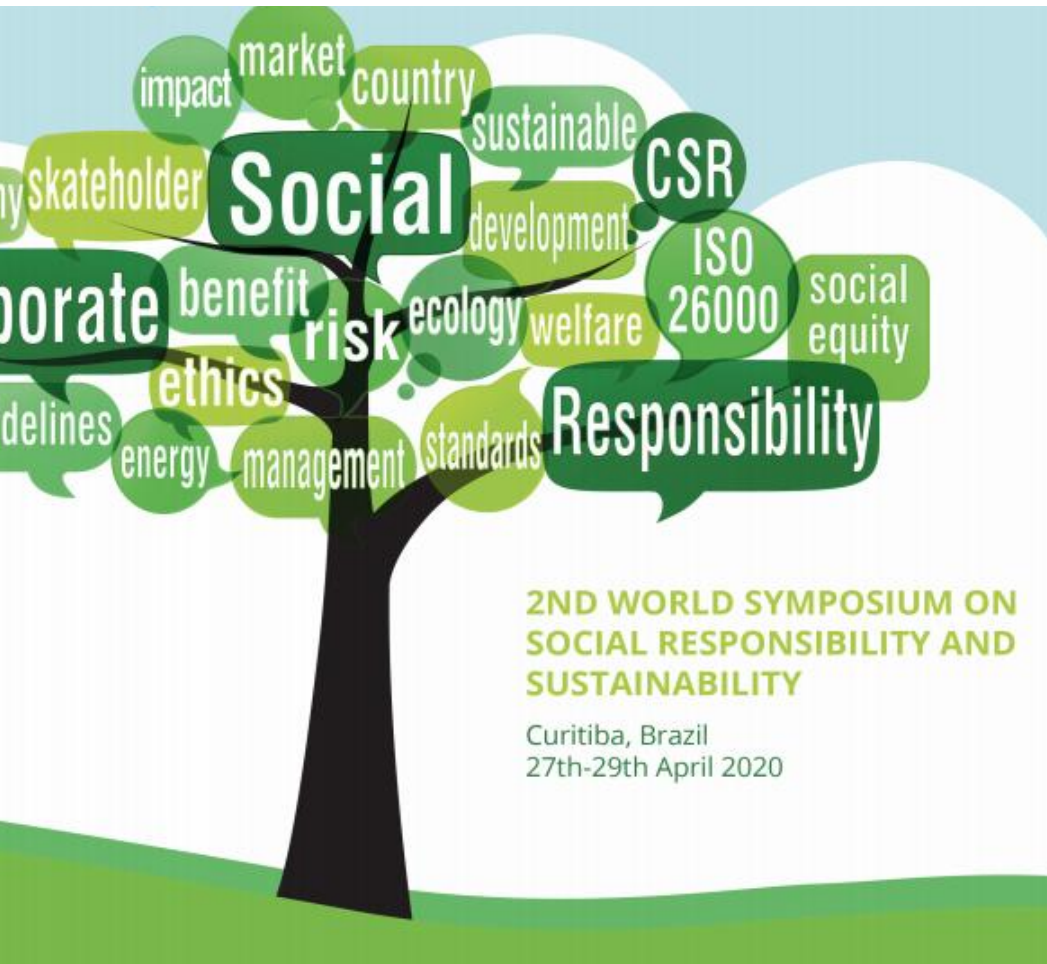


Pedagogical sustainability project in Cabo Frio, RJ, Brazil



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1. Introduction

- Reduced supply of drinking water is a serious socio and environmental problem faced by the city of Cabo Frio, RJ.
- Develop strategies and pedagogical projects in the face of social and environmental problems and the marked local water crisis
- Sustainability project that sensitizes students without affecting the environmental impacts in the city.

2. Goal

- Develop a sustainability and social responsibility project using pedagogical dynamics, through the Cycle of Living Activities with real problem situations, related to the insufficient supply of water in the municipality, involving the discipline of Fundamentals of Tourism and Hospitality of the Integrated High School Hosting Course.

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3. *Scenario*

- Federal Fluminense Institute - Campus Cabo Frio, Rio de Janeiro, Brazil. (Colocar a foto do IFF).



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4. Target audience

- Composed of 23 students from the 1st year of the Hosting Course Integrated to High School.
- Monitors - Six students from the 3rd year of the Teacher Training Course.

5. Problem

- Reduction in the supply of drinking water, especially in high season.
- Data from the Trat Brazil Institute (2018) show that only 73.70% of the population has access to drinking water.

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6. Methodology

- Qualitative research that uses the exploratory methodological approach and action research to solve collective problems.

The study was developed in three Steps:

Step 1: The Organization

The student monitors were trained to use the materials of the dynamics and guide the students of the IFF-CF.

Orientation

- Assembly of the pedagogical dynamics with the available materials;
- Guide on the rules of pedagogical dynamics;
- Distribution of IFF-CF students in teams;
- Choosing the leader of each team;
- Establishment of 20 minutes for solving problem situations.

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Materials used in pedagogical dynamics

<i>pedagogical dynamics</i>	Materials
Mining Activity Construction	Polyvinyl Chloride (PVC) tubes, ropes of various sizes, buckets, water, coloured plastic balls, bicycle tire chambers, funnel and water hose.
Aqueduct Construction	Pieces of thin bamboo, twine, duct tape, and half-moon cut plastic tubes. To simulate water transport, coloured plastic balls were used.
Chandelier Construction	Plastic tubes, strings of various sizes, balls of different sizes.

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Step 2: Application

- The monitors apply the pedagogical dynamics through the Experimental Activities Cycle;
- All dynamics were performed in a team;
- Problem situation- The teams work in a hotel near a mining company. This situation generates employment for the population; however it causes problems such as constant lack of electricity and water supply.

2.1 Mining activity construction

- Team planning the extraction of minerals without wasting water.

2.2 Aqueduct Construction

- *Construction of an aqueduct to transport water to the hotel where to use it.*

2.3 Chandelier Construction

- Assembling a large chandelier and transporting it to the main hall of a hotel.

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3.Step 3: Assessment

- Students answered a questionnaire with four questions related to their perceptions of applied dynamics.

Nº	Question
1	“Which PD did you find most interesting?”
2	“In your opinion, what activities contributed to relate the Fundamentals of Tourism and Hospitality discipline with the environmental issues?”
3	“Did the team activities facilitate the achievement of the proposed objectives?”
4	“In your opinion, did problem situations help to develop activities?”

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8. Results and Discussion

- For the assembly of the chandelier, each team developed different strategies to minimize the impacts of the wind that knocked objects down, a difficult variable to control.
- This situation required the involvement of the entire team.

Pedagogical Dynamics	Frequency	Percentage (%)
Chandelier Construction	11	47.82
Mining Activity Construction	08	34.78
Aqueduct Construction	04	17.40

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8. Results and Discussion

In the question 2: “In your opinion, what activities contributed to relate the Fundamentals of Tourism and Hospitality discipline with the environmental issues?”

Students reported that:

“Chandelier construction helps to reflect on the importance of saving energy”

“Mining and aqueduct construction activities collaborated to reflect on the water problem”

"We need to save energy"

“For the construction of the chandelier, we had to be patient”

"The construction of the aqueduct and mining company is directly related to the environment versus economy and the lives of residents"

The students' responses point to the importance of developing tourism with sustainable practices that involve the real problems of the population, which is developed through the discipline of Fundamentals of hospitality tourism. . Sustainable tourism should enable practices that reduce negative impacts on the environment (PPC, 2019).

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8. Results and Discussion

In the question 3: “Did the team activities facilitate the achievement of the proposed objectives?”

Students reported that:

“Yes. Teamwork makes things easier ”

“Most activities only worked because they were done in teams”

“Doing it this way was not just one person who thought, but several people, to solve each step quickly”

“As a team, everything was easier and faster because everyone helped to come up with ideas”

“We developed team communication and were able to work more easily”

"We could only do the activities because the work was done in teams"

From the students' responses, it is possible to see that teamwork enabled the execution of tasks through the exchange of experiences.

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8. Results and Discussion

In the question 4: “In your opinion, did problem situations help to develop activities?”

Students reported that:

“Yes, we have learned in practice how to deal with problems”;

“We gained more experience and learned to solve problems more easily”;

Through problem situations, we can understand what should be done.”

We got a sense of how to solve such a problem if it occurred in real life.”

The answers must determine which situations the problem promotes an understanding of the process being developed and estimate the solutions. A contextualization through problematic situations leads to affected learning (Almouloud, 2016). |

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9. Conclusion

- ✓ The results of this study demonstrate the relevance of working the Sustainability and Environmental Education duality, in the school universe, within the local reality context.
- ✓ Developed greater student awareness of environmental problems in Cabo Frio, RJ, Brazil.
- ✓ It stimulated greater interest, reflection and discussion on local socio-environmental issues, contributing to enhance the characteristics of the individual profile, expected for the future hosting professional.

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