DPMI+
Final Deliverables

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PEACE CORPS VOLUNTEER
NICARAGUA 2013-2015

Environmental Education Sector

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Introduction To Deliverables

The deliverables presented in this document are the result of the work I conducted with my primary partnering organization, the municipal Ministry of Education in my site placement of San José de los Remates in Boaco, Nicaragua, from 2013-2015. As a Science teacher charged with facilitating the effective integration of Environmental Education and its practical application into the existing Science curriculum, I executed my job by a two fold strategy; the first component consisted of co-teaching Science classes with 4 teachers in 3 separate schools (2 rural and 1 urban); the second component consisted of facilitating monthly Teacher Trainings for the primary school teachers in my municipality.

The 5 tools and frameworks outlined in this document come from the DPMI curriculum and are what I implemented with a range of personnel within the Ministry of Education, including teachers, Principals, and the Municipal Superintendent. They include a Problem Tree, Results Framework, Comprehensive Intervention Design, Training Module, and a Participatory Needs Assessment. These tools were implemented within the framework of the Environmental Education Sector of Peace Corps Nicaragua, which focused on increasing teacher capacity to effectively teach Environmental Education, and the Environmental Education attainment of students in our municipality.

Problem Tree

Context:

In San Jose de los Remates, a rural municipality of 8,000 people located in the mountains of Boaco, consisted of a central town surrounded by 16 rural communities, within which students face unique challenges in relation to their access to and quality of education. Due to the expanse of farming land of property owners, many of my students often had to walk up to an hour to arrive at school. Both of my rural schools were one room schools with one teacher in each school. One was located in "the dry zone" and the other in "the humid zone," each zone having one principal in charge of visiting 16 schools at least one time over the course of each month, which left very little room for quality teacher feedback. Due to lack of transportation and difficulty in reaching rural schools, principals would often visit 2-3 schools on each of the days when they supervised schools. All of the teachers with whom I worked had at least some post-secondary teacher-preparatory coursework. However, the teaching methodologies of my teachers consisted primarily of rote-memorization methods. Teachers were rarely provided with teaching materials, and were expected to comply with ambitious learning objectives calling for ever-increasing engagement with students without a realistic ability to carry out their job effectively.

Rationale and Justifying Data:

In order to understand the intricacies of the education system, I began my service by conducting a Teacher Needs Assessment, as well as creating a Problem Tree, in order to get a wide perspective of understanding in relation to how the education system played out on a

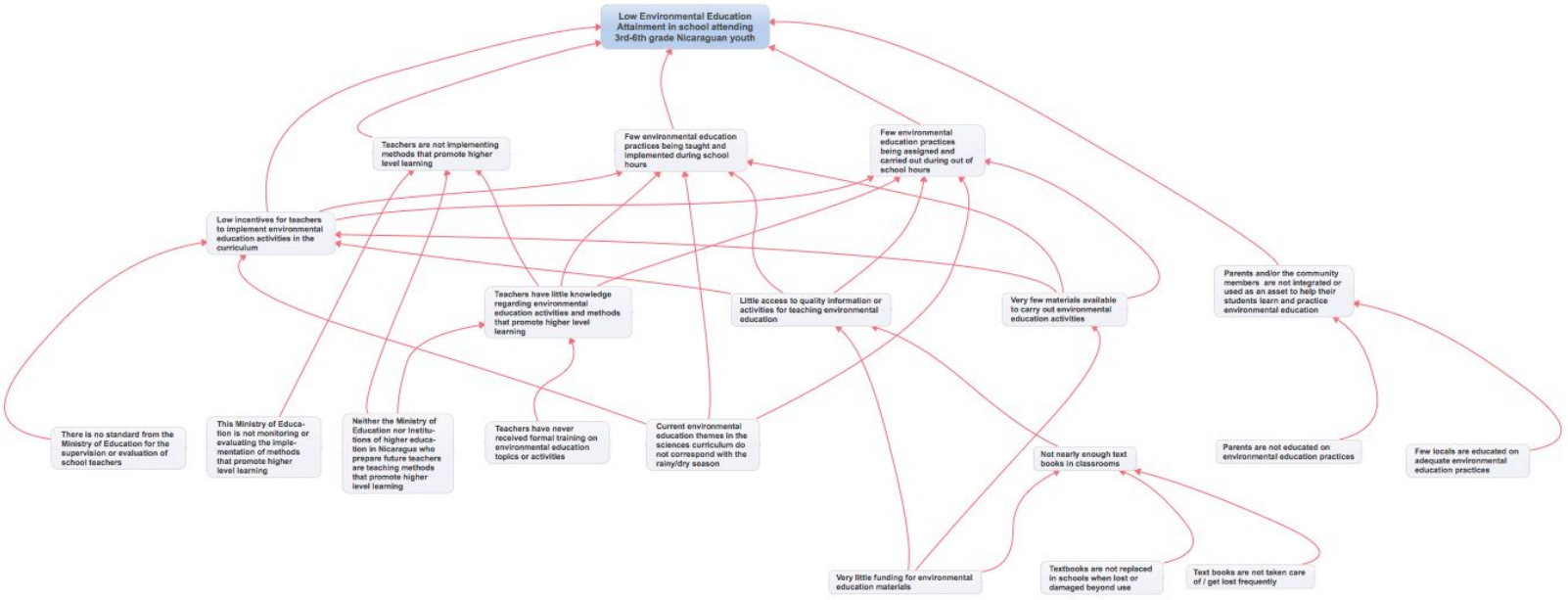
practical level. I consulted teachers, principals, community members, and observed the reality of how the education system functioned compared to how teachers and administrators described it.

The Problem Tree served four purposes in relation to my primary job in the Peace Corps as an Environmental Education volunteer; the first was to define what one most important problem needed to be addressed in our local education system; the second was to better understand the complexity of our situation as a teacher in the public school system; third was to see the linkages and interconnectedness of the various elements; and fourth was the Problem Tree's use as a decision making tool to choose which underlying aspects the local stakeholders and I were going to tackle. Intrinsic in that decision-making was a conversation about the prioritization of which sub-problems we would choose to tackle, using our limited resources, in order to cause a change in the higher level problem, which we determined to be *Low Environmental Education Attainment In Nicaraguan Youth Among Active 3rd-6th Grade School Attending Youth*.

The real value of the Problem Tree was our ability to visually portray that, in order to engage certain issues, we needed to tackle others, and thus develop a clear route to a coherent intervention strategy. Implicit in our strategy was deciding what issues *not* to engage in, which the Problem Tree also helped us to do. With scarce resources (principal among them were time, people, finances, and materials), we decided to eliminate from our strategy all factors outside of teacher trainings, classroom teaching, and parental engagement. This left out factors such as addressing the lack of textbooks, little classroom supervision of teachers, and the little financial disbursements that went toward Environmental Education-related materials.

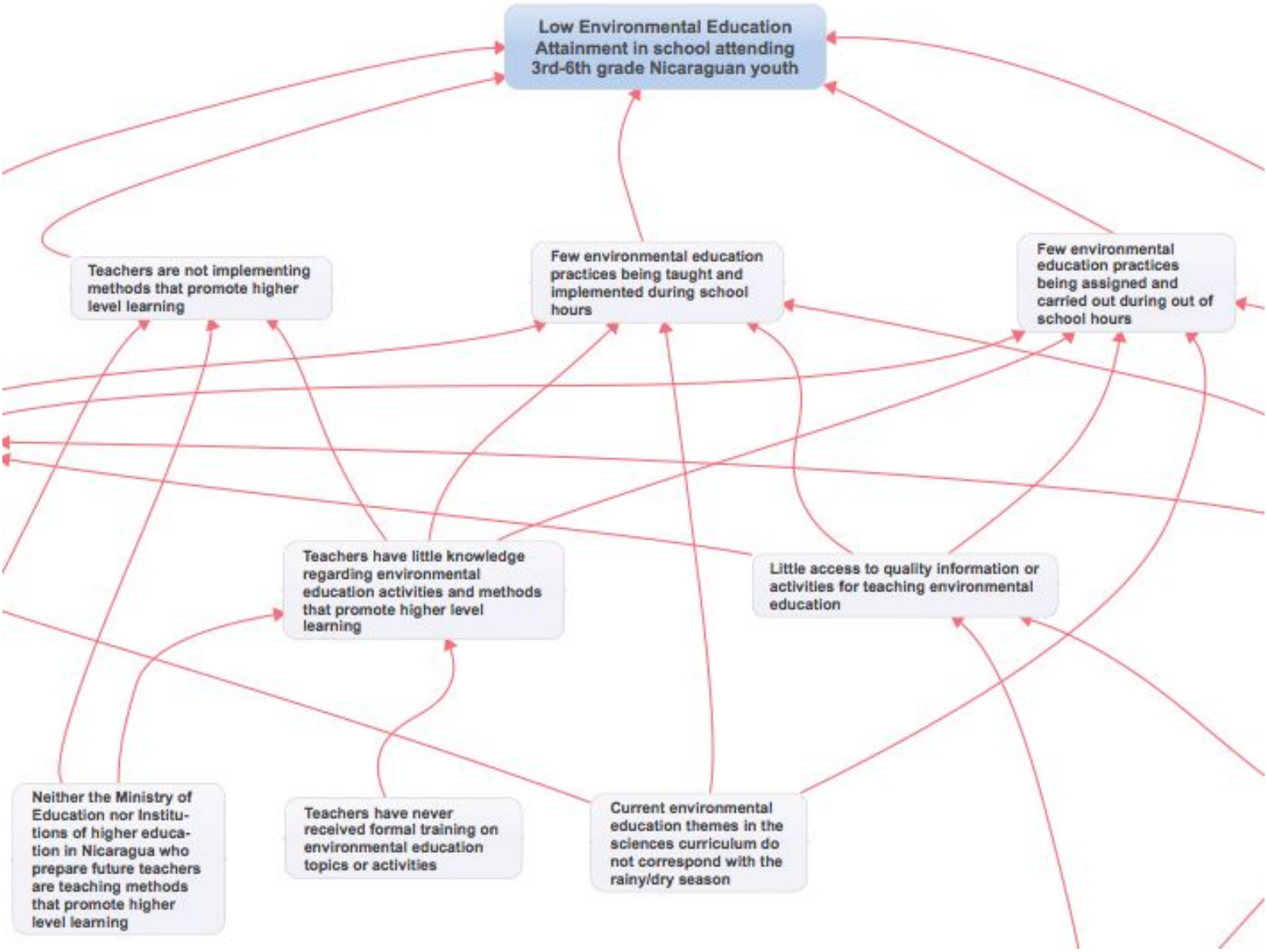
With a more focused approach, we were still able to address the roots of what we perceived to be feasible underlying issues leading to the low Environmental Education attainment of our students.These decision were ultimately made by myself and my Project Specialist, Lissette Carranza, and the Director of the Environmental Education sector, Maria Antonia Mallona. Regardless of choosing not to engage all of the underlying roots of this problem, having an understanding of the bird's-eye view of what factors contributed to this lack of Environmental Education attainment put myself, my Peace Corps staff, my teachers, and the school administrators on the same page, with a clear path forward.

Graphic 1: Problem Tree



(For a larger version, see Appendix: Item 7, for a vertically-positioned Problem Tree)

Graphic 2: *Zoom-In Of Central Portion of Problem Tree*



Participatory Needs Assessment

Context:

The Peace Corps staff encouraged each PCV to create and conduct a Teachers Survey in order to gain an understanding for the areas in which the principals and myself were going to engage with the teachers. We were given a template of Teacher Surveys conducted previously by other PCVs, and we had the opportunity to modify that survey based on our local context. The goal of the survey was to gather a rapid assessment of teachers' existing knowledge of Environmental Education, their interests related to Environmental Education, their interests in other topics they believed they could benefit from learning, as well as for myself to see with which teachers I could work best with. Since PCVs were encouraged by Peace Corps staff to design and conduct this survey at the beginning of our time in site, a byproduct of the survey implementation process was the opportunity to introduce ourselves to the teachers and administrative staff, explain our role, gain rapport, and generally get to know on a personal level the people we would be working with for the following two years.

The survey I gave to the teachers was three pages in length (see Appendix: Item 1) and was designed to take roughly 5-10 minutes. One of the most important components of the survey was a section in which teachers were encouraged to choose which topics they would like to learn about, from a given list (see Appendix: Item 2 for Municipal Results, Item 3 for Example of Individual Results). The teachers had to rank their preferences in order. The principals and myself collaborated in the design of the survey itself, in order to establish which topics we would include in this section. Integrating the principals in this process proved to be an invaluable step I took, because they had a vested interest in what topics they believed their teachers could benefit

from and were interested to see how their perspective would correlate with what the teachers themselves chose. These would be the very same topics from which we would select one topic as the topic of the monthly Teacher Training conducted with all teachers in each rural and urban zone. An additional benefit to involving the principals is that when the monthly all-staff meetings came around, I did not have to pitch to the principals the idea of giving a training on a certain topic; they were already knowledgeable about what the topics would be. Additionally, when I ended up asking the principals to help me evaluate whether some of the teachers were actually implementing the topics that were given during the teacher training sessions, they were enthused to see the progress that the teachers were making on the topics that both the teachers and the principals themselves had decided upon, and thus agreed to help.

Rationale and Justification:

As part of my requirement by Peace Corps within the Environmental Education sector, I had to choose 4 teacher with whom to work over the course of the school year. In order to select my teachers, I decided to include a section in the survey where teachers assessed themselves in regard to in which areas of Environmental Education they perceived as being competent. This gave me the opportunity to determine whether the teacher would be a good fit to work with an Environmental Education PCV. For example, if a teacher assessed themselves as already being highly competent in the Environmental Education topics listed in the survey, as well as already engaging their students in several hands-on Environmental Education activities, I would likely determine this teacher *not* to be one of the teachers with whom I chose to work with. I preferred to choose teachers who demonstrated a combination of 1) a high interest in learning and

incorporating Environmental Education topics and activities in their classrooms, and 2) had relatively *low* knowledge of Environmental Education and thus had low engagement with their students in relation to Environmental Education activities. As long as teachers demonstrated their willingness to learn and implement activities, they stood out to me as a prime candidate with whom I would be interested in working.

Furthermore, the Teacher Survey helped me get to know the interests of the teachers, why they enjoyed teaching, and a little bit about their personality. With respect to their interests within Environmental Education, I had basis for which to search for materials individualized to the topics and activities of each teacher's interest, as well as the unique way in which they wanted to carry out that given topic/activity. For the teachers with whom I did not end up working with, I still provided them information regarding the areas of Environmental Education that interested them.

Results Framework

Context:

Within the first few months of working in San Jose de los Remates, my teachers, school administrators, the Peace Corps staff, and myself contributed in forming our Problem Tree, as well as the Teacher Survey. The Results Framework for us was a straightforward, causal pathway which enabled us to visualize what outcomes needed to be in place in order to achieve our goal of increased Environmental Education attainment by our students. This tool went hand in hand with our Problem Tree, and was essentially carried out at the same place and time, however, over the course of the school year, we constantly updated and changed the mechanisms

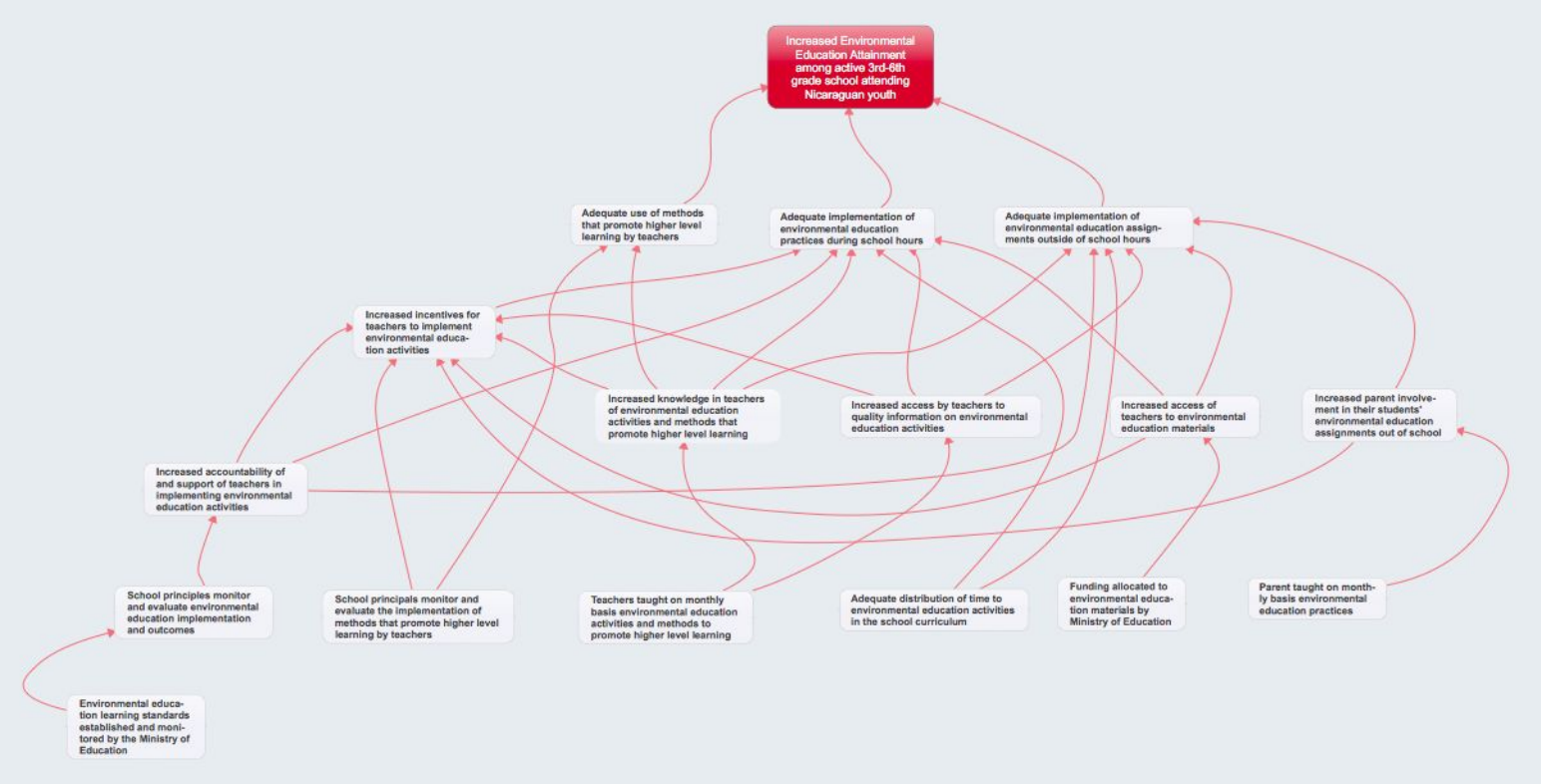
we used to monitor and evaluate our strategy to make them easier for the school administrators, teachers, and myself, to execute.

The monitoring and evaluation of our strategy (as further described in the Comprehensive Intervention Design, and can be found in Appendix: Item 4) fell primarily on the shoulders of my teachers and myself. The principals aided in collecting basic data from teachers who participated in the monthly teacher trainings, but whose school locations prevented my teachers and I from from being able to collect that information ourselves. Since the principals were only required to visit each school one time each month, the data they collected was a simplified version of the monitoring and evaluation system my teachers and I used in our schools.

Rationale and Justification:

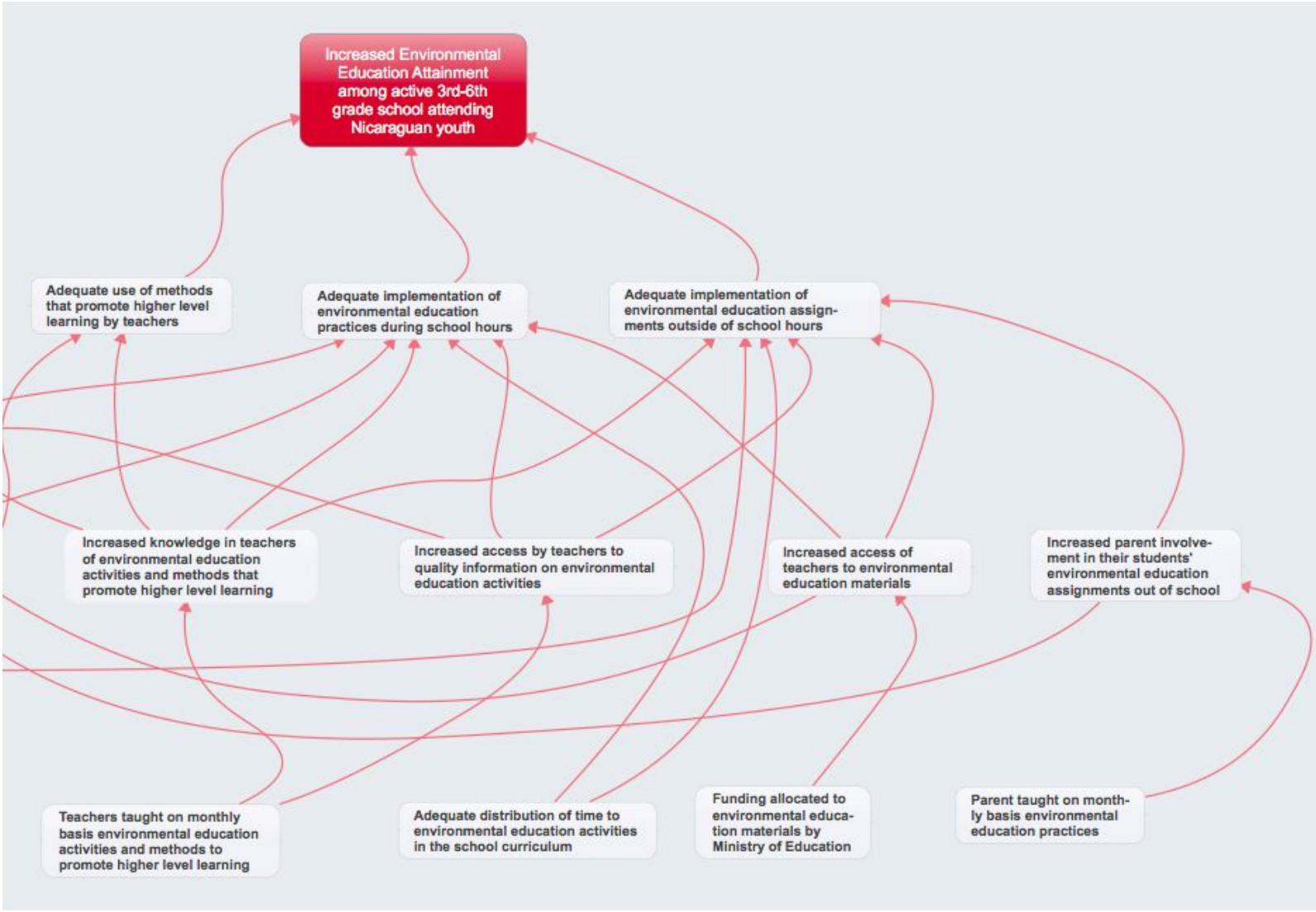
We incorporated elements of a logic model in terms of defining exactly what were the inputs we would need. Since resources were limited, chief among them being human, financial, meetings, and meeting spaces, our awareness of those limitations helped us in determining how we would need to prioritize reprioritize the initiatives we chose to undertake as we learned "on the go." In order to have a more refined and realistic strategy, which we implicitly believed that by treating our Results Framework as an "iterative process," or in other words, refining the results and the way in which we collected those results, we would increase the likelihood us us achieving the goal of increased Environmental Education attainment of our students.

Graphic 3: Results Framework



(For a larger version, see Appendix: Item 8, for a vertically-positioned Problem Tree)

Graphic 4: *Zoom-In of Central Portion of Results Framework*



Comprehensive Intervention Design

Context:

With the Problem Tree and a Results Framework as a guide, I was able to look at what stakeholders I was working with, the resources at our disposal, and the Environmental Education

attainment goals of the Ministry of Education in order to design a coherent, realistic intervention that would be sustainable after my part as a facilitator of the intervention was completed. My unique position within the local Ministry of Education allowed me to be able to be the connector between the actors and resources required to tackle the issues that we had chosen to address in our Problem Tree. By the time we finished our Problem Tree, the principals and myself received the Teacher Surveys from the teachers themselves, collected at the second all-staff meeting, which was held on a monthly basis.

Rationale and Justification:

As stated in the Needs Assessment, the primary component of the Teachers Survey was a list of common topics related to teaching (see Appendix: Item 1) that the teachers were asked rank in order of what they perceived as the topics that they could benefit most from learning. The topics included in the Teachers Survey were decided upon by my principals and myself. We conducted the survey by way of handing out paper copies of the survey to teachers in the first all-staff meeting and asking them to return it to us. We conducted our survey with teachers from the various communities in our county, in order to analyze the results and design a series of teacher trainings in order to meet the needs expressed in the surveys. I also gave the same Teacher Survey to my principals and asked them to fill out in what areas they thought their teachers could benefit most.

I then compiled the results from both parties, and presented them to my principals to keep them appraised, as well as to decide together the order of topics which would be presented in the monthly all-staff training sessions. As part of our Intervention Design, we decided it would be

best for me to work on one topic with the teachers with whom I worked, with the end goal being that one of those teachers who grasped the topic well over the course of the month would be the same teacher who would co-facilitate the Teacher Training with me at the following monthly all-staff teacher training. This intervention fit well into the Problem Tree because it allowed us to address one of the primary underlying issues - teachers having little knowledge regarding Environmental Education activities and methods that promote higher level learning.

As part of the intervention design, I started working one-on-one with 4 teachers, and once a month one of them and myself began facilitating training sessions for the rest of the teachers. Every 3 months, my teachers and I would conduct a review to assess which strategies we had used in relation to that one topic had worked well, and which did not. Since I did not have access to many of the teachers in certain rural areas, the principals of those schools agreed to monitor the results of what new environmental strategies the teachers were implementing. Every 3 months the above cycle would repeat and I would send to my Peace Corps staff a results sheet (see Appendix: Item 5), along with the materials we used. I then uploaded these results to the folder in Google Drive which my fellow PCVs and I contributed to as a way of sharing which activities and tools worked best, as well as the facilitation plans so that they could then replicate the trainings in their own sites.

The final component of the Problem Tree which we addressed with our Intervention Design was a way to integrate parents to help students practice their Environmental Education activities. My teachers and I decided to tackle this by taking advantage of the pre-existing monthly parent meetings at the schools. We appraised the parents on what the focus of the upcoming lessons would be, and explained to them the project(s) that their students would

engage in, and finally in what way we would like them to support their kids. By explicitly stating clear expectations for the students, we were also educating parents on the criteria for which we would assess the students, creating clear accountability between all parties. Parents became engaged with their students and their projects in ways they were not involved before, and parents themselves learned alongside their kids the themes we were covering in our units.

Training Module

Context:

The topics included in the Training Module were the same 10 topics which my principals and I had agreed upon as the 10 most pertinent topics needed to be included in the Teachers Survey (see Appendix: Item 6 for examples). With the school year being 10 months in length, this gave us the opportunity to facilitate one topic each month in the monthly all-staff meeting, for the duration of the school year. The order in which we would present the topics to the teachers came directly from the results of their Teacher Surveys, where they were asked to rank which topics interested them most. As described in the Comprehensive Intervention Design, I would work with my four teachers on a given topic they had chosen out of the 10 they had ranked on their Teacher Survey.

Rationale and Justification:

Co-facilitating the all-staff Teacher Trainings with one of my four teachers proved to be invaluable to the success of each training due to the fact that the Nicaraguan teachers would often explain an idea or concept that I was trying to get across to the rest of the teachers far better

than I ever could have. Sometimes I still felt that, due to having to co-facilitate the trainings, we sometimes had to sacrifice the depth and breadth of the content given in the training. However, in the end, it paid off, because upon evaluating whether teachers ended up actually implementing what we taught them in the Teacher Training, the results were much more rich when I had a co-facilitator compared to the Teacher Trainings that I had facilitated alone. Moreover, I perceived the other teachers to be much more engaged and actively participating when my co-facilitator was one of their fellow colleagues.

Overall, the Training Module reached over 60 teachers from 3 different school districts, including both urban and rural school teachers. Included in each training was an assessment of the knowledge they gained as a result of the training, as well as an assessment of my role as a facilitator of the training. In terms of evaluating the extent to which the teachers ended up implementing the content taught in the Teacher Training, that role was often carried out my three principals, who had better access to the 23 schools (mostly rural) that they were in charge of. In my own schools, I carried out the monitoring and evaluating of the content that was taught during the Teacher Training.

In the end, an added benefit of facilitating the Teacher Trainings was that they helped me to get to know many teachers, increase my visibility, and learn from their years of teaching, as I often asked for their inputs and ideas at the beginning and end of each training.

Conclusion

I can point to the above 5 tools and frameworks as a basis for the deep understanding I gained in relation to how effective development sometimes works, and how it sometimes does

not, but in the end, I don't really think I learned anything that any other PCV didn't learn; it's just that mine happened in a different context, with different plots, people, and stories. Tools and frameworks become pretty easy to use, with practice. Facilitating can be pretty easy, too, with lots of practice, patience, and reflection.

However, the real taxing work is meeting the right people, and being consistent and persistent. It's showing up when you're supposed to, and checking in and checking up, to see how things are going. It's doing the arduous work of somehow trying to read people, decipher meaning in a language that is not my first, in order to determine if the person or persons are not only interested in taking action, despite what they say, but actually walk the walk and prioritize the time to plan and take the action from that plan. And then, to keep trying after it doesn't work - and not giving in and going and doing it on your own. That feels good to actually do it on your own - to feel movement with a project - to feel progress, albeit the short lived progress that comes from someone doing something on their own, which will surely fade away just as quickly as it was constructed, once the constructor leaves his design. The tools are actually much easier to implement when you are the only one who uses them. It becomes quick and easy. However, one thing I have learned is that more often than not, the long-term benefits and positives results of an intervention are directly proportional to the amount of relevant stakeholders who contribute quality time to the use of a tool or framework to guide their planning and execution of the intervention.

Furthermore, my experience using the tools and frameworks from DPMI was not confined to the start time and end time of the 90 minute sessions I facilitated. I like to think of the hard work of getting the right people to come to the meeting as *far* more important to the

success of a tool than just an hour inside the room using the tool itself. That's why when I talk about my conclusions in regard to what I learned from my use of the tools from DPMI, I talk about much more than the tools themselves.

As someone like myself who is analytical and data-driven, I am grateful to have, in the end, seen the fruits of my investment. It was wonderful, and painful in other times, truly painful, to use the tools and frameworks from DPMI to see and feel what it's like to try in the midst of a situation that seems impossible, because the right use of tools can give you insight into that kind of thing. I am someone who doesn't ever give up. I want to emphasize that I am absolutely *not* saying that as something that is positive. On the contrary; I think people need to learn how to give up on some things when it's not working out. With several projects outside of my primary job, I pressed and pressed and pressed. Who knows whether I should have given one initiative a rest and tried another. But what I *am* saying that something positive about me is that I actually have the audacity to believe in what I do, and in myself. Tools can not teach you that, but trying to get the right people in the room, and talking to people, and learning about them and from them - *that* is what the *process* of trying to use the tools can teach you.

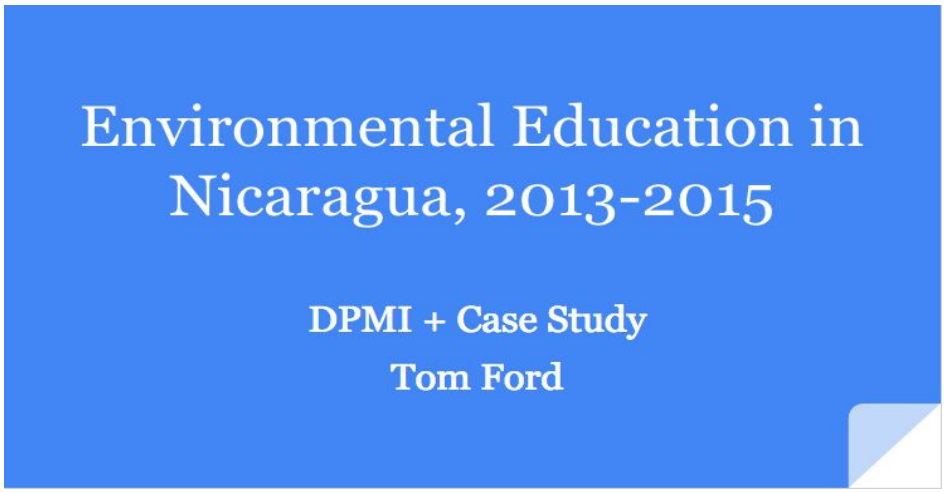
I hated seeing apathy in so many people's perspectives toward their own community development, from local community members, to staff in the school system, and even in a significant portion of the other PCVs, because of the perceived impossible situation and impossible improvements that need to be made for kids to learn and think on a high level. Well, one thing I learned about myself is that for better or for worse, I don't give up and I don't stop feeling motivated, despite how grim an Empathy Map looks. So, the lesson here is that, by way

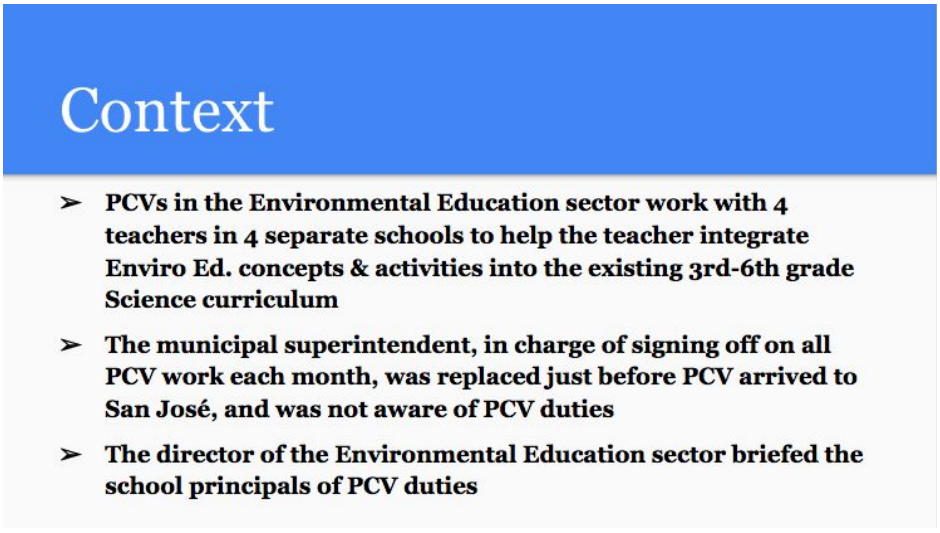
of trying to use tools, you can sometimes develop as a person, and learn about yourself, and about what makes you unique. In other words, you can learn about what sets you apart.

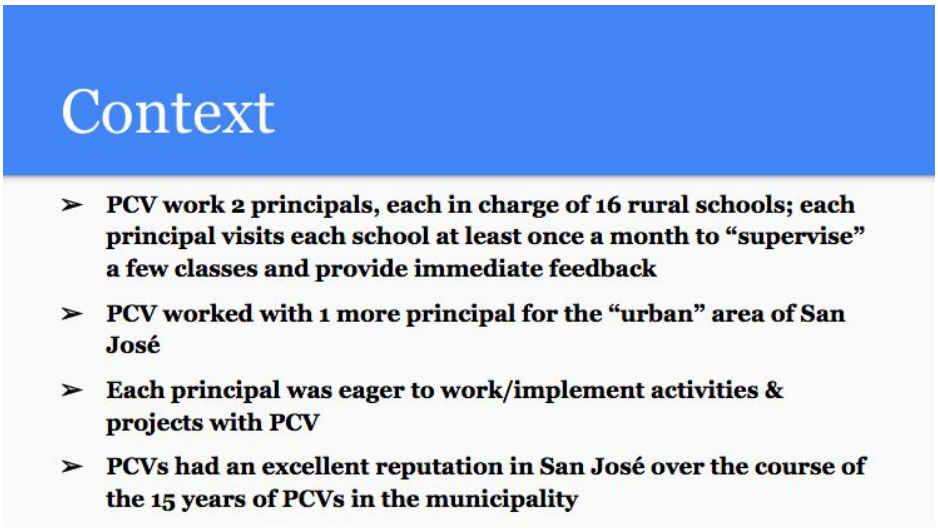
I think ultimately that led to some serious emotional highs and serious emotional lows because of the significant mental investment I made in what I did. But I think there is a stark difference between pressing on, giving up on an issue (ie having the wisdom to determine when an initiative is just not going to get the momentum going) and another alternative, apathy (ie a general sense of "I'm over it," and the look of having the wind totally and utterly taken out of one's sails). Once you reach the point of apathy, there is rarely coming back, from what I have seen. I am so thankful I never felt that. But I truly feel bad, almost sad, for people when they do that to themselves, because what could be worse than giving in, and not shooting for one direction or the other, or at least changing course, in order to hope for and work toward progress. In my opinion, once someone gives in, they are looking from the outside in. I will always prefer to be "the man in the arena," the one who others are looking in toward, who keeps going.

> "It is not the critic who counts; not the man who points out how the strong man stumbles, or where the doer of deeds could have done them better. The credit belongs to the man who is actually in the arena, whose face is marred by dust and sweat and blood; who strives valiantly; who errs, who comes short again and again, because there is no effort without error and shortcoming; but who does actually strive to do the deeds; who knows great enthusiasms, the great devotions; who spends himself in a worthy cause; who at the best knows in the end the triumph of high achievement, and who at the worst, if he fails, at least fails while daring greatly, so that his place shall never be with those cold and timid souls who neither know victory nor defeat." **— Theodore Roosevelt**

Case Study


Environmental Education in Nicaragua, 2013-2015
DPMI + Case Study
Tom Ford


Context
PCVs in the Environmental Education sector work with 4 teachers in 4 separate schools to help the teacher integrate Enviro Ed. concepts & activities into the existing 3rd-6th grade Science curriculum
The municipal superintendent, in charge of signing off on all PCV work each month, was replaced just before PCV arrived to San José, and was not aware of PCV duties
The director of the Environmental Education sector briefed the school principals of PCV duties


Context
PCV work 2 principals, each in charge of 16 rural schools; each principal visits each school at least once a month to "supervise" a few classes and provide immediate feedback
PCV worked with 1 more principal for the "urban" area of San José
Each principal was eager to work/implement activities & projects with PCV
PCVs had an excellent reputation in San José over the course of the 15 years of PCVs in the municipality

Context

- Each month, all 60 teachers in the municipality have an all-staff meeting with principals to conduct Teacher Trainings, give updates on new and existing initiatives, and plan monthly coursework
- Over 90% of the schools are rural and have between 10 and 40 students, normally with only one teacher in each school
- PCV had only 3 months of Spanish language training prior to arriving in San José
- PCV worked in 4 schools: 3 rural and 1 urban

Key Stakeholders

- Key Stakeholders: A recently-appointed Superintendent, 3 principals, 60 teachers (35 rural, 15 urban). All teachers were from the urban area, but some lived in their school's community
- PCV conducted a Teacher Survey (a needs assessment) to determine which teachers were interested in working with a PCV, their knowledge of Environmental Education, and their experience implementing environmental activities in the classroom

Key Stakeholders

- Teachers had a common sense of being "in it" together; not provided materials, little supervision or guidance, little if any college, no water/electricity in schools, worked in very impoverished communities
- Teachers were highly regarded by community members, developing a relationship through monthly parent meetings
- Teachers for the most part had a positive professional relationship with their corresponding principal

Issue/Problem Identification

- **PCV was placed in 4 schools, whereas most PCVs conducted a Teacher Survey with all municipal teachers to identify the 4 most willing and able to spend time working with a PCV to integrate Environmental Education activities**
- **The 4 teachers with whom the PCV was placed had little to no knowledge of Enviro Ed or how to implement environmental activities**
- **No resources were provided by the Ministry of Education to implement Enviro Ed. activities in schools**

Issue/Problem Identification

- **The 4 teachers, although stating that they were willing to invest time to work with the PCV, did not fulfill the teacher-PCV working agreement as explained and written by Peace Corps staff, and explained verbally by PCV**
- **The 4 teachers relied almost solely on PCV to implement the Enviro Ed. activities, nullifying the PCVs purpose of training local teachers in Enviro. Ed knowledge and activities**

Issue/Problem Identification

- **PCV perceived teachers as seeing Enviro. Ed. activities as just one more exhausting requirement from administrators**
- **In the first school year, Peace Corps staff visited the PCVs schools and teachers 2 times, however the situation did not improve**
- **Only one of the four teachers were interested in helping the PCV facilitate a monthly All-Staff Teacher Training (a training encouraged by Peace Corps staff as well as the principals)**

Issue/Problem Identification

- **Without adequate teacher investment, monitoring and evaluating their progress fell all but completely to the wayside**
- **Without adequate teacher investment, any effort to encourage parents to aid in helping their students implement Enviro. Ed. activities outside of the classroom was not prioritized, or left to the PCV to facilitate that portion of the meeting, resulting in lackluster participation levels**

Recommended Course of Action & Rationale

- **After meeting with Peace Corps staff at the end of the school year, PCV and staff decided that, upon reviewing efforts and intended results, the PCV would choose their own teachers the following school year, which would increase likelihood of better results.**
  - **Outcome: PCV conducted a Teacher Survey (needs assessment) with all 60 teachers to determine teachers interested in working with PCV, knowledge of Enviro Ed, and experience implementing Enviro Ed activities**

Recommended Course of Action & Rationale

- **Designed a Teacher Survey focused on finding out who is truly <u>interested</u> in implementing Enviro Ed activities. PCV believed that finding interested teachers would yield the greatest results down the line.**
  - **Outcome: By asking for examples through open-ended questions, as opposed to multiple choice, PCV gained deep insight into which teachers the PCV perceived as being truly interested and willing to invest the time**

Recommended Course of Action & Rationale

- **The PCV, with an additional year of improved Spanish, explained clearly in writing the role and expectations of the Teacher-PCV partnership, asked teachers to reiterate, and PCV then clarified verbally, in order to establish as best possible a transparent working relationship to increase likelihood of teacher participation**

Recommended Course of Action & Rationale

- **The Teacher-PCV partnership was *guided by monitoring and evaluation of the teacher and students in regard to Enviro. Ed. practices,* which were agreed upon first by Peace Corps staff and PCV, then teachers. By holding teachers and PCV responsible each month, PCV believed they would see the most consistent results.**

Recommended Course of Action & Rationale

- **The teachers and PCV agreed on which Enviro. Ed. practices would be implemented each month, guided by the content in the Science curriculum, teacher interests, and and a list of possible activities the PCV prepared for the teacher to choose from, in an effort to maximize stakeholder buy-in**

Recommended Course of Action & Rationale

- **PCV outlined the expectations of the PCV, principals, and Peace Corps staff in regard to co-facilitating monthly Teacher Trainings for rest of teachers. By stating expectations ahead of time, teachers and PCVs would have an expectation to be held accountable for.**
  - **Outcome: All teachers followed through with co-facilitating monthly Teacher Trainings, and demonstrated eagerness to share their new hands on (and fun!) Enviro Ed activities with their colleagues.**

Recommended Course of Action & Rationale

- **By choosing 4 teachers, PCV believed teachers would be more inclined to prioritize parent participation and integrate them into Enviro Ed activities.**
  - **Outcome: PCV and the 4 new teachers had excellent participation with parents, utilizing the local resources in an effort to maximize the potential of Enviro. Ed. activities**

Key Lessons Learned

- **Setting clear expectations, by way of all parties agreeing on a timeline of monitoring and evaluation for the expectations, is vital**
- **Not succeeding the first time is not the problem - that should be expected for a young development practitioner - the key is finding a practical way forward, with the aid of useful tools and principles, and believing in them and yourself**

Key Lessons Learned

- **Any project, large or small, needs significant buy-in from primary stakeholders for lasting impact**
- **Gauging stakeholder interest comes down to asking the right questions to the right people (who may not be the person you thought it would be) and going through the right process to make sure you are following your rationale, or theory, for change**

Appendix:

Item 1: Teacher Survey:

ENCUESTA A PROFESORES
PROGRAMA DE EDUCACIÓN AMBIENTAL

Nombre:_____ **Fecha:**_____
Escuela en que trabaja: _____ **Número de teléfono** _____

Quien soy?: Soy Tom Ford, un voluntario del Cuerpo de Paz, un organismo internacional de los Estados Unidos; este organismo trabaja en diferentes países para ayudar en desarrollo. Yo trabajo con el sector de Medio Ambiente apoyando al MINED dentro de las clases de Ciencias Naturales en primaria, de tercero a sexto grado.

¿Cuál es el propósito del intercambio?

El propósito es compartir nuestros conocimientos de la enseñanza, de manera que compartamos nuestras fortalezas, para que cada uno de nosotros salga mejor como maestro(a). Estoy buscando a los maestros quienes estén emocionados y dispuestos de probar nuevas estratégicas, a la vez compartir diferentes técnicas y disfrutar la experiencia de trabajar como equipo dentro de la clase de Ciencias Naturales.

Utilizamos una metodología que se llama *aprendizaje participativo*. Este aprendizaje incluye además de la información que el docente proporciona a los alumnos, la información que los alumnos aprenden a través la experiencia participativa y activa entre ellos mismos.

¿Cuál será mi aporte al aula?

Aportaré experiencias utilizando las siguientes técnicas de la enseñanza. Por favor, seleccione unas 3 o 4 áreas en las cuales está interesado(a) en aprender más del asunto:

( ) Una variedad de maneras de calificar (formal o informal) las tareas, tanto como el comportamiento
( ) Técnicas de lectura para mejorar el aprendizaje de sus alumnos mientras que copien y lean los textos.
( ) Desarrollo de clases participativas (utilizar las experiencias y expectativas de los alumnos para enriquecer una clase, adaptación de la información para sus vidas individuales, utilización de exposiciones en grupos)
( ) Plantillas para planificar puro grado y multigrado – para aprovechar al máximo el tiempo
( ) Diferentes técnicas para controlar el comportamiento
( ) "La pirámide de aprendizaje": incluye técnicas que resultan en un mejor aprendizaje, así como técnicas que no promueven el aprendizaje
( ) Dinámicas y actividades que incluyen a todos los alumnos y promueven más aprendizaje.
( ) Integración de manualidades en Ciencias Naturales para facilitar más aprendizaje de ciertos temas
( ) Utilización de tarea de dibujos eficazmente (y como no se usa) para demostrar comprensión del contenido (principalmente con temas que consta de varias partes. Ej: Partes del cuerpo humano. Partes de la planta)
( ) Organizadores Gráficos para que los alumnos comparen, contrasten, y categoricen la información

Si usted está interesado(a) en la idea de integrar en su aula las técnicas mencionadas anteriormente, a mí me gustaría la oportunidad de trabajar y aprender de su experiencia y sus habilidades también! El siguiente espacio es para sus comentarios:

_____

_____

_____

¿Cómo funciona el intercambio?

-Primero, voy a observar su clase para conocer más de usted y de sus estudiantes.

-Después de que nos conozcamos usted, sus alumnos, y yo, empezaremos la parte más importante del intercambio:

La ***co-planificación*** y la ***co-enseñanza***, dentro de la clase de Ciencias Naturales.

- ✓ Llevamos a cabo la *co-planificación* de manera que, un día a la semana (durante media-hora a una hora), compartimos nuestras ideas y creamos juntos el plan para la siguiente clase
- ✓ Para la *co-enseñanza* durante la clase de Ciencias Naturales, compartiremos la enseñanza para implementar y aprender el uno del otro

Las siguientes preguntas recogen información básica y opiniones y no tiene respuestas correctas o incorrectas. Solo estoy interesado(a) en saber más de usted! ☺

1. ¿Adónde se preparó para ser profesor(a)? _____
2. ¿Cuántos años ha trabajado como profesor(a)? _____
3. ¿A cuál de los siguientes materiales educativos tiene acceso para el desarrollo de sus clases?
   a. Libros de consulta (Atlas, diccionarios, etc.)
   b. Guías didácticas para docentes
   c. Una cantidad suficiente de libros de texto en cada asignación?
   d. Libros (novelas, cuentos, etc.)
   e. Láminas, mapas
   f. Papelógrafo, papel, tape
   g. Otros
4. Quiero aprender de usted durante este intercambio! Por favor, mencione 2 técnicas de enseñanza que utiliza usted y que funcionen bien en su aula; piense en lo que más le gusta de su estilo de enseñanza. Puede ser cualquier cosa; ejemplos: una técnica para controlar el comportamiento, una actividad en que le gusta utilizar, etc. Por favor, sea específico.

   1. Describa la técnica:_____

   ¿De qué manera le ayuda a Ud?_____

   2. Describa la técnica:_____

   ¿De qué manera le ayuda a Ud?_____

   _____

5. ¿Enseña en un aula de grado puro o multigrado? Si es multigrado, consta de qué grados?

6. ¿Qué es lo que le gusta más de su trabajo?

7. ¿Cuántos alumnos tiene en su aula?

8. ¿Ha trabajado usted con un(a) voluntario(a) del Cuerpo de Paz en el pasado? De qué manera?

9. ¿Tiene en su escuela una copia de la GUIA Didáctica para la educación ambiental del Cuerpo de Paz? Si tiene una copia, ¿de qué manera la ha usado en sus clases?

¿Ha tenido experiencia realizando las siguientes actividades?

	Nunca	Pocas veces	Muchas veces
Viveros			
Huertos familiares/ escolares			
Campañas de limpieza con los alumnos			
Abono orgánico			
Campañas de reforestación			
Ferias Ambientales			
Manualidades			

10. De 1 a 5, tiene interés en realizar con sus alumnos las actividades mencionadas en el cuadro anterior? (ponga un círculo en el número que aplica para usted)

1 2 3 4 5

Ya tengo experiencia en esas actividades, pero gracias!

Estoy SUPER interesado(a) en integrar esas actividades en mi aula

Si tiene algunos comentarios, por favor escriba en este espacio:

---

11. ¿Está interesado(a) en trabajar conmigo en su aula una vez cada semana? Si está interesado(a), cuando estaría dispuesto(a) a co-planificar semanalmente?:
día_____, hora_____, lugar_____

12. Mencione un detalle único de su aula? Puede ser cualquier cosa – (ejemplos: sus alumnos les encanta leer, tienen mucha energía, manejan bien la formación de las manualidades, trabajan bien en grupos)

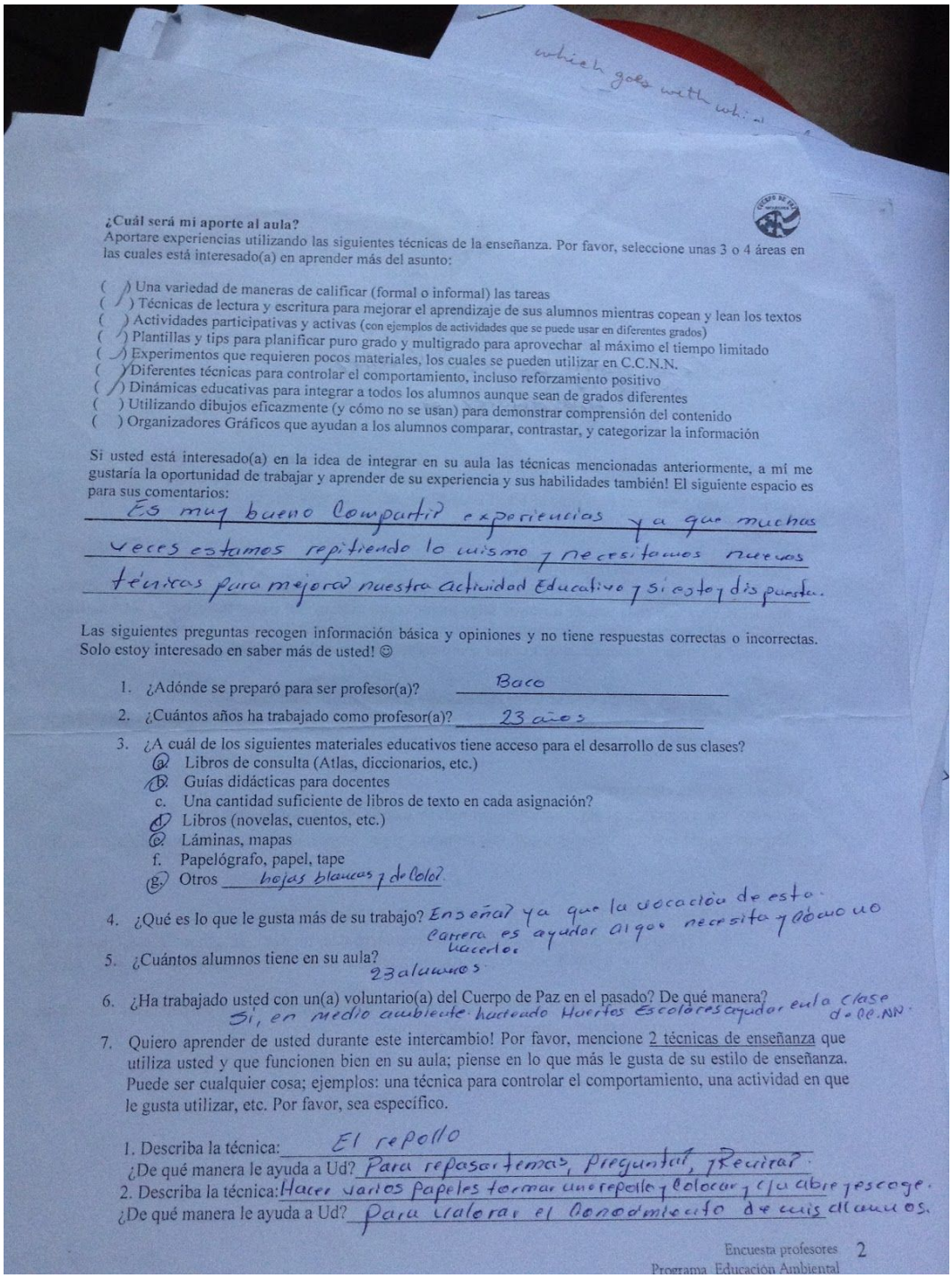
Gracias! Voy a estar en contacto con usted pronto. Por favor, recuerde escribir su número de teléfono para que le llame cuando yo termine revisando las encuestas.

Item 2: *Municipal Results from Teacher Surveys*

Resultados de Encuesta a Profesores – San José de los Remates

	Hnas Alv.	NER Cerro	NER Malac	Total
1. Una variedad de maneras de calificar (formal o informal) las tareas	0	2	10	12
2. Técnicas de lectura y escritura para mejorar el aprendizaje de sus alumnos mientras que copien y lean los textos	5	3	17	25
3. Desarrollo de clases participativas	2	2	7	11
4. Plantillas para planificar puro grado y multigrado para aprovechar al máximo el tiempo	2	1	5	8
5. Experimentos que requieren pocos materiales	4	4	X	8
6. Diferentes técnicas para controlar el comportamiento, inclusivo reforzamiento positivo	0	2	10	12
7. Dinámicas y actividades que incluyen a todos los alumnos y promueven más aprendizaje	3	2	0	5
8. Utilización de tarea de dibujos eficazmente (y como no se usa) para demonstrar comprensión del contenido	1	0	6	7
9. Organizadores Gráficos para que los alumnos comparen, contrasten, y categoricen la información	0	3	2	5

Item 3: *Examples of Individual Teacher Survey Results*



which goes with whi...

¿Cuál será mi aporte al aula?
Aportare experiencias utilizando las siguientes técnicas de la enseñanza. Por favor, seleccione unas 3 o 4 áreas en las cuales está interesado(a) en aprender más del asunto:

( ) Una variedad de maneras de calificar (formal o informal) las tareas
(/) Técnicas de lectura y escritura para mejorar el aprendizaje de sus alumnos mientras copean y lean los textos
( ) Actividades participativas y activas (con ejemplos de actividades que se puede usar en diferentes grados)
(/) Plantillas y tips para planificar puro grado y multigrado para aprovechar al máximo el tiempo limitado
(/) Experimentos que requieren pocos materiales, los cuales se pueden utilizar en C.C.N.N.
( ) Diferentes técnicas para controlar el comportamiento, incluso reforzamiento positivo
(/) Dinámicas educativas para integrar a todos los alumnos aunque sean de grados diferentes
( ) Utilizando dibujos eficazmente (y cómo no se usan) para demonstrar comprensión del contenido
( ) Organizadores Gráficos que ayudan a los alumnos comparar, contrastar, y categorizar la información

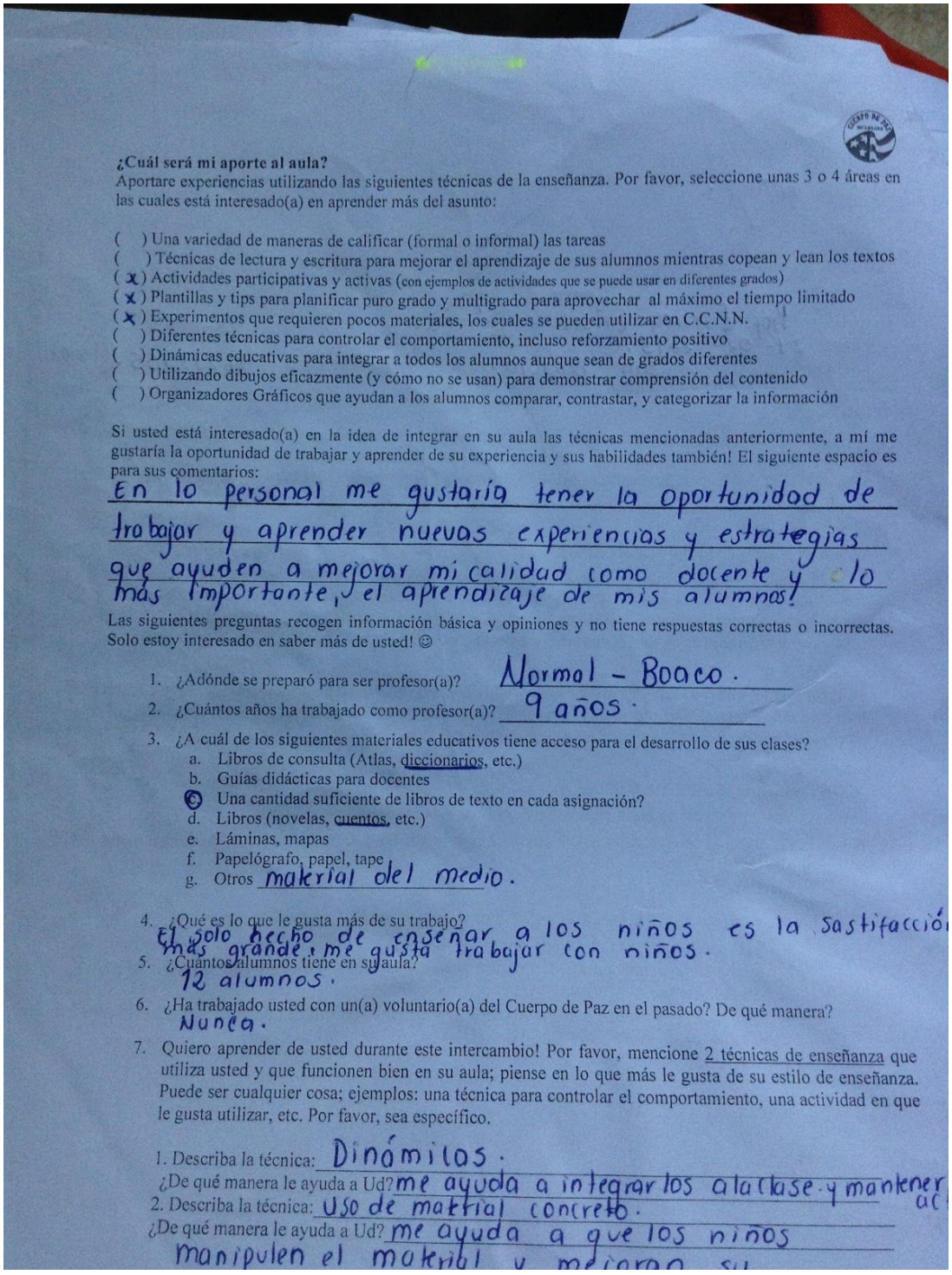
Si usted está interesado(a) en la idea de integrar en su aula las técnicas mencionadas anteriormente, a mí me gustaría la oportunidad de trabajar y aprender de su experiencia y sus habilidades también! El siguiente espacio es para sus comentarios:
Es muy bueno Compartir experiencias ya que muchas veces estamos repitiendo lo mismo y necesitamos nuevas técnicas para mejorar nuestra actividad Educativo y si estoy dispuesta.

Las siguientes preguntas recogen información básica y opiniones y no tiene respuestas correctas o incorrectas. Solo estoy interesado en saber más de usted! ☺

1. ¿Adónde se preparó para ser profesor(a)? Baco
2. ¿Cuántos años ha trabajado como profesor(a)? 23 años
3. ¿A cuál de los siguientes materiales educativos tiene acceso para el desarrollo de sus clases?
   a. Libros de consulta (Atlas, diccionarios, etc.)
   b. Guías didácticas para docentes
   c. Una cantidad suficiente de libros de texto en cada asignación?
   d. Libros (novelas, cuentos, etc.)
   e. Láminas, mapas
   f. Papelógrafo, papel, tape
   g. Otros hojas blancas y de Color.
4. ¿Qué es lo que le gusta más de su trabajo? Enseñar ya que la vocación de esta carrera es ayudar al que necesita y cómo no hacerlo.
5. ¿Cuántos alumnos tiene en su aula? 23 alumnos
6. ¿Ha trabajado usted con un(a) voluntario(a) del Cuerpo de Paz en el pasado? De qué manera? Si, en medio ambiente haciendo Huertos Escolares ayudar en la clase de CC.NN.
7. Quiero aprender de usted durante este intercambio! Por favor, mencione 2 técnicas de enseñanza que utiliza usted y que funcionen bien en su aula; piense en lo que más le gusta de su estilo de enseñanza. Puede ser cualquier cosa; ejemplos: una técnica para controlar el comportamiento, una actividad en que le gusta utilizar, etc. Por favor, sea específico.

   1. Describa la técnica: El repollo
   ¿De qué manera le ayuda a Ud? Para repasar temas, Preguntar, y Revisar.
   2. Describa la técnica: Hacer varios papeles formar un repollo y colocar y c/u abre y escoge.
   ¿De qué manera le ayuda a Ud? Para valorar el conocimiento de mis alumnos.

Encuesta profesores 2
Programa Educación Ambiental



¿Cuál será mi aporte al aula?
Aportare experiencias utilizando las siguientes técnicas de la enseñanza. Por favor, seleccione unas 3 o 4 áreas en las cuales está interesado(a) en aprender más del asunto:

( ) Una variedad de maneras de calificar (formal o informal) las tareas
( ) Técnicas de lectura y escritura para mejorar el aprendizaje de sus alumnos mientras copean y lean los textos
(x) Actividades participativas y activas (con ejemplos de actividades que se puede usar en diferentes grados)
(x) Plantillas y tips para planificar puro grado y multigrado para aprovechar al máximo el tiempo limitado
(x) Experimentos que requieren pocos materiales, los cuales se pueden utilizar en C.C.N.N.
( ) Diferentes técnicas para controlar el comportamiento, incluso reforzamiento positivo
( ) Dinámicas educativas para integrar a todos los alumnos aunque sean de grados diferentes
( ) Utilizando dibujos eficazmente (y cómo no se usan) para demonstrar comprensión del contenido
( ) Organizadores Gráficos que ayudan a los alumnos comparar, contrastar, y categorizar la información

Si usted está interesado(a) en la idea de integrar en su aula las técnicas mencionadas anteriormente, a mí me gustaría la oportunidad de trabajar y aprender de su experiencia y sus habilidades también! El siguiente espacio es para sus comentarios:
En lo personal me gustaría tener la oportunidad de trabajar y aprender nuevas experiencias y estrategias que ayuden a mejorar mi calidad como docente y lo más importante, el aprendizaje de mis alumnos!

Las siguientes preguntas recogen información básica y opiniones y no tiene respuestas correctas o incorrectas. Solo estoy interesado en saber más de usted! ☺

1. ¿Adónde se preparó para ser profesor(a)? Normal - Boaco.
2. ¿Cuántos años ha trabajado como profesor(a)? 9 años.
3. ¿A cuál de los siguientes materiales educativos tiene acceso para el desarrollo de sus clases?
   a. Libros de consulta (Atlas, diccionarios, etc.)
   b. Guías didácticas para docentes
   c. Una cantidad suficiente de libros de texto en cada asignación?
   d. Libros (novelas, cuentos, etc.)
   e. Láminas, mapas
   f. Papelógrafo, papel, tape
   g. Otros makrial del medio.
4. ¿Qué es lo que le gusta más de su trabajo? El solo hecho de enseñar a los niños es la sastifacción más grande, me gusta trabajar con niños.
5. ¿Cuántos alumnos tiene en su aula? 12 alumnos.
6. ¿Ha trabajado usted con un(a) voluntario(a) del Cuerpo de Paz en el pasado? De qué manera? Nunca.
7. Quiero aprender de usted durante este intercambio! Por favor, mencione 2 técnicas de enseñanza que utiliza usted y que funcionen bien en su aula; piense en lo que más le gusta de su estilo de enseñanza. Puede ser cualquier cosa; ejemplos: una técnica para controlar el comportamiento, una actividad en que le gusta utilizar, etc. Por favor, sea específico.

   1. Describa la técnica: Dinámicos.
   ¿De qué manera le ayuda a Ud? me ayuda a integrar los alaclase y mantener ac
   2. Describa la técnica: Uso de makrial concreto.
   ¿De qué manera le ayuda a Ud? me ayuda a que los niños manipulen el makrial y mejoran su

Item 4: *School, Teacher, and PCV Monitoring & Evaluation Plan*

- Monitoring and Evaluation Plan
  - SO 1: Environmental Education Attainment of Students
    - SO 1.1: Completion of Practicum (measures 3 as well)
      - SO 1.1.1: Adequate completion when I was there
      - SO 1.1.2: Adequate completion when I was not there
    - SO 1.2: Scores on Class Activities / Written Quizzes (without copying, ie w Methods)
      - SO 1.2.1: Student Scores when I was there
      - SO 1.2.2: Student Scores when I was not there
    - SO 1.3: Number of plants grown / transplanted (measures 3 as well)
      - SO 1.3.1: Of those planted/conducted when I was there
      - SO 1.3.2: Of those planted/conducted when I wasn't there
  - Of Teachers I worked directly with (planning and co-teaching) in their classrooms
    - From teachers' planning notebooks
      - IR 1.1: # of Methods planned
        - IR 1.1.1: # planned with me
        - IR 1.1.2: # planned without me
      - IR 2.1: # of Environmental Activities planned (a set #)
    - From how we implemented Methods for Higher Level Learning outcomes when together / apart
      - IR 1.2: Who suggested the Method
        - IR 1.2.1: # of times they suggested when we co-planned
        - IR 1.2.2: # of times I suggested when we co-planned
      - IR 1.3: Did they elaborate the Methods (write them out) adequately (in accordance with the purpose of the given strategy they wanted to use) without me/my help?
        - # of times Y or N
      - Methods implemented in class when I was there
        - IR 1.4: # of times Methods were properly facilitated by teacher, ie actually follow the steps Y and N
        - IR 1.5: Success in learning outcomes, from SO 1.2.1: Student Scores when I was there
      - Methods implemented when I was not there
        - IR 1.6: # of times implemented Y and N
        - IR 1.7: Success in learning outcomes, from SO 1.2.2: Student Scores when I was not there

- From how Environmental Activities were implemented when we were together / apart
    - Teachers' knowledge and abilities from Teachers' Training
        - IR 1B.1: Correct answers from game quizzes
        - IR 1B.2: # of teachers adequately completing their practicum
    - Environmental Activities facilitated in class when I was there
        - IR 2.2: # of times properly facilitated, ie Actually follow the steps Y and N
        - IR 2.3: Success in producing learning outcomes
            - From SO 1.1.1: Adequate completion when I was there
            - From SO 1.3.1: Of those planted/conducted when I was there
    - Environmental Activities facilitated when I was not there
        - IR 2.4: # of times facilitated Y and N
        - IR 2.5: Success in producing learning outcomes
            - From SO 1.1.2: Adequate completion when I was not there
            - From SO 1.3.2: Of those planted/conducted when I wasn't there
- The sheet we filled out every 3 months
    - Verify comprehension/ what they like and do not like and why

- Of Teachers I did not work directly with in their classrooms (neither planning nor co-teaching)
    - From my phone calls
        - From IR 2.4: # of Environmental Activities facilitated
        - From IR 2.5: Success in producing learning outcomes
            - From SO 1.1.2: Adequate completion when I was not there
            - From SO 1.3.2: Of those planted/conducted when I wasn't there
    - From talking to Directors who visited school and teachers with whom I could not be in contact with
        - SO 1.1.2: Adequate completion when I was not there (as best as possible)
        - SO 1.3.2: Of those planted/conducted when I wasn't there (as best as possible)
        - IR 1.1.2: Adequate completion when I was not there (as best as possible)

Item 5: *Monitoring and Evaluating Results Reported to Peace Corps*

Cuerpo de Paz Nicaragua
Proyecto de Medio Ambiente

Informe de Trabajo

Nombre del Voluntario: Tom Ford Escuelas: San Bartolo

Sitio: San José de los Remates El Reloj

Departamento: Boaco Hermanas Álvarez

Cuatrimestre correspondiente a: Enero - Abril [X] Mayo - Agosto [ ] Septiembre - Diciembre [ ] Año: 2015

Firma de la(s) Contraparte(s): _____

Meta 1. Maestr@s de primaria ampliaran sus habilidades técnicas para enseñar Educación Ambiental.
Objetivo 1.1 Para Junio del 2018, 420 maestras de primaria habrán incrementado sus metodologías de enseñanza tales como prácticas participativas y manejo de clases.

Practicas participativas: ej: **análisis de problemas y soluciones**, diferentes formas de evaluación, realiza trabajo en equipo, promueve debate, realiza proyectos, uso de guía didáctica.
Manejo de Clase: ej: uso de rutinas, reforzamiento positivo, uso de reglas y consecuencias

Nombre de la Escuela	Grado	Docentes		Coordinación docentes		Explique cambios observados en docentes	Uso de Guía Didáctica de Ciencias Naturales		Docentes implementando actividades	
		Hombres	Mujeres	Co-planificar	Co-ensenar	Practicas participativas y técnicas de Manejo de clases	si	no	Hombres	Mujeres

Hermanas Álvarez	4°, 5°	-	2	Sí	Sí	**Profesora Rosa María:** **Actividades Participativas para poner en práctica el contenido**: • "Las Esquinas," donde hacen un recorrido del orden del proceso de tal contenido • "Simón Dice" (para revisar el tema anterior y explorar el nuevo tema) • "Matamosca" (para revisar el tema anterior y explorar el nuevo tema) • "El Circulo Concéntrico" • "Adivinar La Palabra Perdida" (leen información que se le falta una palabra clave, equipos adivinan para ganar puntos) • "Bingo" (alumnos dibujan varios cuadros en forma 3x3 o 4x4 en sus cuadernos, cada cuadro con una palabra clave del contenido. El/La Profe lee el significado de una palabra clave, cada alumno marca el cuadra el que corresponde al significado. El primer alumn@ que tenga 3 (o 4) enseguida, gana. • "Nombrar Las Partes" (hacen siluetas de sus compañeros con tiza en el piso, identifican las partes) **Técnicas de Lectura y Escritura mientras Copiar y Leer:** • "Completando el Párrafo" (copiar un párrafo que le falta unas palabras claves. Completan según lo aprendido en la clase[con la ayuda de un 'banco de palabras')	Sí	-	-	2

El Reloj	3° -6°	-	1	Sí	Sí	**Profesora Reyna:** **Técnicas de Lectura y Escritura mientras Copiar y Leer:** • "La Idea Principal" • "Grafica T" • "Completando el Párrafo" • "Pensar, Compartir, Agregar" • "Dibujos Informativos" • "Cuadro Sinóptico" **Actividades Participativas para poner en práctica el contenido:** • "Simón Dice" • "El Tacto" se escribe una palabra con el dedo en la espalda de su compañer@, él/ella adivina que dice. • "Piensa, Pares, Comparte" • Exponer en pequeños grupos • diferentes formas de evaluación - Respuesta Corta - Poner en orden - Opciones múltiples - Llenar el espacio - Categorizar la información **Técnicas de Facilitación:** • Rotar quien lee el libro de texto, cada párrafo • Trabajo Individual → En Parejas/grupos → Con Todos, en el transcurso de una clase	Sí	-	-	1

San Bartolo	3° a 6°	-	1	Sí	Sí	**Profesora Griselda:** **Actividades Participativas para poner en práctica el contenido:** • "Simón Dice" • Rompecabezas de las partes del cuerpo humano • Exponer Trabajo Individualmente • Demostraciones/Experimentos con "Los Movimientos Involuntarios" con los ojos, y la rodilla, y "Atrapar La Regla" para el Sistema Nervioso • Explicar con sus propias palabras después de leer • "Escribir en la espalda," para el tacto y vista • "Teléfono" para el oído • "Gire La Botella" **Técnicas de Lectura y Escritura mientras Copiar y Leer:** • "Pensar, Compartir, Agregar" • "Unir con Una Raya" • "Dibujos Informativos" • "Completando el Párrafo" • "SQA": "Saber, Querer, Aprender" • "Diagrama Venn" **Técnicas de Facilitación:** • Trabajo Individual → En Parejas/grupos → Con Todos, en el transcurso de una clase • Competencia entre grupos durante actividades • Usar límites de tiempo	Sí	-	-	1

Objetivo 1.2

Para Junio del 2018, 420 maestras habrán implementado conceptos ambientales y habilidades ambientales a través de la co-enseñanza.

Nombre de la Escuela	Grado	Docentes		Coordinación docentes		Explique cambios observados en docentes	Uso de Guía Didáctica de Educación Ambiental		Docentes implementando actividades	
		Hombres	Mujeres	Co-planifica	Co-ensena		si	no	Hombres	Mujeres

Hermanas Álvarez	2°, 3°, 4° , 5° , 6°	1	7	Sí	Sí	Los 8 profesores han puesto en práctica con sus alumnos (193 en total) la elaboración de un vivero escolar. Los profesores implementaron conceptos y habilidades ambientales, tales como: - La profundidad adecuada de la siembra de semillas, - Cuanto agua se necesitan diario y cuándo - Cuantas horas de sol necesitan diario - Por qué se usa bolsas en vez de una siembra directa - Cómo se escoge un local adecuado y la ubicación correcta de las bolsas en el suelo	Sí	-	1	7
El Reloj	1er, 2°, 3°, 4°, 5°, 6°	-	1	Sí	Sí	La profesora han puesto en práctica con 15 alumnos la elaboración de un vivero escolar. La profesora implemento conceptos y habilidades ambientales, tales como: - La profundidad adecuada de la siembra de semillas, - Cuanto agua se necesitan diario y cuándo - Cuantas horas de sol necesitan diario - Por qué se usa bolsas en vez de una siembra directa Cómo se escoge un local adecuado y la ubicación correcta de las bolsas en el suelo	Sí	-	-	1

Malacatoya 2	3°, 4°, 5°, 6°	-	2	Sí	Sí	Los 8 profesores han puesto en práctica con sus alumnos (193 en total) la elaboración de un vivero escolar. Los profesores implementaron conceptos y habilidades ambientales, tales como: - La profundidad adecuada de la siembra de semillas, - Cuanto agua se necesitan diario y cuándo - Cuantas horas de sol necesitan diario - Por qué se usa bolsas en vez de una siembra directa Cómo se escoge un local adecuado y la ubicación correcta de las bolsas en el suelo	Sí	-	-	2

Meta 2. Estudiantes de Primaria adquirirán conocimientos e implementaran actividades ambientales.
Objetivo 2.1 Para Junio del 2018, 12,250 estudiantes de primaria habrán aprendido conocimientos ambientales
Objetivo 2.2 Para Junio del 2018, 12,250 estudiantes de primaria habrán participado en prácticas ambientales

Conocimientos ambientales: tópicos en Ciencias Naturales/OTV/ECA
Prácticas Ambientales: Manualidades, viveros, huertos, eventos ambientales en la escuela.
Evaluaciones formales: pruebas sistemáticas al final de cada tema.

Nombre de la Escuela	Grado	# Estudiantes		Explique cambios observados en alumnos después de la actividad	Estudiantes Implementando Actividades	
		Niños	Niñas		Niños	Niñas
Hermanas Álvarez	2°, 3°, 4°, 5°, 6°	97	91	121 alumnos actualmente tienen sus arbolitos en el vivero escolar. Todos los 188 alumn@s aprendieron los pasos, los llevaron a cabo, y siguen siendo involucrados con el cuido de los arbolitos.	97	91
El Reloj	1er, 2°, 3°, 4°, 5°, 6°	7	8	15 alumnos actualmente tienen sus arbolitos en el vivero escolar. L@s alumn@s aprendieron los pasos y los llevaron a cabo, y siguen siendo involucrados con el cuido de los arbolitos.	7	8
Malacatoya 2	3°, 4°, 5°, 6°	12	15	21 alumnos actualmente tienen sus arbolitos en el vivero escolar. L@s alumn@s aprendieron los pasos y los llevaron a cabo, y siguen siendo involucrados con el cuido de los arbolitos.	12	15

- Resultados: Cuantifique sus actividades prácticas tales como: Huertos, Aboneras y viveros con docentes, alumnos y comunidad.

Actividad	Ubicación	Docentes		Participantes comunidad/ alumnos				#Plantas	Descripción	Producción
		Hombres	Mujeres	Hombres	Mujeres	Niños	Niñas		Especies, area	(# frutos cosechados, Arboles sembrados, abono 1 saco= 100 lbs)
Vivero 1	Esc. Hermanas Álvarez	1	7	-	-	97	91	121	Árbol de Marango	121 árboles pendiente más crecimiento

Vivero 2	Esc. El Reloj	-	1	-	-	7	8	15	Árbol de Marango	15 árboles pendiente más crecimiento
Vivero 3	Esc. Malacatoya 2	-	2	-	-	9	12	21	Árbol de Marango	21 árboles pendiente más crecimiento

CAPACITACIONES: Describa capacitaciones, entrenamientos realizadas en círculos pedagógicos, TECPE o comunidad

Nombre del grupo, comunidad o NER	# Participantes		Describa el resultado de su actividad (Temas impartidos)	# Participantes implementando actividad	
	Hombres	Mujeres		Hombres	Mujeres
Hermanas Álvarez	1	6	Técnicas de Lectura y Escritura para mejorar el aprendizaje de sus alumnos mientras que copien y lean.	¿	¿
Hermanas Álvarez	-	2	Nuevas Técnicas para Elaborar un Huerto Escolar: (dejar la tierra bajo del sol por un día entero antes de sembrar, usar bolsas para semillero/almacigo, como se construye un techito para el semillero, etc)	-	2
NER Malacatoya	4	20	Experimentos que Requieren Pocos Materiales	¿	¿
Los 2 NER; El Cerro y Malacatoya	5	30	Elaboración de Un Vivero: La preparación de la tierra, la siembra, y el cuido	¿	¿
Miembros de la comunidad de Malacatoya 2, una trabajadora en la puesta de salud "La Casa Base"	2	14	A. La Nutrición Adecuada Para Ser Saludable y Cómo Se La Obtiene a través Las Hojas de Marango. B. Elaboración de Un Vivero para : La preparación de la tierra, la siembra, y el cuido	2	14

ACTIVIDADES SECUNDARIAS: **Describa actividades como clases de inglés, deportes, clases de cocina, entre otros.**

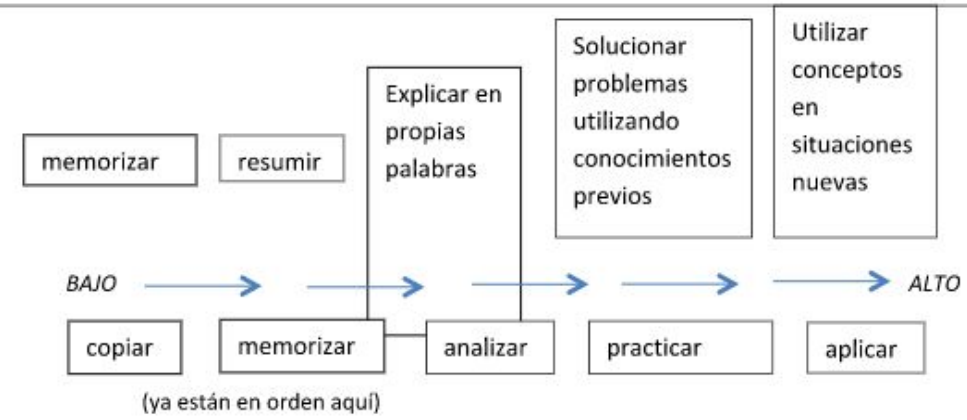
Actividad Realizada	# Participantes				Describa el resultado de su actividad
	Hombres	Mujeres	Niños	Niñas	
El Uso Correcto de un Condón, y la prevención de las ITS (2 charlas apartes)	-	-	3	4	Participantes saben cómo poner un condón y practicaron con los materiales relevantes/adecuados del Cuerpo de Paz, y cómo pasar y no pasar las ITS
Manualidades de Materiales Reciclados	1	10	7		1. Árboles (hecho de botellas de plástico o vidrio, papel de periódico) 2. Regaderas (de botellas de plástico)

Item 6: *Training Module Facilitation*

Nombre de la capacitación: "Técnicas de lectura y escritura mientras que copien y lean textos"	
Date: March 20, 2015	Time: 90 minutos
Facilitador: Tom Ford Participantes: 60 profesores en el municipio de San Jose de los Remates) dividido en 2 capacitaciones, primero con profes de puro grado(~15), luego con profess de multigrado(~45).	✓ Materiales: 31 papelitos ✓ Marcadores para pizarra acrilicas ✓ Narcadores permanentes ✓ Tape ✓ Recortes de las estrategias, uno para ca uno de los 7 grupos (según las 7 estrategias) ✓ 60 copias de la hoja con las estrategias (1 para cada profesor)para cada profesor ✓ campana/timbre ✓ rotulo de 30 segundos ✓ 7 libros de texto de ciencias naturales (can be 3 – 6 grade) ✓ 60 ¼ hojas para la evaluacion ✓ Media hoja de recomendaciones
Objetivos de Aprendizaje[1]: **- Profesores pueden identificar la conexión con las diferentes actividades que realizan en el aula y el nivel de aprendizaje que corresponde a cada una** **-Profesores saben implementar ciertas actividades en su aula que tengan una mayor probabilidad de resultar en más y mejor aprendizaje (sustained learning outcomes)** **-Profesores pueden identificar que estrategias NO resultan en un buen nivel de aprendizaje y que estrategias resultan en mejor aprendizaje**	

Tiempo & Materials	Orden de actividades:
Tiempo: 20 min Materials: ✓ 31 papelitos ✓ Marcadores para pizarra acrilicas ✓ Marcadores permanentes ✓ tape	I. Iniciar • (5 min) Quien soy/ mi rol. La realidad de los profesores (falta de materiales, tiempo, comportamiento de alumnos, libros) y la necesidad de tener estrategias para resolver la falta de estas cosas y aprovechar el tiempo limitado. • (5 min) Puntos de Respeto: Yo les doy temas, ellos me dan "reglas" para cada uno. Ej: levantar la mano, cel de modo vibración, escuchar a los demás, participar, disfrutar, ser creativo. • (10 min) ACTIVIDAD: Les doy 10 papelitos a los profesores (poner debajo de las sillas antes de empezar la capacitación) con una palabra o frase escrita en cada una (5 escrita en azul, 5 en roja). Los dos grupos pasan al frente y trabajando aparte, cada uno tiene que ordenar sus palabras según el nivel de aprendizaje que tendrá un(a) alumn@ después de realizar cada actividad. Un grupo va a ubicar sus palabras encima de "Bajo → Alto, y el otro grupo debajo. Aquí se encuentra las palabras y frases ubicadas correctamente: -Palabras en rojo- 1. Memorizar, 2. explicar en propias palabras, 3. resumir, 4. solucionar problemas utilizando conocimientos previos, 5. utilizar conceptos en situaciones nuevas,

	○ Revisar respuestas y enfatizar: *Poner en práctica, Aplicar* ○ *Pregúnteles "cuál es el objetivo de copiar?"* ▪ *Objetivo:* • L@s alumn@s tienen la información en sus cuadernos, manera de aprender? ▪ Beneficios: • alumnos tienen la información • están en silencio • están comportando bien • fácil para profesores ▪ Perjuicios: • Puede dilatar mucho tiempo, 30-45 min. • Podían haber aprendido más información, en menos tiempo... ○ (Que significa aprender para usted?) ○ ... pero cómo??? ○ *Copiar no significa aprender ni entender (ni memorizar)* ○ *Enseñarles imagen de la taxonomía de bloom*



Tiempo: 0 min Materiales: -- Recortes de las estrategias, uno para ca uno de los 7 grupos (según las 7 estrategias)	II. Desarrollo • Dividir los participantes según cuantas estrategias tenemos en vez de copiar (7), y dar a cada grupo un papelito con una estrategia, su explicación, un ejemplo, y los componentes de una buena actividad, bien facilitada
Tiempo: 60 min Materiales: -- 60 copias de la hoja con las estrategias (1 para cada profesor)para cada profesor --campana/timbre --rotulo de 30 segundos --60 Media hojas de recomendaciones	III. + IV. Culminación (Practicar / Aplicar) • (10min) Explicar a los profesores que tienen 10 minutes para preparar una demonstración de su estrategia (según su papelito). Hay que usar un libro de ciencias naturales y demostrar su estrategia a través cualquier tema de su preferencia. Hay que decirnos su indicador de logro. Tendrán 3 minutos para exponer/explicar su estrategia. Darles a los profes un aviso cuando les quede 30 segundos en su exposición. ○ Hay que incluir en su exposición ▪ Esta estrategia es adecuada para ____ grado(s) (ej: 6º y arriba, 3º y arriba, etc.) y porqué? ▪ Cuando durante el transcurso de una clase sería adecuada su estrategia? Al inicio? Al fin? En el medio? Y porqué? Podria utilizarla en todo momento? Cual es la diferencia? ▪ Recuerden: sean creativos en su exposición! • (35 min) Exponen y escriben notas de las exposiciones de los demás para llenar su hoja de estrategias. • (5 min) Les damos la hoja con las recomendaciones al lado de los "check"s. En parejas, tienen 3 minutos para pensar en más recomendaciones/estrategias. Mala recomendación: darles apoyo a los alumnos mientras hacer su trabajo.
	Buena recomendación: darles apoyo a los alumnos de manera que lea las respuestas de cada grupo y dígales si son correctas o erradas y donde pueden buscar para encontrar la respuesta correcta. • (10min) Pareja por pareja compartimos nuestras ideas/estrategias. El facilitador las escribe en la pizarra, todos las escriben en su hoja también.

Tiempo: 10 min Materiales: --7 libros de texto de ciencias naturales (3 – 6 grado) --1/4 hojas para la evaluacion	IV. Evaluation • (10 min) What strategies did I use today? (strategies of copying, strategies of activities based on levels of learning, behavior control) • (5 min) IDEAS GRANDES (pídales por lo más importante de la charla) – poner en práctica, enseñarles uno al otro • (5 min) Darle a cada profesor media-hoja con **1)** una evaluación de 4 preguntas de esta charla: I. Qué parte fue más útil? II. Qué cambiarías para que la charla fuera mejor? III. Que eliminarías de la charla? IV. Algo mas? y **2)** Darles la lista de los temas y pedirles que escriban los 3 les interesan más (para el próximo círculo pedagógico) Recoger hojas después de 5 minutos.

Circulo Pedagogico - Tom Ford - 2014 - San Jose de los Remates, Boaco

Participantes: 22 profesores

Tiempo: 2 horas - 1 de teoría, 1 de practica

5 min. Introduccion del Tema - Huertos Escolares

- Revisar Agenda
- Propósito del huerto

15 min. Dinámica - Utilización e Integración del huerto en el aula

- Divide participantes en parejas, 3 papelitos para cada pareja. Llena y pega los papelitos en la pizarra con ideas acerca de la integración del huerto en varios temas del aula, no solamente ciencias naturales
- Ej. - mano de obra, el sol y las direcciones cardinales, el aire, cultivación en diferentes lugares geográficos, enfermedades del cuerpo humano - espalda - por causa de mano de obra, medidas de seguridad de herramientas
- Leer lo que tenemos en la pizarra

15 min. Actividad - Jeopardy (Liga del Saber)

- Dividir participantes en 4 grupos, cada grupo seleccionar una carta de la pizarra que vale diferentes cantidades de puntos, hay que contestar a las preguntas acerca del manejo y mantenimiento de los huertos para recibir los puntos

25 min. Información

- Folletos
- Controlar plagas
- Insecticidas orgánicas
- Agua
- Un esquema para los profes para llevar a cuenta quien y cuando los alumnos van a desherbar, llevar agua, regar, y controlar plagas
- Información sobre el cerco, abono, y vivero
- Semillas
- Preguntas
- genero

1 hora Practica afuera del aula

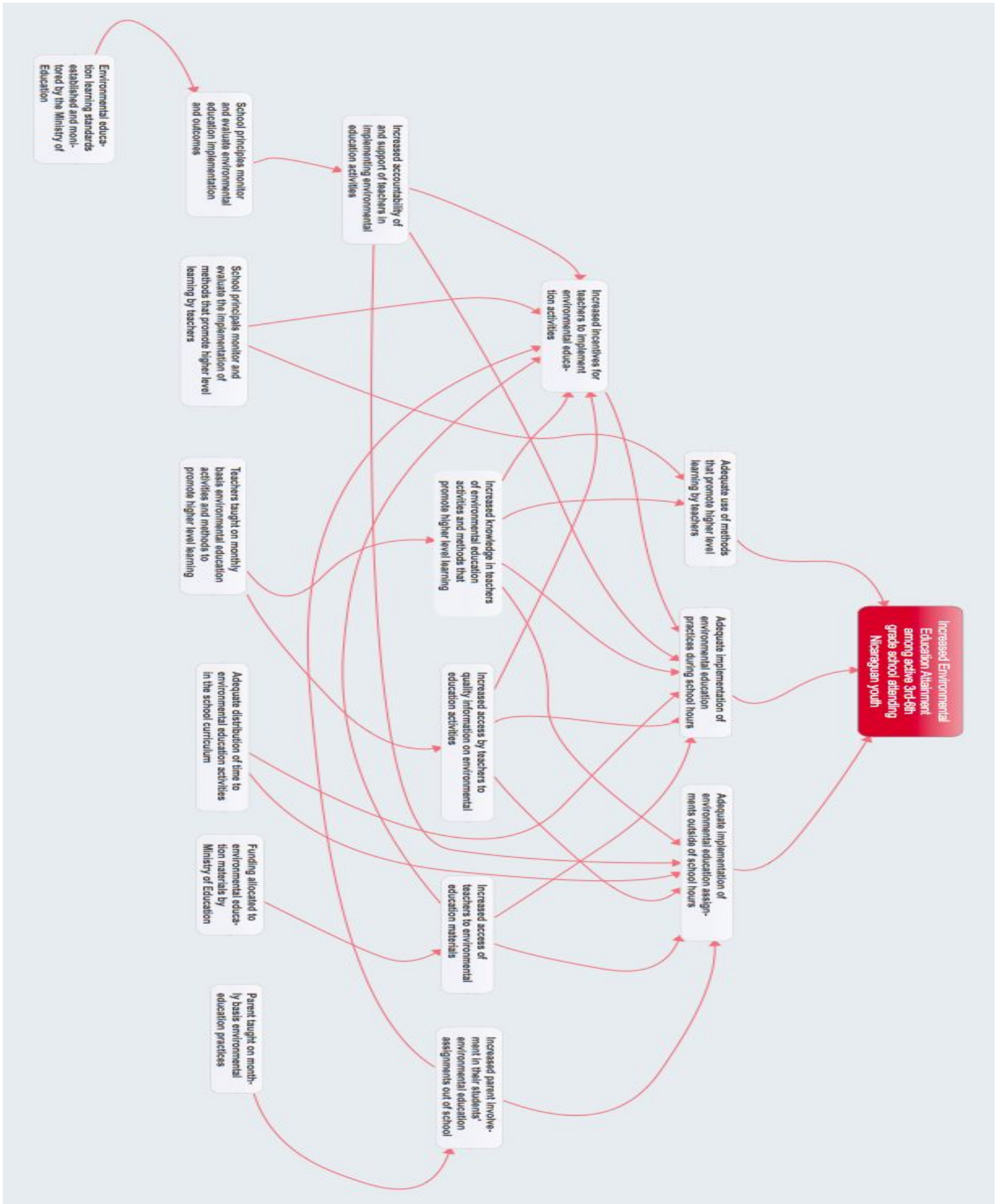
- Dividir en 3 grupos consiste en 6 o 7 personas.
- Entregar papeles con los pasos de la construcción del huerto.
- Realizar construcción.

Materiales

- 3 papelógrafos (agenda, integración de ideas, dibujo del huerto practica)
- 30 papelitos para integración de ideas, 4 marcadores, tepe
- Cartas para juego de joepardy (también llamado Liga del Saber)
- Folletos (4 papeles: plagas control, abono, huerto, vivero)
- Semillas (para el grupo que gane Jeopardy)
- Todas las herramientas:
    - Machetes (3)
    - Piocha (3)
    - Pala (6)
    - Zaranda (3)
    - Estacas (10)
    - Bolsa de abono/estiércol (3)
    - Cal (12 bolsitas)
    - Semillas de Pepino, Chiltoma, Ayote, Rábano
    - Agua
    - Mecate (3 rollos)

Item 7: *Vertically-Positioned Problem Tree*

Item 8: *Vertically-Positioned Results Framework*



End

Tom Ford with his students and teacher in San José de los Remates, Nicaragua, 2014