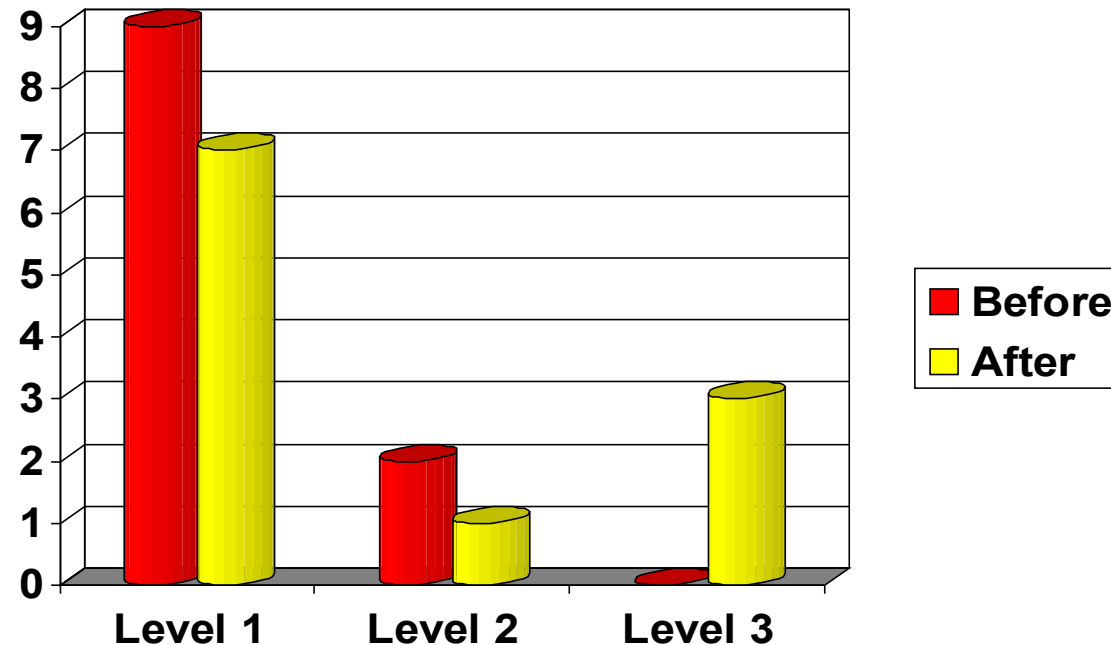
- Pedagogical
 - Immediate appropriation
 - Easy integration to current style/model
 - Reduction of absenteeism
 - Improved discipline
 - New approach
- Technical
 - World leadership
- Community
 - 100% coverage
 - Total community model



Comparative graphic – Text comprehension

Before and After

Students

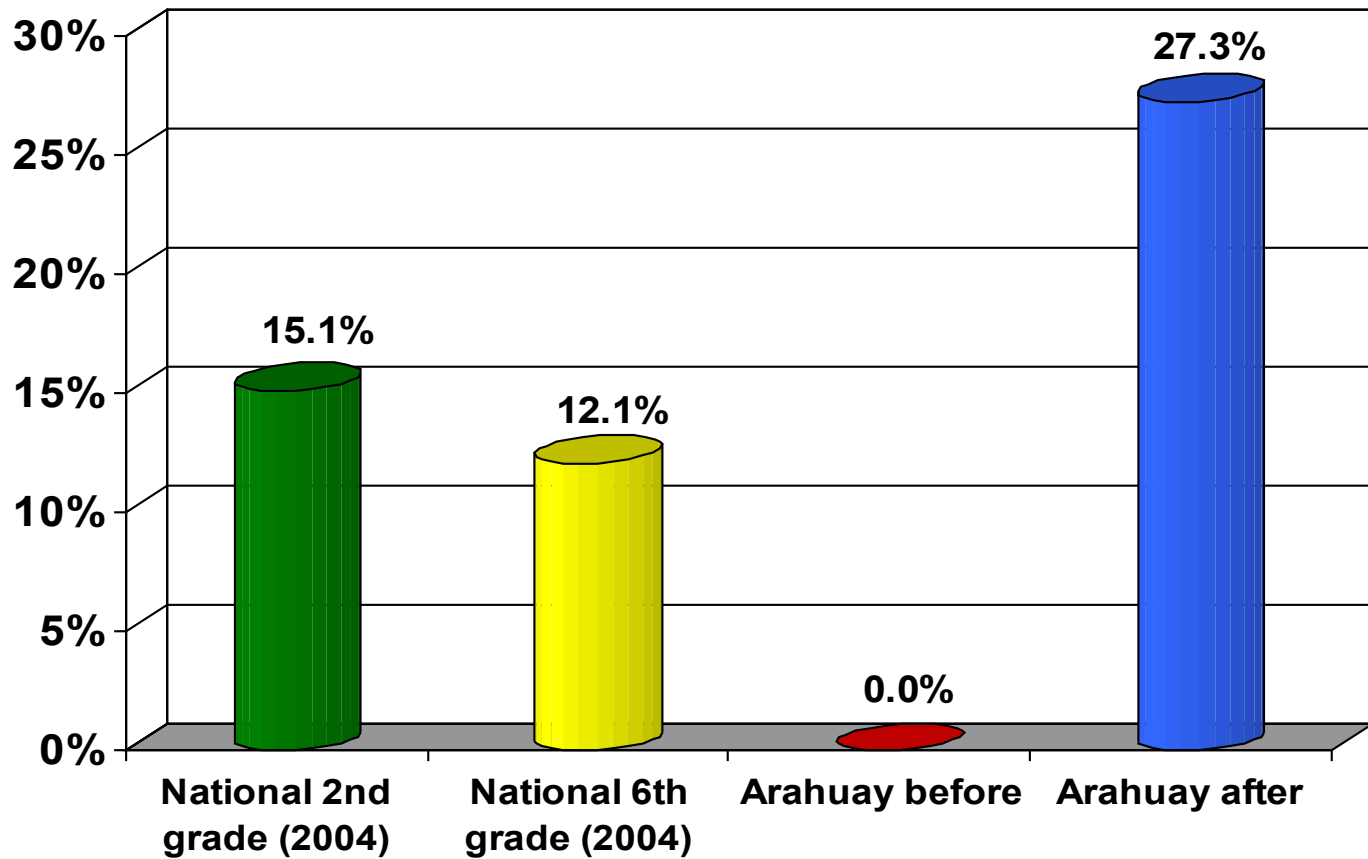


Comparative Table of Results: Test – Reading Comprehension

Level	Number of students for level	
	Before	After
Level 1	9	7
Level 2	2	1
Level 3	0	3
Group 0	0	0



Local (Arahuay) vs National Levels



Percentage of Students at Acceptable Comprehension Levels



Some Warnings

Be Prepared for Negative Reaction

- From “educational experts”
 - No pedagogical model
 - Based on some obscure professors’ theories
 - Unrealistic
- The real objections: “It was not my idea” “I have done nothing”
- From “industry leaders”
 - Lack of teacher training / support model
 - No maintenance support
 - It is really more expensive
- The real objections: “We missed the market” “Wait for our product so we



Why should it matter?





The Children of Peru



Our reason to dream







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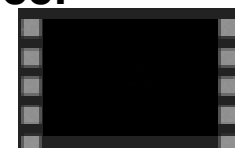
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