

## Fauna and flora of the Brazilian Atlantic Forest: Educational theories and practices in favor of environmental preservation



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### ABSTRACT

This article discusses a study proposal, elaborated through concrete activities, in direct contact with nature, about a contribution to the resolution of specific situations of environmental damage, in the

spaces close to the educational center, to reinforce the role of practice in the formation of values and in the development of proactive attitudes concerning the problems in question. whose vision lies in the urgency to act collectively in sensitizing and raising awareness about the importance of preserving the environment (fauna and flora), which has a remarkable relevance in the Brazilian Atlantic Forest.

The didactics presented integrates the study of the characteristics, conditions, and benefits of an ecological reserve in the Atlantic Forest of the Southeast region, where the purposes are analyzed according to the level of education of the participants, emphasizing the formation of children and adolescents. At this stage of life, the primacy for the construction of environmental values corresponds to several pedagogical concepts, because as learning at this early stage is produced in greater depth, children learn more through motivations and obtain better practical skills.

**Keywords:** Environmental Education, Awareness and Preservation.

## 1 INTRODUCTION

In view of the various challenges concerning the relationship between man and nature in contemporary society and the impacts on the environment caused by the action or omission of human beings, Environmental Education has become a necessity associated with the very existence of the human species. Thus, it is important to emphasize that the principles of EE are related to the knowledge of problems, the awareness of possible solutions and motivation to carry out transformations that generate real responses at a local and global level.

In Brazil, Law 9.795, of April 27, 1999, which provides for Environmental Education and institutes the National Policy for Environmental Education, by dealing with the responsibilities of public policies in relation to the engagement of society in the conservation, recovery and improvement of the environment; it makes educational institutions responsible for promoting Environmental Education in an integrated manner with the educational programs developed by the school itself.



Today's society lives a constant reflection on the attitudes of human beings in relation to the preservation of the environment, due to the transformations that modernity offers to society, thus provoking a socio-environmental emergency that brings out the need to rethink human activities, to provoke a significant change, aimed at the preservation of the environment. and that in the future, man knows how to live, coexist and enjoy natural resources in a conscious way.

Seeing the importance of having an education more focused on the environment and with the growing environmental imbalance that we are witnessing, renowned researchers in Ecology and Environment emerge who in their work come to clarify and justify what has been happening over the centuries, with serious research and studies centered on real facts about the environmental changes in their abiotic and non-abiotic environment and how man has been interfering with it.

The main objective here is not to establish predetermined fixed rules and norms about the environment and how to keep it preserved and intact, but to know how to enjoy it in the best possible way within an ecologically coherent balance.

In the PCNs, there is already talk about Environmental Education and that it should be put into practice in schools, not only as a concept and content, but also with attitudes.

With this project, the school in question seeks to raise this awareness, initially, in the students who make up Elementary School I and who are in the fourth and fifth year of this respective modality of education. Such students will be the propagators of this action, with the purpose of provoking a change in self-destructive social behaviors and in the incessant process of degradation of nature and people's quality of life. In addition, the participants aim to show that the responsibility towards the environment will have a greater or lesser social impact, defining the standard of development, commitments, control and limitation of the damage caused to the environment.

Finally, that man can enjoy, in an attentive way, all that nature provides, without harming it or preventing it from its potential for self-regeneration and collaborating for its full development, under the understanding that we are the environment in action.

## **2 ENVIRONMENTAL PRESERVATION: FAUNA AND FLORA OF THE ATLANTIC FOREST**

The Atlantic Forest, a national heritage provided for in article 225 of the Federal Constitution, is one of the richest biomes in Brazil in terms of biodiversity, similar to the Amazon Rainforest, with lush vegetation, accentuated hygrophytism and ecological diversities that allow spontaneous regenerations. The abundant fauna has a large number of endemic species (which cannot be found anywhere else on the planet).

Law No. 11,428/2006, known as the Atlantic Forest Law, regulated by Decree No. 6,660/2008, which provides for the implementation of the Municipal Plan for the Conservation and Recovery of



the Atlantic Forest (PMCRMA), is the main instrument for the management and conservation of this Biome. It is relevant to clarify that although such regulations provide for restrictions pertinent to the conservation and preservation of fauna and flora, unfortunately today such riches are harmed by human actions, among them: deforestation, illegal trade and pastures, resulting in the extinction of several species, thus revealing the great problem of this wonderful set of ecosystems. According to statistical data released by the IBGE News Agency (2020); in 2014, in Brazil there were 3,299 species of animals and plants threatened with extinction, with the Atlantic Forest having the most threatened species; 1,989 or 25% of the biome's species in the study.

In the sense of the relationship between man and the environment (biotic and abiotic) they are part of an integrated whole and interacting together in this huge organized and self-sustaining ecosystem.

Thus, Reigota (2001) exemplifies his work on three social categories of the Environment.

With the Modern Era, and its technological, scientific, social and cultural developments, comes the advances of the population with its disorganized and highly devastating growth for the biotic and non-biotic environment, as misery, diseases, unemployment, families living in precarious houses and/or even on the streets appear, underemployment appears, socially and culturally it can be said that there is in this century a sub-race of human beings that does not have the slightest condition to understand, understand and solve the basics of the problems that surround them.

This social culture dates back to the Industrial Revolution and the disorganized growth of urban centers and the emptying of rural areas.

To better understand these "new problems" there is a science that comes to solve these problems, which is **Ecology**, which means house or home, is derived from the Greek *oikos* (Ricklefs, 2003). However, it was the German zoologist Ernest Haeckel (1834 -1919) who gave this word a new meaning, for him ecology is the body of knowledge concerning the economy of nature, and the investigation of the total relations of animals with their inorganic environment, including their friendly relations with those animals and plants with which they are directly or indirectly present to them. thus, ecology is the study of all the complex interrelationships determined by Darwin with the conditions of struggle for existence (Ricklefs, 2003).

Ecology is a new science with several definitions, from the science that studies living beings and their natural world, as well as the science that studies these organisms in terms of their distribution and abundance in the environment in which they are found (Boff, 1999).

According to Boff (1999), ecology takes place in four ways:

I - Environmental Ecology, is concerned with the Environment so that it does not suffer excessive disfigurements, thinking about having a better quality of life, here nature sees



itself outside the human being, seeks new technologies less polluting and ecologically less aggravating for nature.

II- Social Ecology, which inserts the human being within nature (wants the whole environment and just something fragmented), is concerned not only with having a more beautiful and modern urban environment, but also prioritizes solutions to current social problems, since citizens are and are part of a portion of nature.

III – Mental Ecology, or deep ecology, says that the causes of the Earth's deficit are not only to be found in the type of society, but in the type of mentality, whose roots go back to times before our modern history, these minds consider themselves masters of nature and that it should serve them, they live in an anthropocentric idea.

IV – Integral Ecology, is a new vision of the Earth, they see the Earth from outside the Earth, in this case the human being is the Earth itself while thinking, feeling, loving, crying, trying to accustom the human being to the global and holistic vision, capitalizing on the organic totality, being one and diverse in its totality, but uniting them in a globalized whole.

In the last decades Ecology, as a science, has been presenting a growing development in the media, intensifying its ideas, proposals and how to improve "our Environment" and with it our Planetary Ecosystem in a sustainable way for all who integrate this planet Earth (biotic and non-abiotic environments, together with man), but it has been happening with this flag raised under the name Ecology and its Sustainability, erroneous interpretations arise that distort the true meaning and essence of the word Ecology and its real importance.

Thus, environmentalists emerge who see in the "wave" of Modern Ecology with their discourses about the protection and well-being of nature, but they are people who distort the real concept of Ecology and its importance in the balance of the Ecosystem, which has been suffering a gradual and constant imbalance for decades of expansion and evolution of society. cultural, social and technological.

Ecology studies the structure and dynamics of biotic organisms with the abiotic environment, in a relationship of equilibrium, having support to respond and understand the imbalance that exists today with so much force and destruction (Boff, 1999).

Although ecologists have been discussing the effects of man's actions on the environment for more than half a century, the theme is recent in classrooms. Socio-environmental education is the most used term in recent times to define the concept for discussing the responsibilities of individuals and the consequences of their actions. ( Rodrigues and Malzoni, 2010, p.15 ).

This project is focused on the critical current, since it has a greater approximation to Environmental Education, moving not only a group, but an entire community that, with significant attitudes, will involve other communities and so on. This paradigm is based on scientific and solid



arguments, with sustainable, ethically correct and responsible use of nature's resources, to ensure the satisfaction of current and future growing human needs (FUNIBER, 2022).

### 3 TRAINING OBJECTIVE

The main objective is to sensitize students to the development of skills in the promotion of values, attitudes and capacities for a transformative action of social life, in the natural environment and other spaces of society, situating the circumstances in the context of the student to carry out the experience in the praxis, in the world of causes and effects, of the scientific explanation related to previous knowledge about the origins and consequences, and environmental problems, making adaptations according to the particular specificities of each student, since every human being has several capacities that are expressed in a different way. Although they have common traits, they have distinct personalities and identities, such as culture, ethnicity, beliefs, and sexuality.

The CGEA (General Coordination of Environmental Education) provides the training of environmental educator teachers, dedicating efforts both to initial training in the degrees of the former magisterium, as well as in continuing education; the promotion of Environmental Education projects in schools, stimulating and developing teachers, students, management, employees, and the community, having an environmental educational praxis, proposing a permanent ecological education with all citizens who are members of the community (Trajber, 2007).

For this, it is necessary to have teachers who assume the commitment to the environment, its importance both in prevention and in the protection of humanity, having a self-critical look at their own values, running the risk of transmitting to the new generations - in the same way that we transmit social prejudices - erroneous concepts about the environment and the attitudes to be taken (FUNIBER, 2022, p. 112).

### 4 METHODOLOGY AND PROPOSED ACTIVITIES

Based on the theme addressed and the proposed objectives with the intention of carrying out an active and significant action, with the students being protagonists and the teacher the mediator of this process, in the development of this work a structured teaching methodology was used through an interdisciplinary project, based on a sequence of activities, distributed in the following stages:

**1st Moment:** In the introduction of the theme to the class, the teachers organized, at the school, an Awareness Lecture on the importance of preserving and conserving the Environment existing in the "Atlantic Forest"; as it is a comprehensive theme, the faculty had the support of professionals in the area who work in an NGO, which works with specific issues (Environment), environmental agents from the region itself that compose data, images and videos, among other resources, which will be



used to present the theme to the students, promoting their commotion and awareness, regarding the preservation of the environment in which they live.

**2nd Moment:** After the above activity is carried out in the school environment, the group goes to a field practice in which the students carried out a trail in an Ecological Park of the Municipality, near the school center, accompanied by the teachers and supervised by an environmental monitor who is available to give all the information to the possible questions related to the fauna and flora of the region. such as: What animals are part of this region? Which animals went extinct? Is there an illegal trade in animals? And what are these animals? What type of vegetation predominates in the region? Is it primary/secondary vegetation or virgin forest? The most significant and relevant data about the route traveled were recorded through photos and/or notes in notebooks.

**3rd Moment:** After the trail, already in the classroom, the students were guided by the teacher to produce a drawing, representing the rereading of the tour carried out. Each drawing consists of presenting a phrase that demonstrates the importance of having an "Environment" preserved.

**4th Moment:** Divided into groups, the students carried out a more specific research on the fauna and flora of the region in which they live. In addition, to make better use of the work, printed and digital materials (books, magazines, videos, documentaries, websites with reliable information) were used. Each group was responsible for a certain environmental area (fauna/flora), and made thematic environments for the exhibition of their work, through models, panels, reuse of scrap metal, mini lectures on garbage and the importance of the 4 Rs (recycle, reuse, reduce and rethink) and construction of a mini sensory trail with scraps and aromatic plants.

**5th Moment:** The presentations of the results of the activities developed by the students took place in the sports court and in the schoolyard, with an exhibition of materials made, focused on the theme: "**Environmental Exhibition of the Atlantic Forest of Brazil**". The exhibition was open to the public of the region and to the other students of the school, so that everyone could be sensitized and understand the relevance of the Atlantic Forest, its positive points for the population, for the city's surroundings, for commerce (such as tourism), job creation, and also the preservation of river springs.

The closing of the Environmental Exhibition took place through a theatrical presentation, with the participation of teachers and some students, who portrayed the knowledge acquired by the class throughout the activities, demonstrating how important it is to preserve the environment in which one lives, so that there can be harmony between man and nature. Such action is an invitation for the community in general to think more about the issue of preservation and also to become a partner of the school, assisting in the activities to be promoted, related to environmental issues

**6th Moment:** The approaches of this project were evaluated in two stages:

1st stage - In the exhibition "Environmental Exhibition of the Atlantic Forest of Brazil", where each visitor can register their comment, on a mural located at the exit of the site, referring to the work



carried out by the students with the supervision of the teachers and the school team, positive or negative comments, giving the opportunity for each visitor to evaluate the school events of their community, as well as possible suggestions for other future activities on the Environment;

2nd stage - The registration and dissemination of the results occurred through the production of an Informative Ebook (with online or printed access), which was built by the students and teachers who effectively participated in the project, also containing the opinions of the community who attended the exhibition "Atlantic Forest Environmental Exhibition".

## 5 FINAL THOUGHTS

When dealing with the purposes of social actions in different socio-environmental contexts and formal educational spaces, the urgency of an active citizenship is seen, guided by collective and organized actions, which seek to understand and act in decision-making related to environmental problems, quality of life and sustainability.

Educational practices such as this promote a dialogue of knowledge that allows the formation of a critical, creative thinking and attunement to the need to propose answers for the future, capable of analyzing the complex relationships between natural and social processes and of acting in the environment respecting sociocultural diversities, educating students for knowledge, so that they can politically insert themselves in the world. consciously, responsibly and in solidarity, since it was possible to achieve a positive result with the development of this proposal.

Education that works with interaction, with the protagonism of students, articulated with a social change, transforms pedagogy into a political practice, as suggested by Giroux (2003), with cooperation between educators and other cultural subjects engaged in social and environmental struggles, creating critical spaces for learning inside and outside the school, seeking union with organized social movements. Thus, changes will not occur from the top down, but with the direct participation of students, teachers, the community, and the environment, in a complex dynamic (Tristão, 2007, cited by Jacobi, 2009, p. 09).



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