



International Seminar on Integrated
WATER-Related
Disease Control

12-14 May 2014, Norway

Sorhellinga Building
Norwegian University of Life Sciences, Ås



Reducing diarrhea in children and controlling dengue vector *Aedes aegypti* in rural schools in two municipalities in Colombia



Healthy Schools. Preliminary results

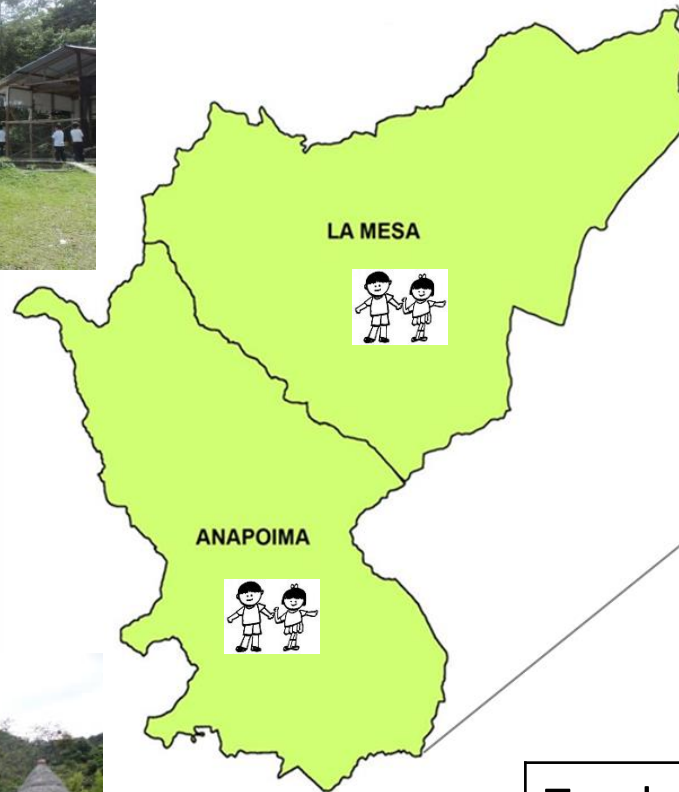
Educational Intervention and Qualitative Evaluation

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Reduce exposure to dengue and diarrhea risk factors in schools by improving health education on dengue and diarrhea prevention

Methodology

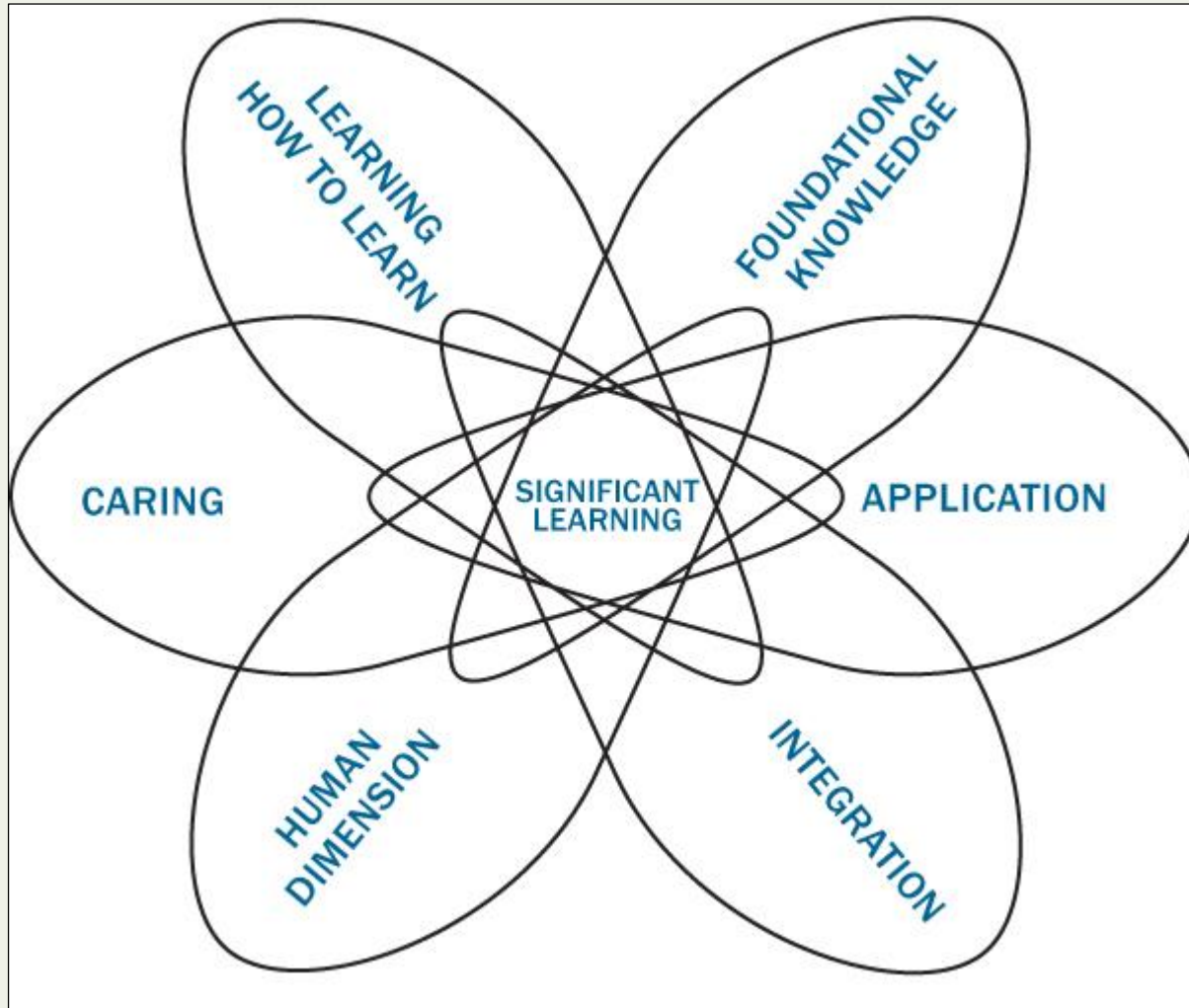
Location



	Anapoima	La Mesa
Teachers	18	26
Students	787	1108

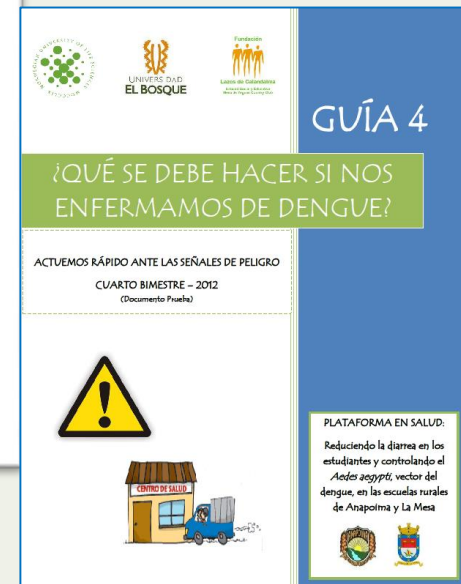
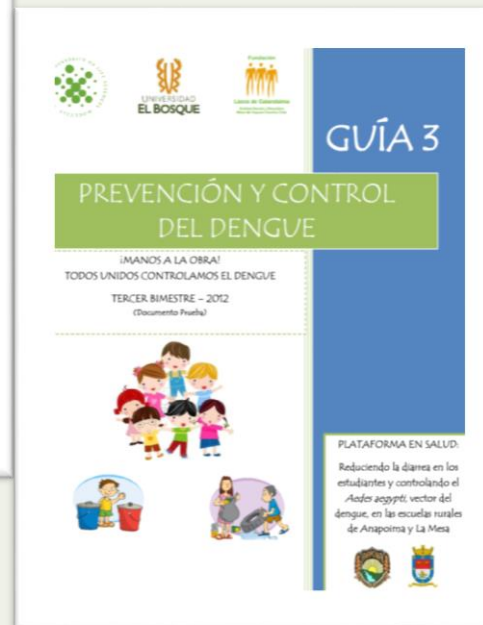
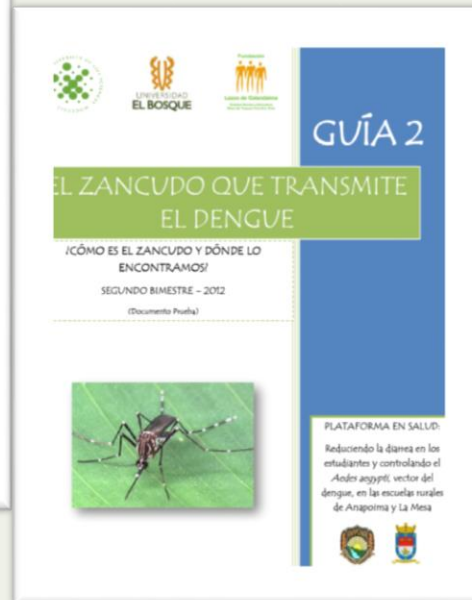


Teaching/Learning Paradigm

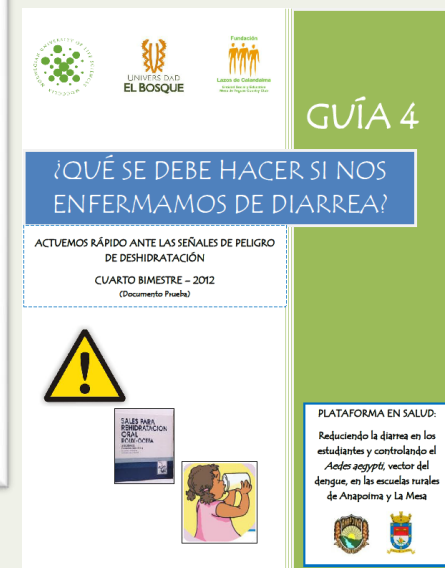
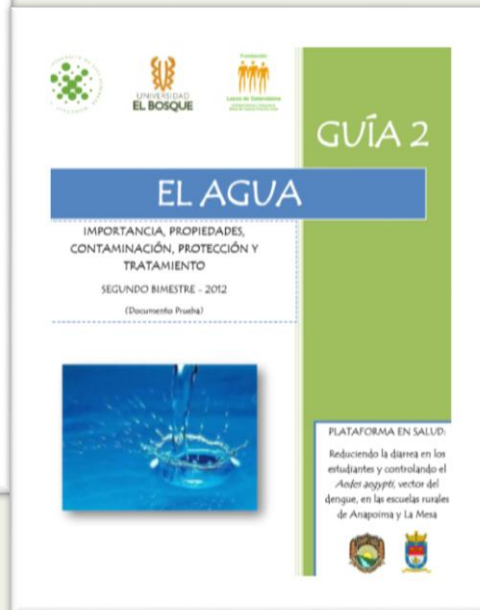


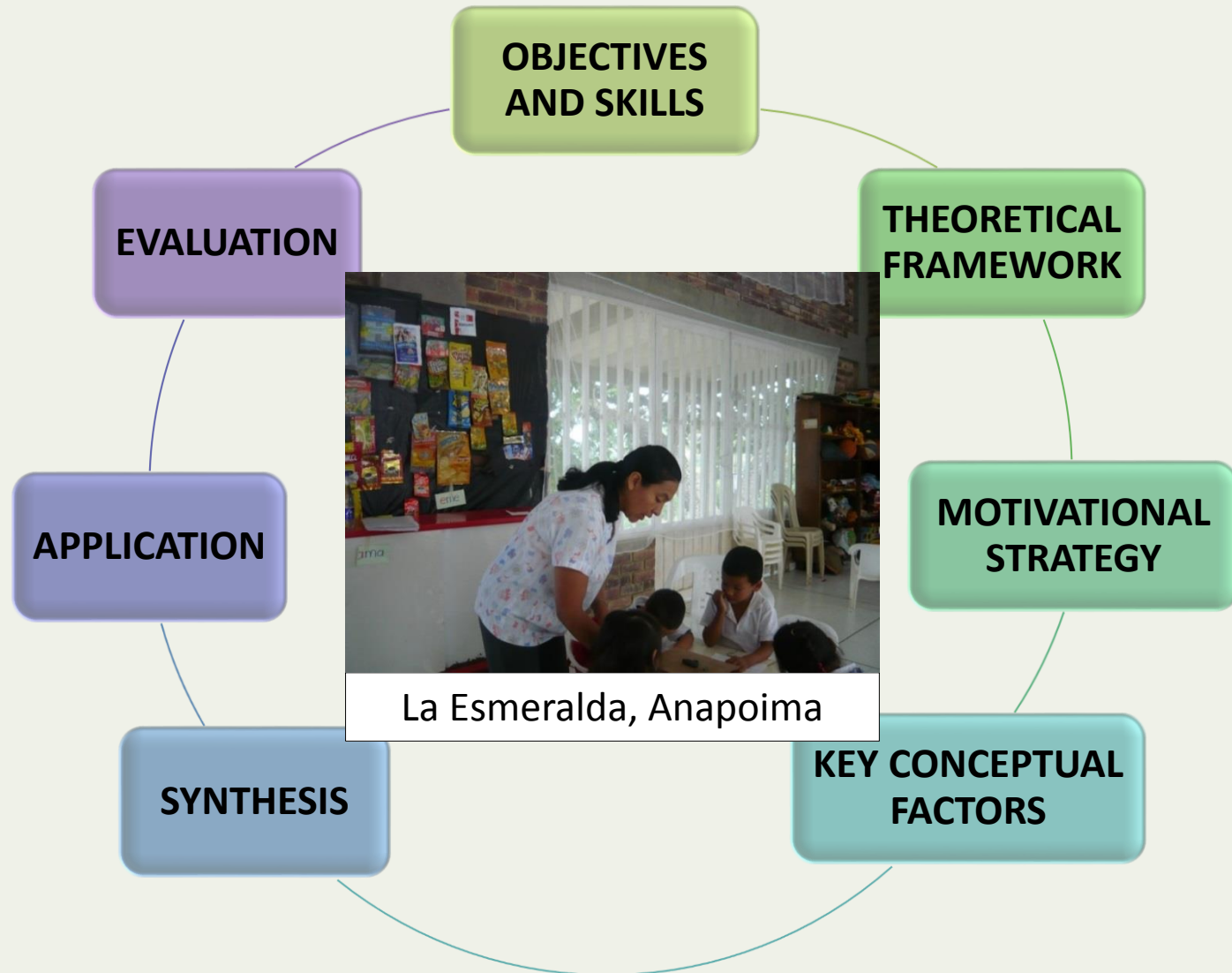


Educational Guides



Educational Guides





Quantitative Evaluation

Evaluation Criteria

- Format
 - Binding
 - Manageability (size)
- Contents
 - Concepts
 - Usefulness according to curricula
 - Sociocultural context adaptation
 - Internal cohesion
 - Student level adaptation
 - Amount of information
- Capabilities developed according to school grade
- Methodology
 - Content and objective adaptation
 - School grade adaptation
 - Clarity
 - Motivational resources

EVALUACIÓN GUIA 2: ¿Cómo es el zancudo que transmite el dengue?					
IDENTIFICACIÓN					
Escuela:					
Docente:					
Grados a cargo:					
FORMATO DE LA GUIA	1	2	3	4	5
Encuadernación (solidez)					
Manejabilidad (tamaño)					
ANÁLISIS DE CONTENIDO					
Aspectos generales	1	2	3	4	5
Conceptos básicos					
Utilidad de la Guía en relación al currículo					
Adaptación a contexto sociocultural					
Coherencia en la estructura interna (secuenciación)					
Adecuación al nivel de los estudiantes					
Cantidad de información					
Texto:	1	2	3	4	5
Tipo de letra					
Tamaño de letra					
Lenguaje adecuado					
Comprensión					
Ilustraciones	1	2	3	4	5
Calidad					
Adecuadas para los estudiantes					
Competencias de la guía	1	2	3	4	5
Adecuadas al grado escolar de los estudiantes					
Metodología	1	2	3	4	5
Adecuada a contenidos y objetivos					
Adecuada a estudiantes (grados de dificultad)					
Claridad en las explicaciones					
Recursos motivadores interesantes para los estudiantes					
Evaluación	1	2	3	4	5
Criterios adecuados a los objetivos y contenidos					
OBSERVACIONES					

Quantitative Analysis

EVALUATION CRITERIA	n	RANGE	MIN	MAX	MEAN	SD
Concepts	120	2	3	5	4,76	0,45
Usefulness according to curricula	122	4	1	5	4,50	0,68
Sociocultural context adaptation	122	2	3	5	4,66	0,49
Student level adaptation	122	2	3	5	4,55	0,59
Amount of information	121	3	2	5	4,54	0,70
Appropriate language	121	2	3	5	4,74	0,48
Capabilities according to school grade	119	2	3	5	4,57	0,61
Methodology adapted to content and objectives	120	2	3	5	4,66	0,54
Methodology difficulty	120	2	3	5	4,52	0,62
Clarity	120	2	3	5	4,68	0,55
Motivational resources	119	2	3	5	4,64	0,52
Evaluation	120	2	3	5	4,70	0,48



Qualitative Analysis



Qualitative Analysis



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Evaluación	1	2	3	4	5
Criterios adecuados a los objetivos y contenidos					
OBSERVACIONES					

1. Data collection

- a. Observations included in each guide evaluation form

- *Qualitative Analysis*

b. Comments made by teachers in each guide delivery meeting



c. Focus groups with teachers and pupils during 2012 and 2013



Qualitative Analysis

2. Analysis

- a. Classifying data
- b. SWOT analysis



Retrieved from: <http://slideshop.com/PowerPoint-SWOT-Illustration-Icons>.

Qualitative Analysis

7 meetings with teachers during 2012 and 2013

Focus groups with pupils during 2012

Focus groups with teachers during 2013

45,5 hours recorded



Methodology

Qualitative Analysis

FOCUS GROUPS WITH PUPILS

Previous knowledge about diseases
(dengue/diarrhea)

What do the children do when
feeling sick

What do their parents or caretakers
do when feeling sick

Whose responsibility are actions on
dengue and diarrhea prevention

What can every pupil do to prevent
diseases

Changes before-after intervention

FOCUS GROUPS WITH TEACHERS

Educational intervention

Educational material

About pupils

About parents and households

Teachers role

Information transfer

About the project

Time

Interventions

Strengths

“I’ve learned at the same time with the kids”

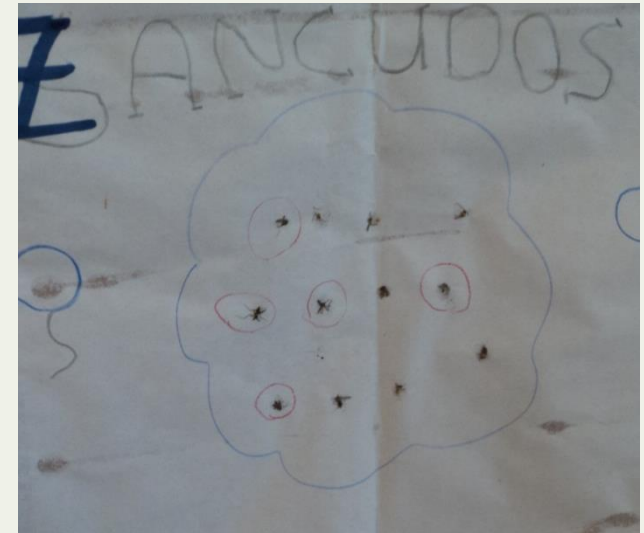


“An anecdote about the toilets, in the past, the walls were written with vulgarities and we decided to ask for money to the students and paint the walls; being in the project we have talked about cleaning the toilets, self-esteem, we have noticed that now the toilet walls are clean. Habits have been modified, before toilets smelt horrible, nowadays they are aware about cleanliness before and after going to the toilet and they carry their bucket.” (Cristina Perez, Laguna Verde, La Mesa)

“The guides are very good, I mean the material”
(Cristina Pérez, Laguna Verde, La Mesa)

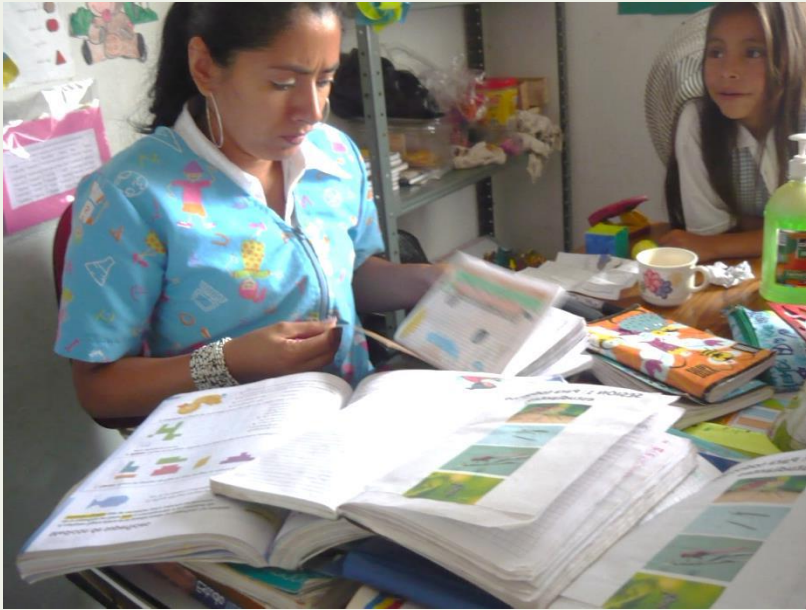
Strengths

“First it required the participation of teachers to educate about the insect, then reviewing and then application. In the schools the intervention has been useful, very, (practices such as) hand-washing..., covering tanks, waste collection and picking-up garbage, I think it was effective and we learned”
(Diana Rojas, Panamá, Anapoima)



“They have developed the habit and have associated (hand-washing) before they didn’t have it, and they say that they do it even at home , that even children emphasize it, they check “look daddy didn’t wash his hands.” – “ah, why would I” – “then we get sick!” It became a habit for them and it wasn’t before.” (Angel Castillo, Santa Bárbara, La Mesa)

Weaknesses



“We’d like the applications to be simpler, with fewer steps. It’s important to work on it because it’s a problematic of the area, it could be done every year, maybe with a reduced amount of hours.” (Cristina Chavarro, Alto de Flores, La Mesa)

“We don’t have enough time to develop them... while we adapt it gets complicated. (The program) is good but time is not enough, we prioritize Spanish and Mathematics task. We should work on one topic at a time, each semester.” (Angel Castillo, Santa Bárbara, La Mesa)

In the end, it’s the teacher’s responsibility, if he/she is willing, is fine, otherwise we do a different thing; if the habit remains in the child, I think the habits continue, don’t they? However they tend to disappear.” (Cristina Pérez, Laguna Verde, La Mesa)

Opportunities



“As you are in the context, you begin to understand more things, you get used to the context where you are.” (Consuelo Casallas, Alto de Flores, La Mesa)

“It would be good to have a book of activities...it would be easier for them to work on their own materials.”

(Diana Rojas, Panamá, Anapoima)

“Well, I think it should be a continuous work; the activities were very good because of the supporting activities that are attractive to them. As a suggestion, the activities shouldn’t be repetitive but deepening.”

(Adriana Medina, Palmichera, Anapoima)

“You can see in the hand-washing habit, we still have work to do”

(Cristina Chavarro, Alto de Flores, La Mesa)

Threats



“There may be a projection of the application of the work in the school and at home, but a work like that was not done in the community.”
(Diana Rojas, Panamá, Anapoima)

“The institution can’t go beyond the community when it doesn’t want to appropriate it, people haven’t been raised with this culture and it’s going to be a failure, as long as the community is not involved.”

(Angel Castillo, Santa Bárbara, La Mesa)



Strengths

"I have loved writing, drawing. I like the little zancudo saraviado" (La Esmeralda, Anapoima)

"(It's our responsibility) because if we don't take care of ourselves we can get diarrhea and get sick" (Camposanto, La Mesa)



"I liked learning about how you get diarrhea, playing and learning how to prepare home-made solution (ORS). I liked learning how to cook food. I liked doing experiments and the workshops. I'd liked to keep learning about the diarrhea project because it's beneficial for us" (Guayabal, La Mesa)

Weaknesses

“Sometimes you tell your parents what you learned and they say –well, go do your homework-, they also say they have no time” Payacal, La Mesa



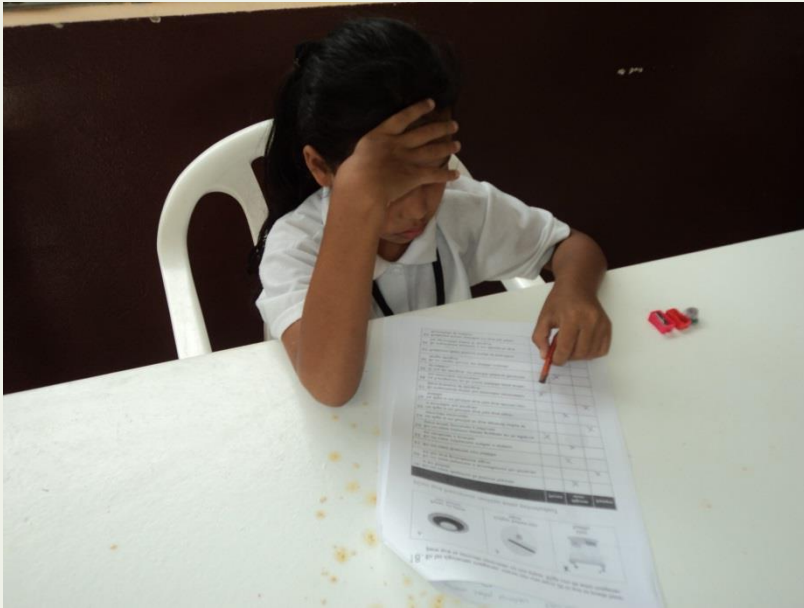
"I wash the laundry tank with my mother. For us (children) is so difficult to climb-up over the tanks" (La Esmeralda, Anapoima)



"It's so easy to do at home what we learn at school because it helps us to keep the house clean without bacteria" Camposanto, La Mesa

Threats

Pupils



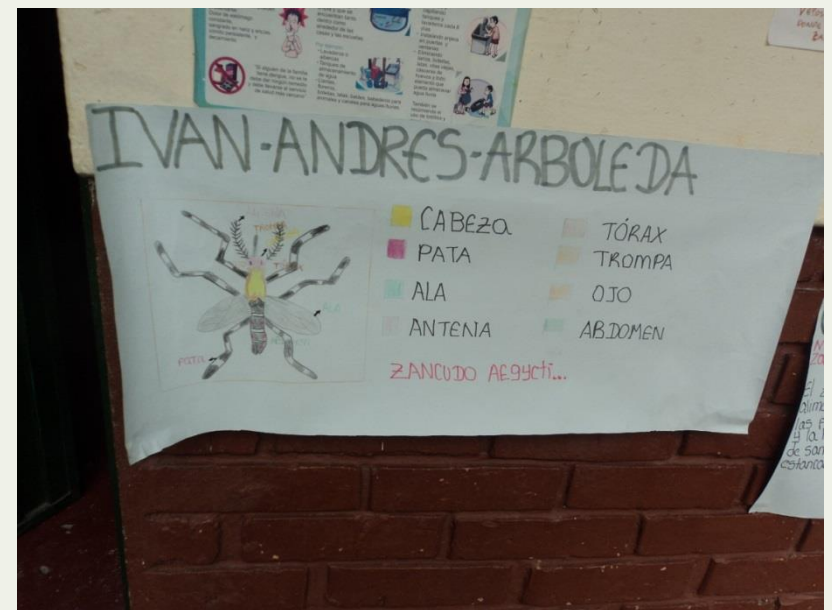
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- Not only for water-related diseases, but in general from our experience, educational interventions are worthy
- Always is an option to choose working with children and families









Thank you

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