Environmental Management of Gabriel Correia Pedrosa Children's School in Manaus - Amazonas, an Application of Environmental Education

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Abstract

The implementation of Environmental Management in elementary schools encourages the development and sharing of correct environmental solutions, cost reduction and resource optimization, conservation of school physical spaces and commitment to the management process. In this context, it is proposed to apply an Environmental Environmental Management Plan at Gabriel Correia Pedrosa Nursery, located in the Compensa II neighborhood, Manaus-AM, seeking to identify as environmental activities. An exploratory research was used to define the problem with greater precision, to identify methods of action or to obtain additional data, having as pedagogical objectives the introduction of paradigm changes that lead the individuals of Education to be inserted in democratic processes of transformation of the problem. human-nature relationship. An analysis of the data allowed the elaboration of methods of implementation of the

Gabriel Correia Pedrosa Nursery PGAE model guided by the following steps: an environmental perception through the early diagnosis of activities and a thematic methodology of the nursery EA. Thus, the nursery develops activities to finalize the student on environmental issues in order to raise awareness - and use a multiplying agent, carried out in 2019, as the following activities: activities and studies with plants and flowers for cultivation and irrigation; interaction with soil, without working the nursery garden; implementation of fruit trees for children and environmental educational tours. The Nursery seeks to implement the highest level of GEA, going from 5R to a change, reinventing a way of life, being described by 7R.

Keywords: Environmental Education, Environmental Management, 7R's;

1. Introduction

The environmental area, today is the focus of the most discussed issues in the world, as it involves various segments of society, linking the areas that make up the tripod of sustainability. With the prospect of increasing population and the process of globalization, there is an increasing need for the conservation and preservation of natural resources for the use of future generations.

Thus, the initial process for recognizing these changes and the need to maintain resources, recognizes from environmental education, an essential condition for change in the correct use of these resources. In this context, the school can be considered a space capable of contributing to the construction of new concepts and social and environmental relations.

Environmental Management (GA) has been gaining increasing space in organizations, where increasing ecological awareness is visible at different levels and sectors of society, encompassing different companies and educational institutions. The adoption of international environmental management standards was one of the measures found to ensure environmental conservation and sustainable development [1].

This management process aims to create techniques, plan, organize and manage economic and social activities in order to make rational use of natural goods, as well as comply with current environmental legislation [2].

The implementation of GA in primary schools has the following benefits: good school-community relations, strengthening and enhancing institutional image and market share, improving cost control, reducing incidents involving civil liability, conservation raw materials and energy, stimulating the development and sharing of environmentally sound solutions, reducing costs and optimizing resources, conserving the school's physical spaces and commitment to the management process [3].

In addition, it provides the involvement of all who integrate the school space, disseminating environmental responsibility to the entire community. However, it is necessary to observe the characteristics of each educational institution and the form of application that the GA must assume, given the reality of the school community, considering its structure and location [4].

In 1992, with the holding of Rio 92, United Nations Conference on Development and Environment, also called ECO 92, the consecration of the concept of Sustainable Development gains connotation. This highlight resulted in the elaboration of relevant documents, resulting in the creation of Agenda 21, national

and local, resulting in the active participation of society to assume responsibilities, focusing on social, environmental and economic improvement.

Aiming at building people's capacity on environmental and sustainable development issues, Chapter 36 of Agenda 21 launched the four basic challenges for the implementation of Education with Sustainable Development (ESD): improving basic education; reorient existing education; develop public understanding; knowledge and training [5], the author also highlights [...] Environmental Education (AS) as a discipline that emphasizes the relationship between men and the natural environment, the ways to conserve it, preserve it and administer it. their resources properly [...].

ESD is comprehensive, encompassing EE and its relationship to sociocultural factors and sociopolitical issues of equity, poverty and quality of life [5].

Thus, it is assumed that AE cannot be conceived only as a school content, because it implies awareness based on political, economic, cultural and scientific factors [6].

Thus, it is evident the importance of citizens' awareness to act responsibly and maintain a healthy environment in the present, knowing how to demand and respect individual and collective rights, changing their relationships with the environment, as a person as a collective being. in the future [7].

In order for EA to evolve into a GA proposal it is important to aggregate different areas of knowledge within a cross-cutting perspective, integrating all teachers, students and the community [8].

The concept of Educating for Sustainability indicates an educational component, the preservation of the environment, depending on an ecological awareness; and the formation of conscience depends on education, making it possible to expand knowledge, paradigm shift, reframing values, attitudes, seeking to improve skills, prioritizing the integration and harmony of individuals with the environment [5].

Considering all this importance of the environmental theme and the integrated vision of the world, in time and space, schools stand out, with project-oriented actions and participatory processes seeking self-confidence, positive attitudes and personal commitment to environmental protection implemented, in an interdisciplinary way [9].

Given the above arguments, the importance of the structural organization of the PGAE is emphasized, having its own pre-established delimitations [8].

The development of these new perspectives and pedagogical practices generates an educational challenge in search of a future education: transformative, integrative and interdisciplinary. GA involves practices that aim to ensure the conservation, preservation and reduction of the environmental impact of human activities, which can be worked on in public or private companies, industries and educational institutions, in the process that involves the recognition of changes in habits, awareness raising. understanding and action in activities related to this process, environmental interpretation, culminating in the conservation and preservation process [10].

In order to work GA in school environments, it is necessary to elaborate a PGAE, which is the result of coexistence with the schools and with the pedagogical work developed by them, constituting a process of systematization of the actions of AE [8], having as pedagogical objectives the introduction of paradigm shifts that lead the subjects of Education to be inserted in democratic processes of transformation of the human-nature relationship, and promoting an EA committed to citizenship and directed to the environmental issues of the school environment.

In this context, it is proposed to apply a School Environmental Management Plan (PGAE) at Gabriel Correia Pedrosa Nursery, located in the Compensa II neighborhood, Manaus-AM, seeking to identify all environmental activities.

2. Materials and Method

2.1 Study Area

The study uses the Gabriel Correia Pedrosa Municipal Nursery, located in the Compensa II neighborhood of Manaus, AM, for the establishment of the research. Figure 1.

Fig.1 Location map of Gabriel Correia Pedrosa Nursery, Compensa II.
Source: Own authorship (2019).

The Corrêa Pedrosa Municipal Day Care Center was created by Municipal Decree No. 2,666 of December 5, 2013. The construction of the day care center began in 2012 and its project was prepared by the National Education Development Fund - FNDE [11].

The idealization of the day care center and its construction arose from the great need for the care of children aged between 1 and 3 years for the Compensa II neighborhood, since in the neighborhood there was no educational institution that could attend this age group. The institution currently serves not only the nursery phase, but also the preschool, counting on the number of ten rooms that function as a reference room [11].

2.2 Data Collection

Research is exploratory, used to define the problem more accurately, identify relevant courses of action or obtain additional data [12].

Having as pedagogical objectives the introduction of paradigm changes that lead the subjects of Education to be inserted in democratic processes of transformation of the human-nature relationship and to promote an EA committed to citizenship and directed to the environmental issues of the school environment, will be researched and modeled. the PGAE, marked by [8].

The data analysis allowed the elaboration of the methods of implementation of the PGAE model of the

Gabriel Correia Pedrosa Nursery, guided by the following steps: the environmental perception through the previous diagnosis of the activities and the thematic elaboration of AE in the Nursery.

Regarding the data analysis, [13] presents considerations, emphasizing the importance of the researcher's previous knowledge about the researched subject, as well as his theoretical background, common sense and ability to argue so that he can collect the data and describe it in the best way. Thus, aiming to summarize, classify and codify the data, to achieve the desired means of research, through a quantitative analysis using statistics and / or qualitative-quantitative.

A field research was also performed, which according to [13] is a methodology that allows the researcher to deepen his research theme, developed in natural scenarios, through direct observation, survey or case study.

3. Results and Discussion

The Gabriel Corrêa Pedrosa Municipal Nursery currently has 40 employees, of which 18 are effective through a public tender, 13 are contract employees and 9 are outsourced [11] (Figure 2).

Fig.: 2 Gabriel Corrêa Pedrosa Municipal Nursery
Source: [11].

The day care center has capacity for 228 children. The thirty professionals who make up the day care center are divided into teachers, pedagogues, pedagogical support, nursing technician, psychologist, concierge, general service and cooks [11].

The studies by [8] helped the Gabriel Corrêa Pedrosa Nursery in the elaboration of a basic model of PGAE, constituting a process of systematization of the actions of AE, having as pedagogical objectives the introduction of paradigm changes that lead the subjects of Education to be inserted in democratic processes committed to citizenship and directed to environmental issues around the school. Thus, the nursery develops countless activities in order to insert the student in environmental issues in order to sensitize him and make him a multiplier agent.

Initially, in 2019, the nursery performed the following recreational activities: interaction and learning with

plants and flowers for cultivation and irrigation; interaction with the soil in the work of the nursery garden; implementation of fruit trees for children and environmental educational tours.

For the following years, the Nursery has the following activities intentions: introduction and use of selective trash bins, used to segregate the waste, besides collecting the organic waste to feed the composer; use of educational toys with natural resources, composting made with organic waste from the kitchen to prepare the fertilization of the garden, which will be used for learning planting and cultivation [11].

In the first moment of the environmental perception analysis, the lack of adequate infrastructure in the Nursery for the disposal of solid waste, highlighted the lack of continuing education courses in the area of EE for teachers of Public Basic Education.

Another point to be considered is the teachers' little concern with environmental issues regarding sustainable water consumption, besides the condition of applied knowledge, so that the information is deepened and absorbed in such a way as to guarantee the continuity of process.

The importance of PGAE can be observed and recognized in the National Curriculum Parameters (PCN) created by the Ministry of Education in 1997, which underscores the undeniable importance of future Brazilian generations to responsibly and sensitively instruct environmental preservation, making it sustainable [14].

It is important to highlight that the first stage started raising the awareness of Creche employees regarding solid waste management. However, according to [15], proper waste management involves adopting the policy of 5R's: Rethink, Reduce, Reuse, Recycle and Refuse (Table 1).

From this perspective, educational practices should guide the search for pedagogical proposals that aim at changing habits with social attitudes and practices in the construction of competences, analytical skills and the active participation of stakeholders, and this challenge leads to thought reform [16] .

Tab .: 1 Representation of EA's 5R's for proper management.

5R's of Environmental Education	
Rethink	Rethink the need for consumption and the production and disposal standards adopted.
Refuse	Refuse possibilities of unnecessary consumption and products that generate significant environmental impacts.
Reduce	Reduce seeking to avoid waste, consume less products, preferring those with lower potential for waste generation.
Reuse	Reuse to prevent trash that is not trash by reusing everything that is in good condition. Be creative, innovative using a product in different ways.
Recycle	Recycle by transforming materials that are discarded into other products through industrial or craft processes.

Source: [15].

The EA process is not only about a module that works to implement the process, but rather, advancing from the effectiveness and continuity of activities seeking to achieve the established goals.

Environmental education work in primary education should raise the awareness of staff and students about

their values, attitudes, commitments, and capabilities needed for environmental improvement.

Conscious consumption depends on everyone's participation, where the progress of methodological actions is indicated. The 5R's methodology reaches an even higher level, the 7R's, including the desired, reinventing a new way of life [17] (Table 2).

Table 2 - Description of the different moments to reach the 7R's

TIME	3R's	5R's	7R's	META
1st	Reduce Reuse Recycle			Short term
2nd		Reduce Reuse Recycle Reuse Rethink		Mid-term
3rd			Reduce Reuse Recycle Reuse Rethink Refuse To recover	Long term
TARGET	WASTE	WATERS	Habits	PRACTICES

Source: Elaborated and Adapted [17].

There is a range of actions and interventions that can be done to reduce the amount of waste produced. Some are quite simple and depend solely on having the knowledge and practical experience of everyday actions [17].

The nursery seeks through new insertions to work in this perspective, knowing all the obstacles given to GA. Even because the information passed on to the student must be continued and incorporated into their time, becoming part of it.

Sensitization of education professionals and other public servants involved in the project is of fundamental importance to achieve the proposed objectives, awakening conscious citizenship with responsibility for social transformation, improving the basic concepts of EE [18].

A posteriori, the Nursery has the following activities intentions: introduction and use of selective trash bins, used to segregate the waste, besides collecting the organic waste to feed the composer; use of educational toys with natural resources, composting made with organic waste from the kitchen to prepare the fertilization of the garden, which will be used for learning planting and cultivation [11].

4. Conclusion

From this perspective, sustainability becomes an obligation to future generations from the moment when EA's knowledge becomes assimilated and intrinsic to our actions, satisfying the sustainability tripod.
According to the conception and perception of individuals in a given community, so that they reflect, understand and discover the importance, there will be effective participation in projects involving EE.
The study presented here is just one of the possible initiatives of working with EA in day care, even in the face of great difficulties and challenges in basic education, articulating educational actions, appropriate conditions and training for educators so that they can work on environmental education themes and activities.
It should also enable the criticality of students, based on concepts and playful actions, developing the values of environmental practices with interventions based on the awareness of individuals in the process, awareness to take the EE as part of themselves, administer the interpretation actions, so that, in fact, it is developed and absorbed, until it reaches the desired model, acquiring forms and tools for the execution of environmental awareness.

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