

Guatemala, August 8th 2017

REPORT VII & VIII: Communication as a key for conservation & Replication workshop

Introduction. The environmental educational program for teachers at the Guatemalan Caribbean as a key for conservation in rural areas, is a project sponsored by Rufford Foundation. Its main goal is to create replicators of knowledge in rural schools of Izabal, promoting access of environmental education to children and youth, so that they can positively change their attitudes and perceptions about the environment.

On August 6th and 7th 2017, the seventh and eighth environmental workshops were held. During these days, the topic of *Communication as a key for conservation* as well as the *Replication workshop* were presented to teachers.

For the first part of the workshop, teachers learned what communication is, how is it formed, the difference between transmission and dialogue, and how to identify communication distortions when they are listening to new information as part of informal education. This workshop was complemented with two dynamics where educators could understand the theory using the practice.

The second part of the workshop consisted in replicating all the activities and dynamics that educators learned through the previous workshops. This was made in order to evaluate if teachers understood how to do it, and to correct them if there were any mistakes. An activity per educator was given; they had 20 minutes to prepare the activity and then 15 minutes to present it and apply it with the group.

The activities that were made are: *Environmental Impact*, *Natural Resources Classification*, *Footprint questionnaire*, *Food web*, *Energy through a food web* and *Perception line*. Teachers led their respective dynamic, while the rest of the teachers participated in each one.

After the workshops, teachers were interviewed to measure satisfaction levels, acquired knowledge and skills, awareness, attitudes and behavior changes through the 8 workshops (see results below). Furthermore, a sheet of evaluation of replication was given to each teacher, so that they can measure the past activities they have made with their students, or the ones that they will do during August.

Next workshop will be focused on evaluating each teachers results of replication, and to prepare their presentations for the final presentation, where different key actors are going to be invited.

Module VII: Communication as a key for conservation

The Communication presentation was held for teachers of Puerto Barrios and Livingston. It was divided in two parts. The first one focuses on teaching the process of communication and the differences between a dialogue (which is the correct use of communication where there is feedback) and just transmitting a message (where the emitter just gives the message and there is no possible opportunity for feedback).

To make the topic clearer, an activity was made with teachers. For this activity, they had to draw a butterfly made of geometric figures based on directions that a person gave them. They had 3 blank sheets of paper.

First person: This person didn't give much information. The person was turned away the audience so that they could only draw the butterfly based on the information they could hear and their interpretation. No questions were allowed. *Second person:* This person gave more information about the butterfly. The person was allowed to move their body (body language) and to express everything he/she could see. No questions were allowed either. *Third person:* This person gave more information about the butterfly. No teachers were allowed to ask for questions until they have solved all of their doubts. They interacted with the presenter and completed the circle of communication.

At the end of the activity, teachers compared their three drawings and realized the difference that exists when someone just share a message and when there is a dialogue that clarifies any doubt that might exist.



Figure 1. A participant turned away from the audience giving information about the butterfly.

For the second part, teachers learned how communication can be mistaken depending on the resource they are consulting or getting the information from. Teachers were taught that every time they want to communicate a message, they have to analyze the resource they are getting the information from, and also compare it with different ones to come to a better conclusion.

To teach them the change in communication, four people of the audience were taken out of the salon. Then one by one they were getting in. An image of a restaurant was showed to the first person that came in. That person has 3 minutes to memorize it. Then, the image was faded out, and when the second person came in, the first one had to tell the second what was the image about and all the details he/she could remember (the audience was asked to be quiet and not to laugh).

Then, when the third person came in, the second one told him/her what the first one told him/her about the image. For this step, people noticed that the second person had changed some information. At the end of the conversation, the third person was asked to write down what the second one had told. The audience could notice that the third person wrote down some descriptions differently.

The fourth person came in, the image was showed to him/her and he/she was asked to write down what he/she saw. At the end of the activity the two charts were compared, and the audience could see how the information was distorted when it went through different people.



Figure 2. One of the teachers of Livingston looking at the image of the activity “Distortions in communication”.

Module VIII: Replication workshop

This module focused on the skills that teachers had acquired through the program. Teachers were asked to read and be prepared to do the activities that were done at the previous workshops: *Environmental Impact*, *Natural Resources Classification*, *Footprint questionnaire*, *Food web*, *Energy through a food web* and *Perception line*.

Teachers led the dynamics and feedback was given to them by the participants or the presenters. This was made to measure and evaluate how teachers are replicating the activities in their classrooms and to correct the common mistakes.

Due to the amount of audience, In Puerto Barrios teachers were teamed up in groups of two presenters. In Livingston each teacher presented a topic. They had 20 minutes to prepare for the presentation and to familiarize again with the materials provided by the project.



Figure 3. The food web dynamic.



Figure 4. Energy flow through a food web.



Figure 5. Footprint questionnaire.



Figure 6. The perception line dynamic.



Figure 7. Collecting resources at the environmental impact dynamic.



Figure 8. Classifying the natural resources.

At the end of this workshop, a sheet of evaluation of impact was given to teachers, so that they could take notes and record the impact they will have during this month of replication and/or the impact they have had since the beginning of the project.



EVALUATIONS

- Satisfaction

During each workshop, a satisfaction evaluation was given to participants. As in the rest of the workshops, teachers show a high-satisfaction level being these levels:

How satisfied do you feel about the workshop?

76% of the participants marked “Very Satisfied”

24% of the participants marked “Satisfied”

How satisfied do you feel with the dynamics?

82% of the participants marked “Very Satisfied”

18% of the participants marked “Satisfied”

How satisfied do you feel with the educational materials?

47% of the participants marked “Very Satisfied”

47% of the participants marked “Satisfied”

6% of the participant marked “neutral”

Additional comments at the survey showed that teachers are happy with the workshops, that they think that the dynamics are always well connected with the theory, that these dynamics can be easily replicated with their students and that this workshops are highly participative.

- Perception Pre-Post

The post-perception questionnaire was given to teachers. This contained the same 20 perception questions that had the pre-questionnaire. Results show an average increase of positive perceptions towards the environment (Puerto Barrios and Livingston) of 3.75% (from 82.18 to 85.93).

	PRE	POST	Results
Livingston	80.73	85	4.27
Puerto Barrios	83.63	86.86	3.23
Average	82.18	85.93	3.75

- Interviews

At the end of the workshops, teachers were interviewed to collect information about *knowledge, awareness, skills, behaviors and satisfaction*. In this interview, all of the items were evaluated for the educational program and not just for the specific workshop. Results are listed below:

Knowledge

- From 1 to 10, where 1 means “Nothing was new” and ten means “Everything was new”, *How much new knowledge did you acquire during the workshops?*

63 % of the participants answered “10”

11% of the participants answered “9”

16% of the participants answered “8”

10% of the participants answered “7”

This means that more than the half of the participants received a whole package of new information to replicate with their students, while the rest of the participants, even though they already knew some of the given information, they still got new topics to present with their students at rural schools.

- From 1 to 10, where 1 means “Nothing” and ten means “Everything”, *How much of this new knowledge do you think you remember?*

16 % of the participants answered “10”

58% of the participants answered “8”

21% of the participants answered “7”

5% of the participants answered “6”

This means that more than the half of the participants tend to forget at least 20% of the given information. This effect is completely normal and its percentage can increase through time. This is the reason why environmental education has to be a continuous process that refreshes participant’s brains through time. Nevertheless, we can appreciate that there are some participants that still remember everything they learned; Most of these participants were better replicators at the Replication Workshop.

Awareness

- *From 1 to 10, where 1 means “Nothing” and 10 means “A lot”, How much interest on the environment did you develop as a consequence of this educational program?*

63 % of the participants answered “10”

32% of the participants answered “9”

5% of the participants answered “8”

It can be appreciated that participants developed high level of environmental awareness and interest on environmental topics thanks to the program. Environmental programs are related to increase awareness and attitudes, which triggers a bunch of conservation actions in participants.

Skills

- *Did the program help you to work as a part of a team and to think more critically?*

84% of the participants strongly agreed

16% of the participants agreed

- *Did the program help you to identify environmental threats and find possible solutions for them?*

89% of the participants strongly agreed

11 % of the participants agreed

Through appreciative inquiry, an increase of the participants’ skill was noticed. Teachers can detect environmental threats easily, including some threats that people don’t usually notice (like killing some animals just for the fact that they saw in a movie or facebook post that they were harmful for humans). Furthermore, observation of the group shows that the participants show willingness to work as a group and to form alliances to start new environmental projects. Also, participants’ answers show that they perceive an increase of their skills.

Behaviors

A list of pro-environmental activities was given to participants. They were asked to answer which of the activities they started doing/implementing as a consequence of the project and to mark in a scale on 1% to 100%, where 1% means “minimum” and 100% “Totally”, how much did they think the level of this activities was.

Activity	Percentage of teachers that do/implement it	Percentage of implementation (Average)
Reforestation/restoration of ecosystems	79%	49.26%
Different environmental activities in my community or school	95%	67.58%
Recycling	100%	74.68%
Composting	58%	42.89%
Reduction of the single-use plastic	95%	66.58%
Give environmental presentations at my community or school	79%	55.42%
Talks with my friends and relatives about taking pro-environmental actions	79%	56.74%
Others (*)	11%	5.79%

(*) Others includes activities such as environmental awareness through social media and streets clean ups.

This chart shows that participants are doing pro-environmental activities thanks to the change of their behaviors. Even though they still don't do it in a 100%, the numbers show that they are almost half of the way! This is promising, because if they keep doing this activities, more people will join them, and the impact will be grater!

Satisfaction

- *How satisfied are you with the educational program?*

89% of the participants are "Very satisfied"
 11% of the participants are "Satisfied"

One of the things that they liked the most was the presenter dynamism and that all the theory was connected with activities that showed how to apply the acquired knowledge with different audiences.

This is important to us because it shows that people are willing to learn more and replicate our program at their schools.