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Index

The Problem with Duquesa	
Problem Framing	
The Root Cause of Drop Outs	
Unmet Needs & Demotivation	
Trueque. The Intervention	
Theory of Change	
System Map	,
Framework: Agreement/Playing it Out/ Redeeming	,
Piloting & Learnings	5
Bigger Than Drop Outs57	,
Appendix61	L



The Problem With Duquesa

Duquesa is a small community in rural Dominican Republic, that lives in extreme poverty. Their livelihood comes from diving into a landfill that is a few miles away to sort recyclable material. This practice doesn't discriminate age. At 11, kids help out their family by either cleaning sorted material in their homes or diving into the landfill themselves. Kids in Duquesa have many pressures at a young age, resulting in them being most vulnerable at 7th grade to dropping out of school.

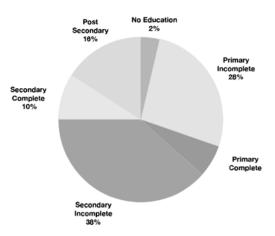
The risk of not finishing school basically insures kids a life of poverty scavenging through a landfill, impacting not only their quality of life but their health and wellbeing.

School retention is a prominent issue in the Dominican Republic and although the country is one of the best economically performing countries in the Latin America and the Caribbean region, around 46% of all rural Dominicans live in poverty. School enrollment is high (103% in 2012) 28% of the students do not complete their Primary education, and 38% do not complete their Secondary education.

There has been continuous public demand for an increase in the budget to education, in 2013 the national budget for education grew 70%, from RD\$58,590 million in 2012 to RD\$99,628 million in 2013. The 2014 budget in the education sector represents 4.32 % of GDP.

Although the government has greatly invested in human resources and infrastructure, not enough is being done to understand the emotional needs of the kids they serve. That is the gap this intervention wishes to fulfell

Educational Attainment

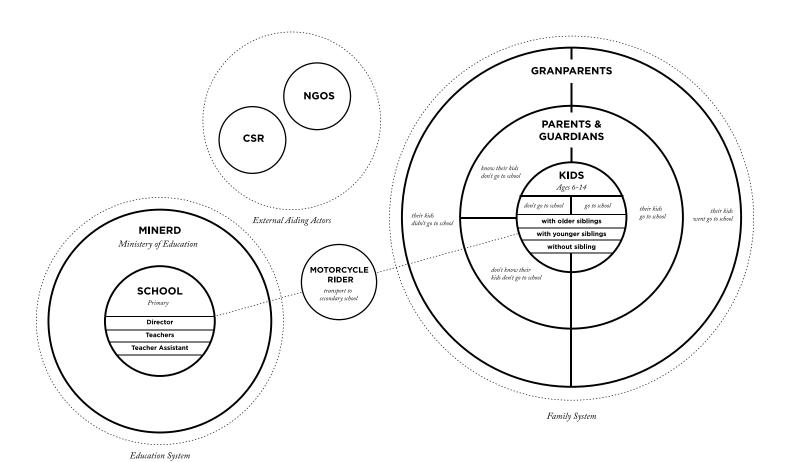




Stage: Discovery 13

Problem Framing

The first challenge I faced was distance. The discovery phase of research is dependable on direct contact with stakeholders, let it be by inperson observation, interspects or interviews. To address this a chose a proxy with experience in education and vast experience with kids with the age group I was researching. Transfering of knowledge and creating tools that woud be autodidatic for both the proxy and the user was crucial in this stage of scoping down on a need.



Angle: Talk to the parents of kids that are going to school and those that aren't, to compare & contrast.

Method: Observation and indepth interviews with a Toolkit for Proxy.

(See Appendix A)

1

Research Question (Based on Observation)

Within the same community, why are some kids going to school while others are not? & is this decision related to their parents views on education?

Problem Statement

Parent's in Duquesa are focussed in providing for their families immediate needs. Although parents envision better futures for their children, it's difficult for them to see the long-term benefits of sending their kids to school, because it takes 12 year to see tangible value.

Hypothesis

Parent's in Duquesa value that their kids learn to read and write, after this they quickly disengage from the education system. They do so because reading and writing are skills where it's easy to see the benefit. Parents will have a long term engage with their kids education if they are provided a feedback loop that allows them to see value & practicality in their kids education .

Learnings:

After talking to 15 parents in the community and ranking the level of hiercahry education played in the decison making of their household. I learned that although parents didn't consider education a top priority in comparison to food, religion, family, and more their kids still attended school regulary. This disproved my asumption, I learned tht kids do attend regularly.

THE GAP

The most significant discovering was understanding that within 6th (Primary) and 7th grade (secundary) kids from Duquesa has t change schools to a larger community 40min away. Within these time kids are faced with even more barriers.

I use to think that kids dropped out of school because their parents were too focused on making a living & although they envision better futures for their children, it's difficult for them to see the long term affects of education. Although this is true, it's not the root cause of while kids drop out.



Stage: Discovery 17

Problem Framing

2

Reframing Research Question

Why do kids drop out of school?

Problem Statement

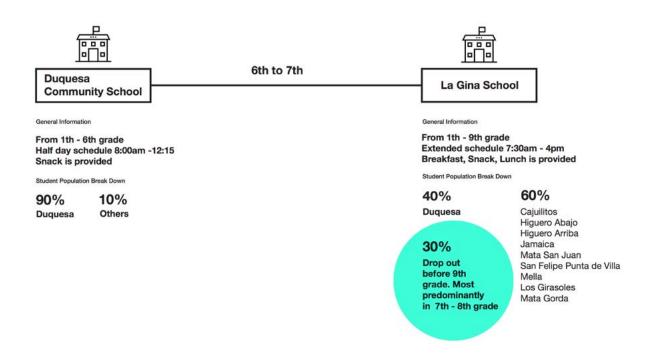
Kids in Duquesa need to change schools from grades 6th to 7th, between these ages they are more vulnerable to fall behind & work in the landfill.

Hypothesis

6th graders are overwhelmed with the changes and uncertainty of going to a new school. If they were informed & excited then they would successfully continue their education to the 7th grade.

Reframe Insight:

I use to think that 6th graders from Duquesa dropped out because it was difficult to get school to continue 7th grade due to the long distance they need to travel, now I know that kids drop out due to lack of motivation.



Reframing Research Question

When are kids most vulnerable to dropping out?

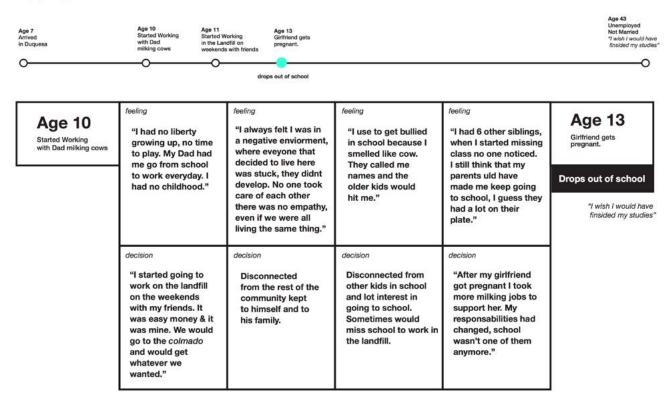
Problem Statement:

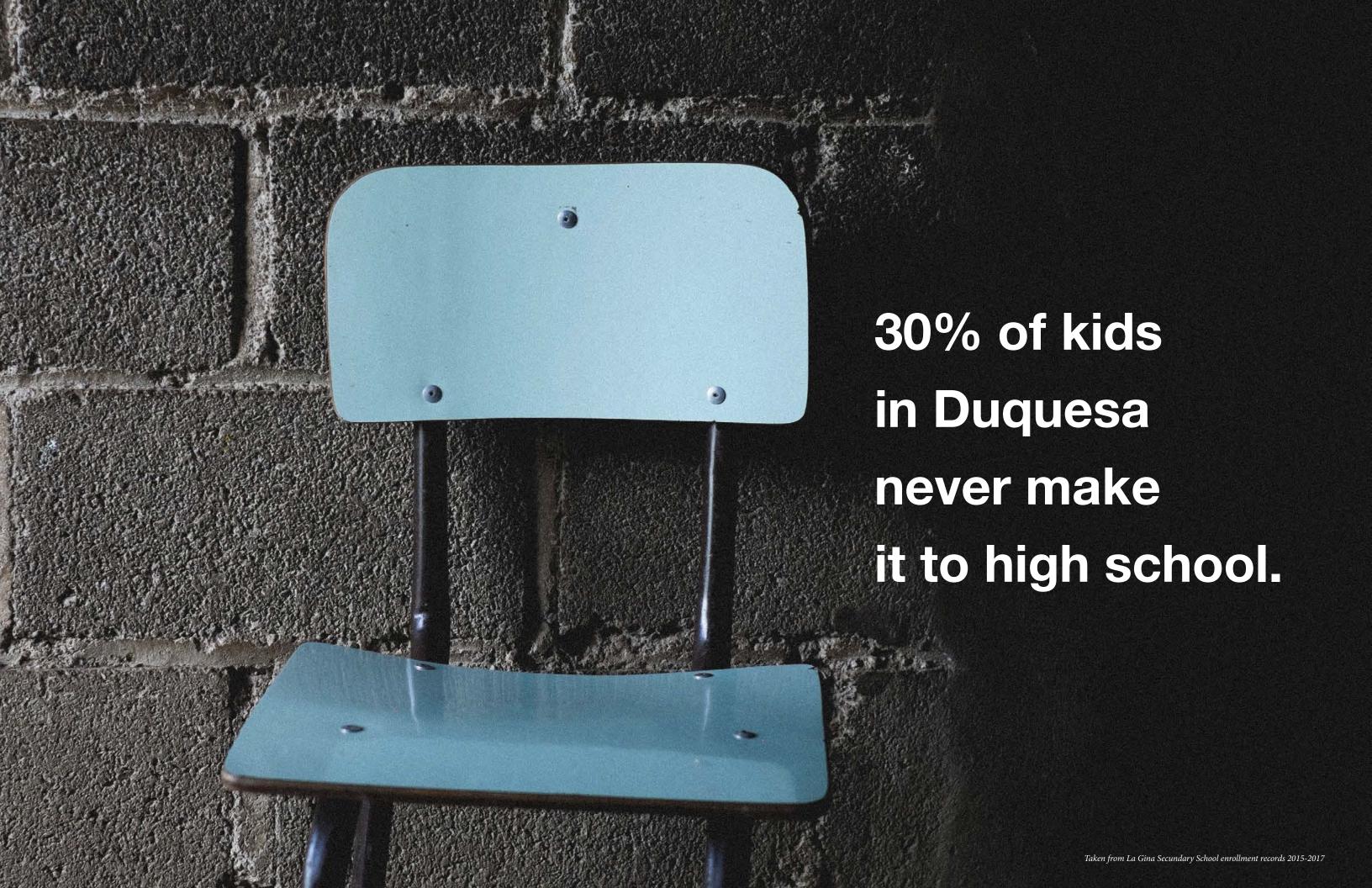
The school of La Gina serves multiple communities, 40% of their students are from the community of Duquesa. Within 7th & 8th grade 30% of the kids from Duquesa drop out or due to the lack of motivation to come to school due to conflicts with kids from other communities.

Hypothesis:

If 7th graders from Duquesa that are going to studying at La Gina are motivated to come to school & feel integrated with their classmates and recognized by their teachers then they will not drop out continuing successfully to high school.

Edward's Decision Making Process to Dropping Out





Understanding the Root Cause of Drop



Kids in Duquesa need to change schools from grades 6th to 7th. They transition from their small community school to a bigger school a village a way that serves multiple communities. Within this transition they experience multiple barriers to get there, such as having to walk long distances to get to school, not being able to pay the costs of transportation.

In spite of these barriers
kids are resilient.
They have an intrinstic
motivation to go to school.

We know from stakeholder interviews were numerous cases of kids that had enrolled themselves to school at as young as 10 years old, demonstrating that sometimes even without emotional or logistical support from their parents, these kids valued education. The research also points out long term aspirations and a grounded appreciation for education, as well as a cognitive connection between obtaining and education to reach their aspirations.

The problem we've identified is that that kid's intrinsic motivation to go to school starts diminishing when they reach 7th grade.

Why is the lack of motivation so critical? In this context their future is determined by own motivation or the lack of A lot of their future is determined by own motivation or the lack of it. Through research we have learned that as we said these kids overcome daily difficulties to get access to education, however when motivation starts decreasing the prominence of these barriers begin





1. No Common Social Norm

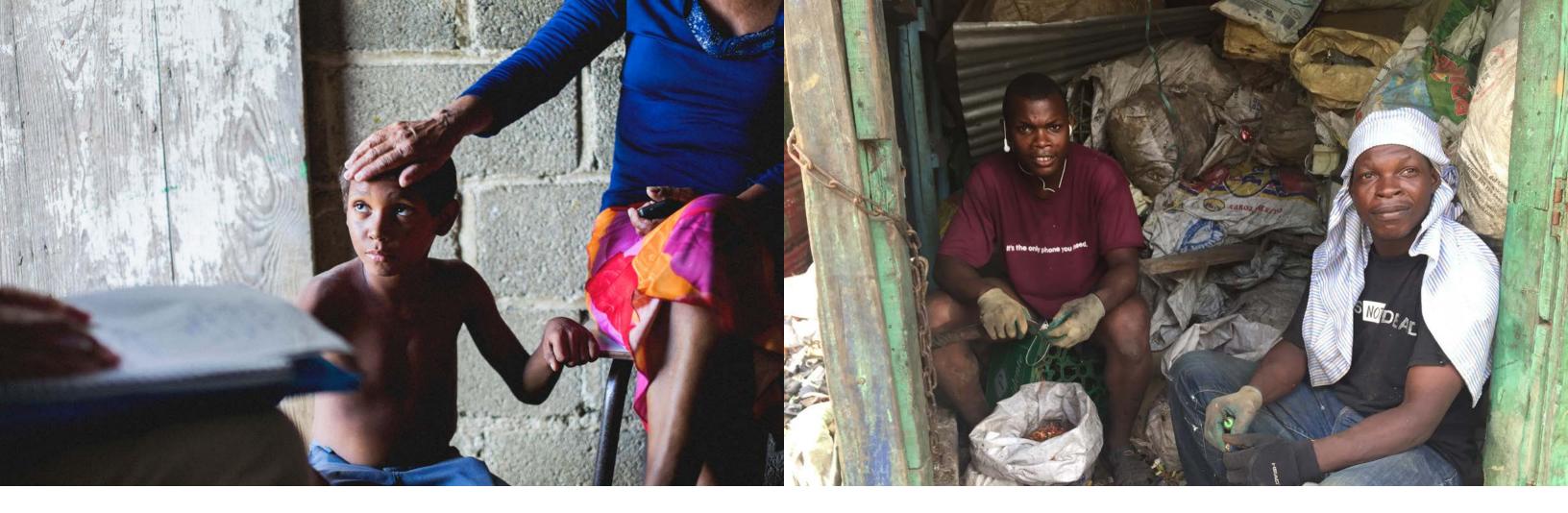
Once kids from Duquesa transition to the new school they are faced with a different social norms, that are unfamiliar & unprepared. The new school serves 7 different communities from around the area. The community of Duquesa is known to be more secluded, kids don't have much interaction with kids from other villages until they reach the new school. Going from being the majority to a minority. Kids are also predisposed to the belief that in the new school they will be discriminated by their teachers and classmates from other villages. Duquesa is a marginated community within the adjacent villages ecosystem, this sentiment is made known to nervous predisposed new corners that perceive this change of environment as a challenge to their self-integrity, a psychological threat. Kids stop going to school because they perceive this new environment as threat.

2. Poor Conflict Management Skills

Families in Duquesa are different from families from the other communities the school serves. Working in the landfill means survival. It is unregulated labor that has a set of informal rules. Such as stealing someone's metal is met with stabbing. This aggressive behaviors on managing conflict is passed from the parents to their kids. When kids in Duquesa that are already perceived as different encounter common daily problems with other kids or school authority in attempt of acting in self defense they quickly escalate to violence. Kids stop going to school because they get into fights with classmates due to poor conflict management skills which leads to bullying and alienation.

"Kids don't go to school primary to study, they go because of their friends, because of the relationship of emotional ties they have made. If a kid does not cultivate these, waling away is the easist thing."

- Paula Ceveros, Child Psychologist

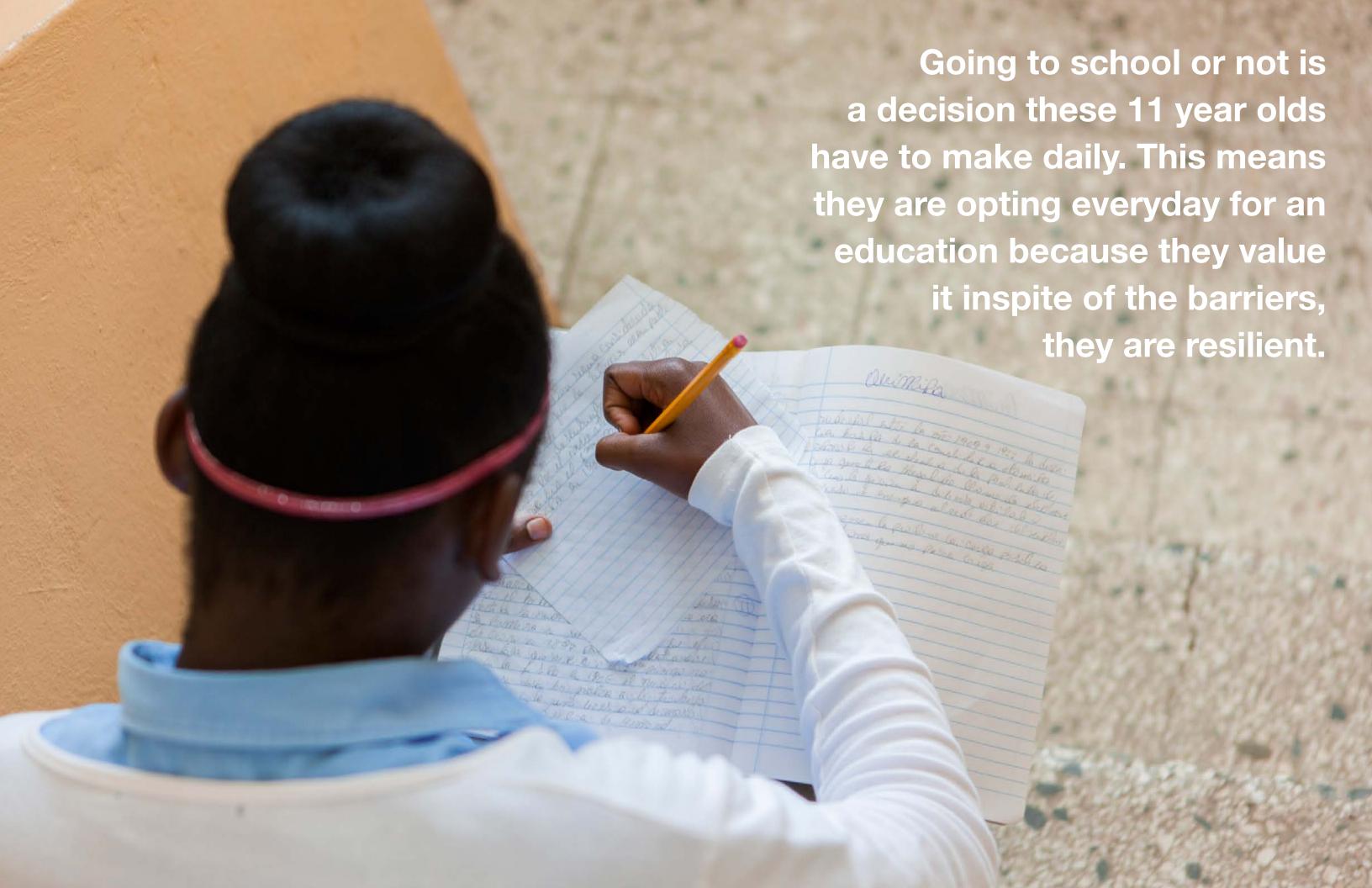


3. Lack of Attention & Recognition

These kids are born big families where attention is scarce and go to big class room where they get lost. The common size family in Duquesa is of 5-7 siblings, for this reason parental attention is limited. They stopped going to school because they lack of individualized attention & recognition.

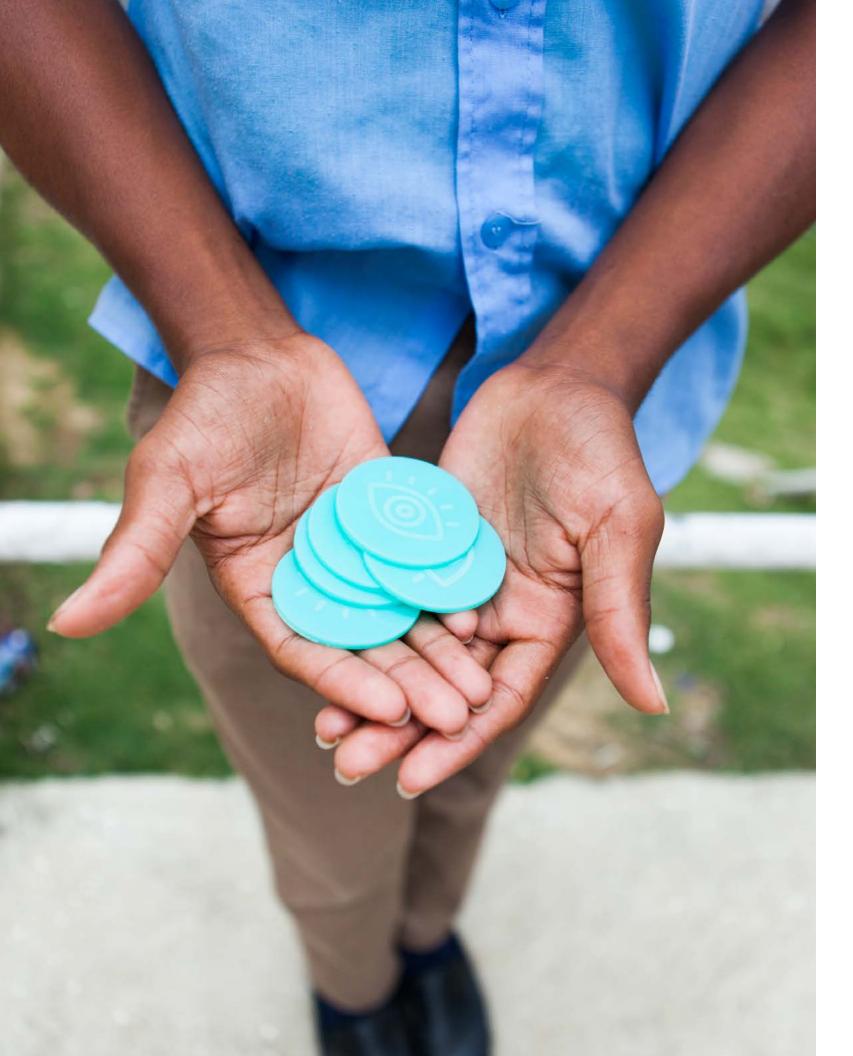
4. Worry of Financial Contribution

Most of these kids are directly or indirectly involved in child labor. They help their parents provide an income by various ways. They scavenge through the landfill to collect recyclable material (metal, hard plastic, glass bottles). They wash material collected by their parents at home. They help mom cook food at night that will be sold in the landfill the next day. Although the amount of income that kids generate isn't significant to the household. Kids worry about helping sustain their household, this deprives them from focussing on education, when producing an income quickly displaces attending school.





harnessing kids motivation to go to school



Trueque: a spanish meaning, an exchange of value.

What is Trueque?

Trueque is a semester long program built to harraness kids motivation to go to school. It does so by co-creating with them a more desireable school enviorment. Trueque gives kids autonomy by inviting them to participate in a series of workshops to reach a common ground on how they agree to treat each other. Understanding that the biggest motivator for kids to attend school is making school a place worth going to. It involves:

students teachers local bussiness owners

Trueque reinforces the behaviour kids agree upon through a reward sytem in the form of tokens. Understanding that behaviour change is incremental and a learning process kids get a brand new opportunity every day to try again. These rewards aren't only used to incentive behaviour, it also lessen the financial burden that often forces kids to drop out.

Trueque, is built on the belief that if kids needs of 1) Understanding their social norm 2) Being able to manage conflict in healthy ways 3) Receiving attention and recognition from their teachers and 4) Lessening the financial worry are met, that will increase the intrinsic motivation that kids have to go to school, thus lessening drop outs.



Theory of Change

The Goal

Disrupt the cycle of poverty by increasing future work opportunities for children in Duquesa.

Through Education

Completion of high school education

The Gap: Motivator

Students need to **feel motivated to stay in school**, particulary through 7th & 8th grade when they are most vulnerable to droping out.

Needs to be met

Psycological/ Emotional Needs

Basic Needs

1. Kids need to feel recognized for their achievements.

2. Kids need to feel intergrated with their group inspite of community origin diference.

3. Kids need to feel Joy.

4. Kids worry about helping sustain their household, this deprives them from focussing on education, when producing an income quickly displaces attending school.

Intervention / Point Reward System + Community Currency

The Agreement

Daring kids to meet individual &/or collective goals that aim to improve inside/outside classroom behaviour as well as motivate group integration.

The Reward

Kids get rewarded by a special currency once they meet these goals. This action provides positive reinforcement of intrinstic motivations by extrinstic rewards.

How To Redeem

Kids can redeem their coin in affiliated bussiness from the community, that provide access to items of want as well items of need.

Meet Needs

1. Kids will be recognized by their achievement to proposed goals.

2. Kids will feel integrated by reaching common goals a group, emphasis on win/win outcomes. 3. Kids need to feel Joy.

4. Kids will earn through educational achievements opportunites to provide for their family.

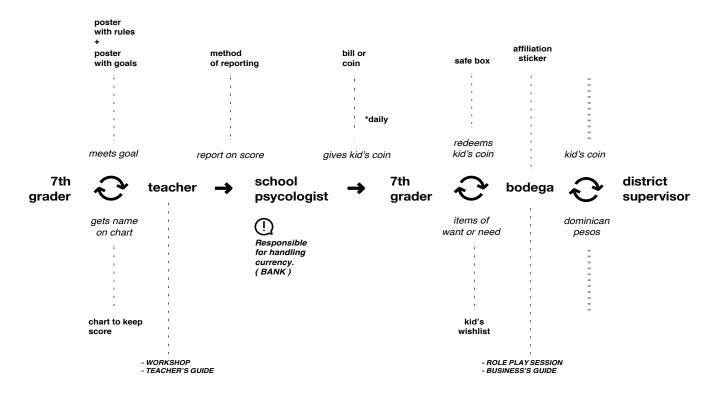
the consequence

By these actions kids will experience prolonged motivation by the extintion of negative factors (such as bullying or lack of recognition) and in exchange be remunerated by achieve- ments. In consequence kids will have a stronger desire to stay in school, reducing drop outs.

Trueque work in three steps:

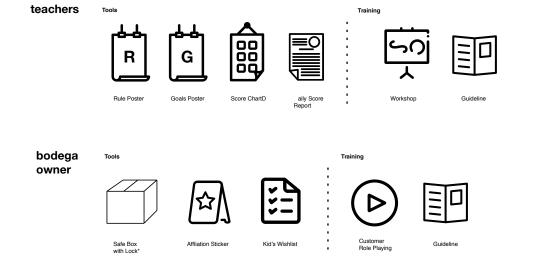
- The Agreement
- Playing it Out
- Redeeming

Trueque's System View



37

Tools for Stakeholders:







Step 1: The Agreement

In the first step in the intervention kids and teacher reach an agreement on how they commit to treat each other. This agreement provides kids from Duquesa with a social common ground, they didn't have before, as well as aids them on practical principals on how to manage conflict.







Piloting with 42 Eager 7th Graders

Trueque was piloted with 42 eager 7th graders from the La Gina Highschool for a duration of 4 weeks. It was implemented by one designer and one education consultant; with the collaboration of school personnel, including the school director, psychologist and 3 teachers. The pilot also included the participation of a local bodega owner as our point redeemer. The pilot had two objectives 1) Proof behaviour modification by gathering evidence of diminishing negative behaviour (verbal, physical, threat,). 2) Gage the readiness of the school and local business owners on the adoption of the intervention.

M&E

To measure this intervention a baseline measurement was emplaced on frequency of bullying adapted from "Forms of Bullying Scale (FBS) - Edith Cowan University". The questionnaire was given to half of the class, a total of 20 kids. The same question will be given to this cohort at the end of the intervention's pilot. The aim is to determine if there was a reduction in bullying from the perspective of the primary stakeholder through 20 questions that gage at frequency of multiple type of negative behaviour through a lictor scale.

Weekly monitoring was conducted by gathering data on which kids were attributed stickers and which weren't, as well as weekly debrief reflection interviews with teacher and students. This quantitative and qualities has been analysed and evaluated to produce learnings. (M&E Baseline Negative Behaviour Questionnaire - Appendix B)



Pilot Learnings

What were the learning of doing Trueque?



Did it positively change behaviour?

Yes. It did.

1. Trueque became a tool for teachers for classroom management. It also changed the interaction between teachers when it came to addressing the behaviour and concern of their students.

Trueque primary focus was to modify kids negative behaviour in school, while doing so it had the unitended consequences of engaging teachers in deeper conversations about the behavour of their students. It provided them with a tool that could facilitate class managements and further reach academic goals. demic goals. Francisca, a math teacher, shared:

"With trueque not only were kids more aware of their behaviour and that of the their classmates, they were more attentive and willing to participate in class. I remember in the second week I could fit two of my classes in one because they were so attentive. I feel this works for me and kids love it, and deserve it."

2. Trueque opened a conversation in the community about the value of keeping kids in school. The bodega was the hub for these interactions.

I understood early on fromt he research taht community is influencial in education, by incorporting local bussines owners not on;y does this help the local economy but it provides a place were conversations can start happening. Marisca the owner fo the bodega were kids exchanged their tokens proudly explained the program to all her customers that showed curiosity on "the blue eyes coins". It will be interesting to explore if this could have any greater impact on the perception of education in the community as a whole.



100%

of the kids reported theyenjoyed participating in Trueque

of the kids reported they noticed a positive change in behaviour, in themselves and/or their classmates

> of the kids would recommend Trueque to a friend.

3. Within the third week kids started redeeming materials for school from the bodega, in it's effect reinvesting their earings into their education.

The consumption habits in in the 4 weeks of piloting evolved from items kids desired such as ice creams, sodas, sandwiches, and baseball caps. To items they needed for school such as pencils, paper, folders and backpacks. In two ocasions tokens were used for purchase breakfast when kids couldn't bring any from home.

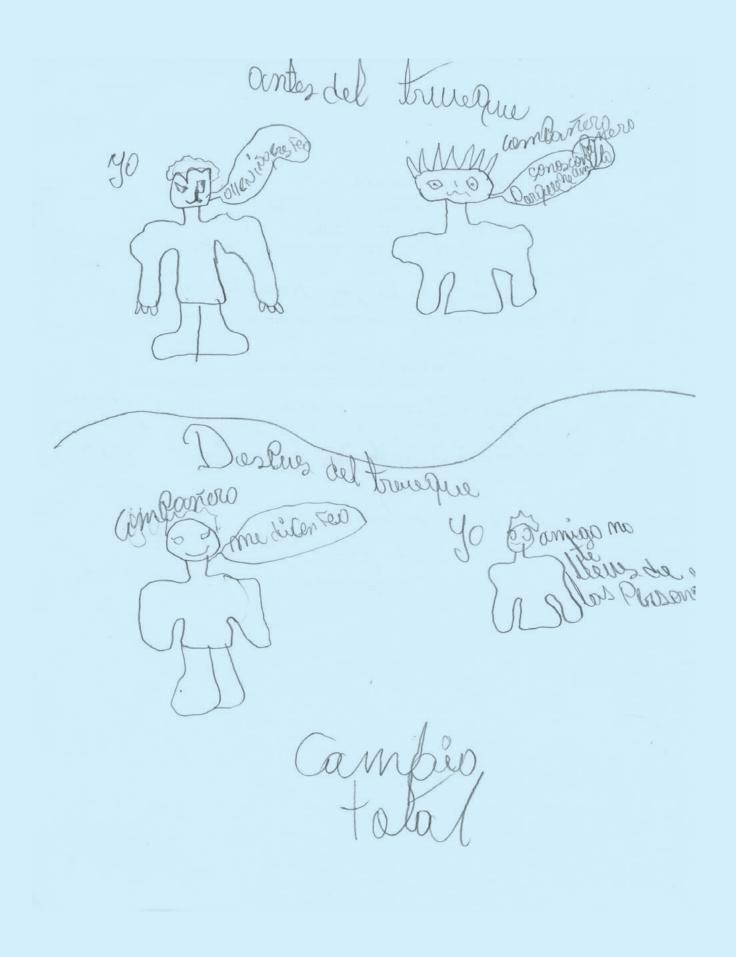
4. Teachers reported less absences within the second week, and a noticible change on behaviour within the third week.

Kids expressed in interviews after the program completion that they didn't want to miss school because they would miss their chance to win tokens. Other kids shared their plan to safe up their tokens for items they desired. Marcos shared in his interview:

"I don't want to miss school because I don't want to miss out on winning tokens. I have 4 so far, I only need two more to buy the backpack I want, it's blue with neon straps, it's amazing."



Before & After Trueque





Before Trueque:

I said use to tell my classmates: "Your an ugly kid."
My classmate use to say to me: "Don't mess with me!"

After Trueque:

Classmates will tell me: "They say I am ugly."
I will tell my classmates "Friend, don't listen to them."

Total change.

Angel, 11

Before & After Trueque



Before Trueque:

I made fun of my friends.

After Trueque:

I treat them well.

Ana Cristina









Bigger Than Drop Out Prevention

Trueque doesn't stop at graduation. It's mission goes bigger than school retention, the real interestis in the development of kids from students to professional adults. I have learned from conversations with governmental offices and nonprofits working on the same issue of access and retention in education in the DR, that this problems isn't limited to Duquesa, in fact similar needs are seen in communities throughout the country. I recognize that every community is unique, what is interesting about Trueque is it's adaptability to address contextual differences while still holding the systemic structure and intent that makes it work.

This is an ambitious mission, to achieve it we have some friends. The Bank of the Caribbean & El Banco del Progreso are two prominent private companies interested in social good. They eagerly reallocated their social assets from a traditional donation model to a social innovation. Apart from being the main financial contributors they have a lasting commitment of hosting career fairs upon graduation. This way Trueque can provide employment opportunities to further students development, closing the circle. Not pny benefiting kids but also the government:

Currently grade repetiton cost the government:

\$60,412.51 per student

Trueque implemented for the duration of one semester of the school year will result in a cost of:

\$4,250 per student

Trueque is about promoting social equality, by keeping kids motivated t go to school and being the bridge between schools in underserved, over looked communities and national employers kids can begin to have a fairer chance.



Special thanks to this women who knows too well how to go above & beyond.

Trueque was built by the intent, enthusiasm & knowledge of many people:

Cheryl Heller - Chair, Design for Social Innovation
Margarita Dargam - Educator and Research Proxy
Miya Osaki - Main Advisor
Tina Park - Main Advisor
Jaime Cloud - Education Advisor
Mayra Nunez - Photographer
Hilda Pellerano - Photographer
Edwin Erazo - Photographer
Eduardo Dargam - Photographer
Nicole Imbert - Child Behaviour Consultant
Dennis Simó - Banco Caribe - Partner & Funder

Dennis Simó - Banco Caribe - Partner & Funder

Appendix

Remote Research Tool Kit. Duquesa. Main Research Question: Why are some kids in the community going to school & other aren't?

Appendix A - Remote Research Tool for Proxy

Discussion Guide

Parents /

(name here)

Introduce yourself

Hello my name is Margarita and this is Edwin. First of all we want to thank you for being talking to us today we know that your time is important so we'll try to be brief. So, we are talking to you today because we want to learn about you, and your life and how is living in this community. We are very interested in anything you have to tell us, we have some questions but what we who really want is for this to be a conversation. You can ask me questions if you'd like at any moment. Another thing that is very important to tell you is that there are no right or wrong answers, we are really interested in how YOU think. For us to not miss anything important that you say we would like to record this, is that ok with you?

1. Basic Information:

Could you tell me your name and age?	What are their names and ages?
How long have you been living in this community?	Do they live with you?
How do you feel about living in your community?	Are they currently enrolled in school? (if so what grades)
What is your current occupation?	Do they go to school regularly?
Are you married? Do you currently live with your partner?	How many times a week do they normally go to school?
What does your partner do for work?	Have they told you about something they like about going to school?
Do you have children?	Did you go to school? (if so - until which grade)
How many children do you have?	Did your parents go to school?
	Do your parents live with you?

3. What is there Emotional Need?

Can you tell me about an activity you really enjoyed when you were a kid? You told me that you did/didn't attend school, would you have liked to? or what did you think of it? What difficulties did you have in your life then? What difficulties do you have in your life now? How does that make you fee?

what happened?			
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4. What do they Value?

Tool: Sorting Cards

Probe:"I want to do a quick exercise with you, I am interested in knowing what is important for you, there are no right or wrong answers, everyone is different and have their own opinions of what is important in their life. I am only interested in what is important to you. As you tell me what is aspects are important to you I am going to make a drawing in these cards that will symbolize it."

What aspects of your life are important for you?

- *YOU: Draw in cards what they tell you one quick doodle and word representative of the thing they value.
- * THEM :Ask him/her sort in level of importance take picture*

What aspects are important for you in your kids life?

- *YOU: Draw in cards what they tell you one quick doodle and word representative of the thing they value.
- * THEM :Ask him/her sort in level of importance take picture*

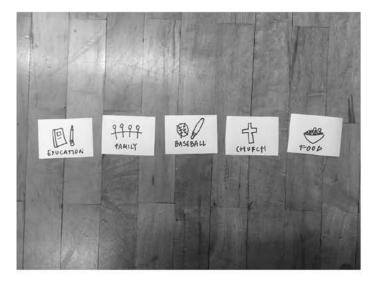
Notice if education shows up if so ask

I noticed that education is ranked number X - can you tell me why it's in that ranking?

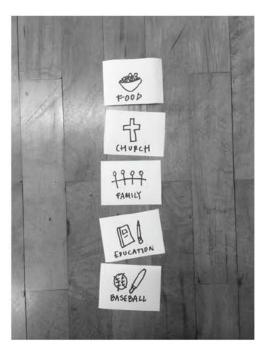
Notice if education does NOT show up & ask why it didn't

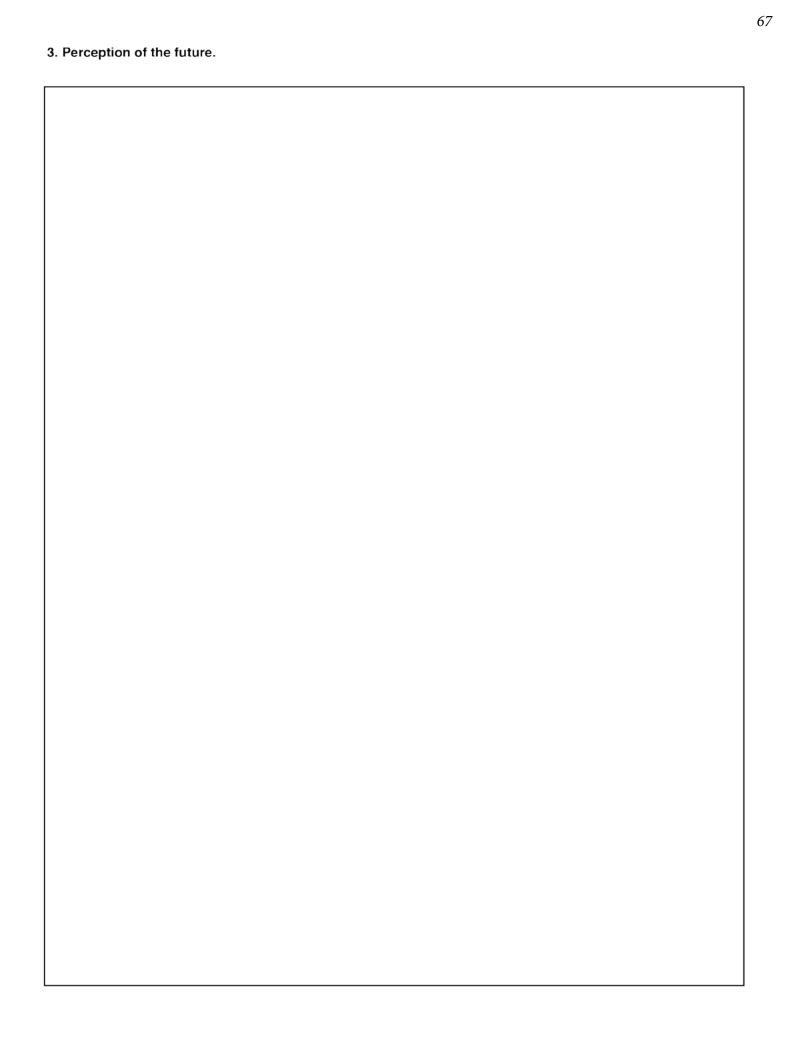
1. 2.

You set them like this, towards them.



They organize it this way, top being most important bottom least important





Discussion Guide

Schools /

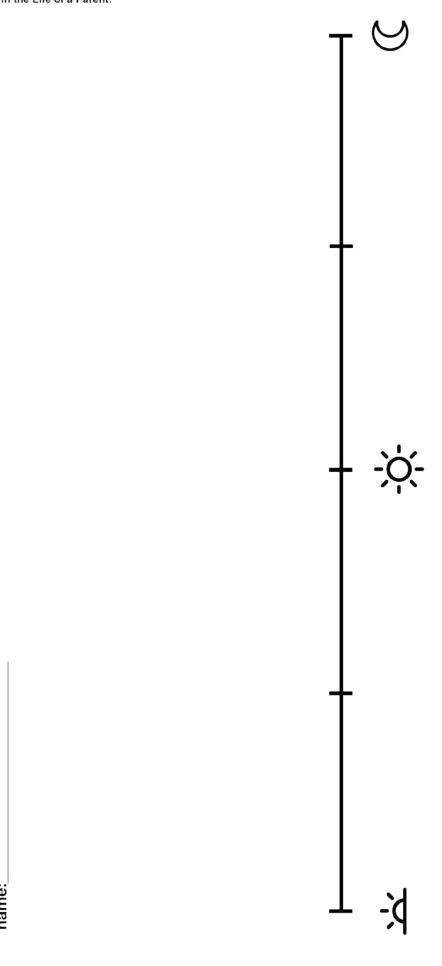
name here)

Introduce yourself

Hello my name is Margarita and this is Edwin. First of all we want to thank you for being talking to us today we know that your time is important so we'll try to be brief. So, we are talking to you today because we want to learn about you, and your life and how is living in this community. We are very interested in anything you have to tell us, we have some questions but what we who really want is for this to be a conversation. You can ask me questions if you'd like at any moment. Another thing that is very important to tell you is that there are no right or wrong answers, we are really interested in how YOU think. For us to not miss anything important that you say we would like to record this, is that ok with you?

(Could you tell me your name, age and rol?
	To what grade does this school teach?
	How many students are in the school / in your class?
,	How do you deal with absences?
ı	Do you have many students that are enrolled and don't attend class?
ı	How is the relationship with the parents of kids that are ussually absent ?
	To your perception - how are these parents atitudes and thoughts?
,	What are the barriers for kids to come to school?
ı	If you could change something about this what would it be?
	Could you walk us through a normal day in your life from the moment you wake up to when you go to bed?

A) Day in the Life of a Parent:



Appendix B- M&E Baseline Negative Behaviour Questionaire

71

Name:

Community of Origin:

Do you like coming to school?

Would you recomend you school to another kid?

Answer the following questions by a scale of 1 to 5 - 1 being doesn't happen to me - 5 happens to me often.

Last term how often were you bullied in the following ways:

Victimization Version (FBS-P)

I was TEASED in nasty ways

SECRETS were told about me to others to hurt me

I was hurt by someone trying to BREAK UP A FRIENDSHIP

I was MADE TO FEEL AFRAID by what someone said he/she would do to me

I was deliberately HURT PHYSICALLY by someone and/or by a group GANGING UP on me

I was CALLED NAMES in nasty ways

Someone told me he/she WOULDN'T LIKE ME UNLESS I DID what he/she said

My THINGS were deliberately DAMAGED, DESTROYED or STOLEN

Others tried to hurt me by LEAVING ME OUT of a group or NOT TALKING TO ME

LIES were told and/or FALSE RUMOURS spread about me by someone, to make my friends or others NOT LIKE me.

Perpetration Version (FBS-P)

I TEASED someone in nasty ways

I told SECRETS about someone to others to deliberately HURT him/her

I hurt someone by trying to BREAK UP A FRIENDSHIP they had

I deliberately FRIGHTENED or THREATENED someone

I deliberately PHYSICALLY HURT or GANGED UP on someone

I CALLED someone NAMES in nasty ways

I told someone I would NOT LIKE THEM UNLESS THEY DID what I said

I deliberately DAMAGED, DESTROYED and/or STOLE someone's things

I tried to hurt someone by LEAVING THEM OUT of a group or by NOT TALKING to them

I told LIES and/or spread FALSE RUMOURS about someone, to make their friends or others NOT LIKE them

Appendix C- Persona Cristofer 6th Grader



6th

73

duquesa community school

Waking Up

Cristofer is one of the 16 kids in the 6th grade of the community school of Duquesa. He lives at walking distance from his school. His mom wakes him up at 7am, he gets ready for school by changing and getting this math books into his bag, his mom makes him breakfast. He arrives at school at 8am, where he gets in the line of his grade. They pray and sing the national anthem and go to first period: Language Arts.

Cristofer

Eating Habits

At 9.30 he has breakfast *campito*, *relleno*, *masita*, ham and ice cream. He purchases his breakfast from a local seller that goes into the school, he pays \$30. At 10am he eats again snack that the school provides, juice or milk, bread or masita. He has lunch at home around 12:15pm right after school. His mom cooks him rice, beans, & meat. His dinner is around 9:00pm when he usually has apple juice, bread and cheese.

Likes

Cristofer really enjoys school, he likes to participate in class, especially in his favorite subject: math. He doesn't like science so much. After school he likes playing games with kids near his house, the group are regulars, some from school some from around down the street. The play Ron con Tazo and he almost always wins. They can spend the entire afternoon playing this game. He also likes to see soap operas with his mom at night.

What would Cristofer do if given 1,000 pesos?

"I'd give the 1,000 pesos to my mom, to help out." Cristofer lives with his mom and his two older brothers.

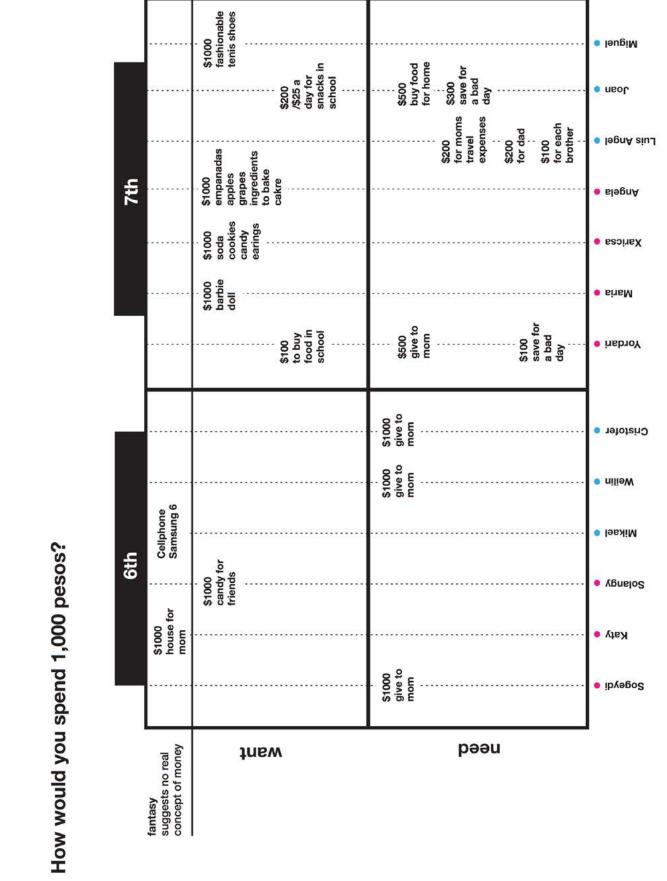
His mom works in a bodega in the mornings. His older brothers 17 and 16 of age, work in metal cleaning and carton collecting. They collect carton from the landfill and sell it to buyers. Cristofer sometimes helps his brother by cleaning metal before selling. Their stand is in the edge of the landfill.

Cristofer's Expectation of Changing Schools

Cristofer wants to continue his education and is excited of going on to 7th grade. He is nervous to go to La Gina because he heard his aunt talking about how they expelled his cousin last week. He is scared he'll get picked on by kids from other towns or expelled like his cousin. He doesn't mind the walk to school he's walked it before with his brother once. He also hears his teacher talk about how they have to be extra good and disciplined when they go to the new school because kids from Duquesa have a bad reputation. He says he will be good and work on his math.



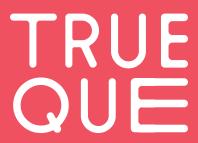
Classroom 6th Grade Duquesa Community School



75

Appendix D - Analysis 1,000 pesos Cultural Probe





Masters of Design for Social Innovation Thesis from the School of Visual Arts New York City, May 2017

By Karla Despradel