



ANALYSIS OF ENVIRONMENTAL PERCEPTION ON STUDENTS IN TWO PRIVATE SCHOOLS IN THE CITY OF NORTHEASTERN OF BRAZIL

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ABSTRACT

Environmental education figures as an important tool to overthrow a society, from her citizens began to rethink their attitudes and to correct them. According to the National Environmental Education Politics of Brazil, established by Federal Law No. 9795/99 and regulated by Decree No. 4,281 / 2002, it must be present in all levels of education in an interdisciplinary way. This study is an evaluation of perception assessment on education. We tried to understand how the students of 8th and 9th year of two private schools in City of Recife realize achievements in environmental issues in the school environment, and know of their achievements in their homes, starting from the understanding that the apprentice takes the school experiences home. Understanding how school communities they see the achievements that environment is important because only after knowing the reality can suggest activities that fit the needs found.

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INTRODUCTION

Concern about the environment according to (Dias, 2006) reached greater proportions due to the visible effects of the imbalances caused by the anthropic action in nature. In the 1960s, journalist Rachel Carson opened the eyes of society to the need to think about the environment and sparked the debate over the use of chemical pesticides with the publication of her book *Silent Spring*, which denounced the cellular alteration in plants and animals due to the use of the pesticide Dichlorodiphenyltrichloroethane - DDT. Since then, the environmental theme has gained more attention from governments and the United Nations - UN that in turn organized events that aimed to analyze the effects and factors responsible for the environmental degradation of the Planet. At these meetings, several countries concerned about the negative effects on the environment have signed a number of commitments, including reducing environmental degradation,

emission of polluting gases into the atmosphere and using natural resources in a more sustainable way. Already in the first events carried out with the objective of analyzing the environmental problem, they pointed primarily to the need to have an education that allows the citizen to reflect on environmental issues, their quality of life, and to enable the connection (Segura, 2007) cultural, political, socioeconomic, religious: Environmental Education (EE). At the events of Stockholm, 1972, Belgrade, 1975, and Tbilisi, 1977, Environmental Education was recognized as a tool to combat the environmental crisis, guidelines were drawn "for an international EA program, according to which it should be continuous (Dias, 1991), and established in the last mentioned event, according to (Medina, 1997), the principles that guide EA: critical, ethical, interdisciplinary and transformative, in addition to reaffirming its interdisciplinary character. For Bonotto and Carvalho (2001) in Almeida (2005) the educational process was pointed out as one of the possibilities to try to reverse or minimize the set of imbalances installed, since, educate to perceive the environment, according to Silva (2007), means to educate by projecting life. For (Felizola, 2007), environmentally correct behaviors must be learned in practice, in the daily life of the school, thus contributing to the

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formation of responsible citizens. In order to seek this education, Silva (2007) points out the need for the school to be prepared to organize dialogues with reality, allowing critical and purposeful thinking, always relating ideas and practices, since education is a tool for formation and According to Carvalho (2007), the school, in turn, is a space designed for planned and intentional formation in modern society. In this sense, it is essential to include environmental education in the school environment, because it is a place where knowledge is built / rebuilt, foster experiences and establish new experiences. Sauv e (2005) argues that there is a void in the relationship between the human being and nature. It is necessary to reconstruct the feeling that makes man feel that he belongs to the environment. Environmental education makes it possible to understand the world in which we live; and points out the ethical conduct to be followed (Loureiro, 2006). "It is the necessary condition to modify a picture of increasing socio-environmental degradation" (Jacobi, 2005). Effting (2007) points out that it aims to provide all people with the conditions to acquire the knowledge necessary to protect and improve the environment. The EE must be carried out in an integrated and transversal way and is not limited to being remembered only in commemorative dates.

The Environmental Education for Layrarges (2002) in Sorrentino and Trajber (2007) is divided into three types according to the approach in carrying out the activities. These are: 1) environmental education; 2) education for the environment; and 3) environmental education. The EE practices according to Paula (2010) allow the active participation of the student in the diagnosis of environmental problems, due to all of this; environmental education has the important role of fostering the perception of the necessary integration of the human being with the environment. In the Brazil, Law No. 9.795 / 99, which "Provides for environmental education, establishes the National Environmental Education Policy - PNEA and provides other measures" (Brazil, 1999), arises to qualify environmental education, shows its objective principles, those responsible for its implementation, its scope of action and its main lines of action, with the purpose of affirming the right of all to environmental education. Sato (2002) complements affirming that EE should be addressed in all school activities. Must be present at all levels of education. It is only when one understands the importance of the PNEA to capture its educational meaning that it will function as a tool for transforming virtues and values in social relations. Only the law will fail to provide the adhesion and effectiveness of this process (Lipai *et al.*, 2007). With the implementation of an environmental education project in the school space, Felizola (2007) points out that students and the population will be given a fundamental understanding of existing problems, their responsibilities and their critical roles as citizens of a country and of a planet. In this way, the development of skills and values that will lead them to rethink and evaluate their daily attitudes and their consequences in the environment (Paula, 2010).Contributing, according to Crespo (1996) with the formation of responsible citizens. Environmental perception can be defined according to Faggionato (2005), as an awareness of the problems related to the environment in which it is inserted. Rosa and Silva (2002) consider that it is the way individuals see, understand and communicate with the environment, taking into account also the ideological influences of each society.

For Fernandes *et al.* (2003) education and environmental perception appear as tools in the defense of the biosphere

helping to re-approximate the man of nature because it arouses the responsibility and respect of individuals in relation to the environment in which they inhabit. Education appearing as a tool to sensitize citizens and the study of environmental perception as a means to better analyze how people see the environment that surrounds them and their relationships with them.

MATERIALS AND METHODS

This research was carried out with students in two private schools in the city of Recife / PE. Using the confidentiality criterion, educational institutions were named in this work by CA (School A) and CB (School B), respectively. In agreement with Marconi and Lakatos (2003), this research presented quantitative-descriptive analysis, promoting a study of evaluation of programs related to education, investigating the effects and results of the education and environmental management program carried out in the colleges investigated. , according to Marconi &Lakatos (2003), is equivalent to extensive direct, performed through a questionnaire composed of 16 questions, this method has as advantages its application to a larger number of people in a shorter time. The questionnaire was divided into four (4) parts: the first part (from the 1st to the 4th question) was to know the profile of the public interviewed; from the 5th question to the 8th, it was sought to know the student's understanding of sustainability, as well as the practices in his residence. From the 9th issue we investigated the actions of the college in Environmental Education and Management. The last two questions in the student questionnaire were opened so that they could have more freedom in reporting on all the activities and what the school still needed to do to suit a sustainable attitude. As a criterion for the selection of the universe investigated, the last classes of elementary school (8th and 9th grade) were chosen, with the group interviewed being in the last years of elementary school, and thus accustomed to the practices, didactics and projects carried out by the schools investigated. The questionnaire was applied in the classrooms of the aforementioned classes on September 12, 13 and 17, 2012, obtaining a total of 126 questionnaires answered. In order to preserve the identities of the students, as well as to provide greater freedom in responding, it was decided not to register the name of the interviewee. The analysis of the responses was based on the Malafaia& Rodrigues (2009) method, on the objective questions, using a pattern of counting and applying percentages, for discursive responses, the discourse analysis technique was used, where the responses were transcribed into keywords and also applied percentages.

RESULTS AND DISCUSSION

We obtained 126 responses from the questionnaires regarding the students' perception of 137 expected; (42 were from school A and 84 from school B). It was possible to observe that the male representatives presented in a proportion greater than the female, similar in the two schools (57.1% in the CA and 56% in the CB, respectively). As for the age group, it ranged from 12 to 18 years in both schools, with a 12-14 year age group (80.9% in the AC and 90.5% in the CB, respectively). More than half of the public interviewed in the CA school (57.14%) live in apartment type housing, compared to 83.3% of the CB. It is observed a strong verticalization in some neighborhoods, like those close to CB. It was not argued the neighborhood where the interviewees live. A large majority of the students

that participated in this research (72% of the AC and 84% of the CB) affirmed knowing what selective collection is. According to the National Policy of Solid Waste - PNRS "selective collection is the collection of solid waste in advance separated according to its constitution or composition in the place where it was produced" (Brazil, 2010). It is very important to adopt this practice, because it helps to return the raw material to the production cycle, reducing production costs, the impacts caused to the environment for the extraction of the raw material and minimization of environmental pollution. However, from the group of students who said they knew about selective collection, when asked about the performance of the Selective Collection only 43.33% and 40%, respectively, reported doing it at their residence always or only sometimes. In Brazil, the National Solid Waste Policy - PNRS also informs that all those who produce residential waste are responsible for them and only such responsibility has ceased with the adequate provision for collection or, in the cases covered by art. 33 of this Policy, with the return by reverse logistics (Brazil, 2010).

When questioned about the meaning of sustainability, 41% of CA students answered that it was just "consuming in a balanced way"; already 41% of CB students understand sustainability in a broader way, covering consumption in a conscious way and protecting the environment. For the National Solid Waste Policy, "sustainable standards are those that meet the needs of current generations, both in the production and consumption of goods and services, and allows better living conditions without compromising environmental quality and meeting the needs of the future generations" (Brazil, 2010). Therefore, it can be seen that CB students demonstrated a greater understanding of the term sustainability, aligned with what is the PNRS, and that seems to be related to the projects and activities related to the theme, which the school has been developing for more than a decade. In the case of the practices of reduction in consumption (of water, energy and a minimization in food waste) in the residences, the students of the AC affirmed to carry out more these activities (60%) when compared to the CB (42%). According to Scherer (2003) water conservation education should be inserted in schools. According to Oliveira (1999) it is necessary to inform the reasons why we should save this nonrenewable natural good, and it should be done, according to Ywashima (2005) in a pleasant way, so that the user feels stimulated and not forced to save water. This knowledge will be shared with the people with whom you live, sensitizing them as well.

In addition to carrying out activities for the conscious consumption of water, emphasis should be given to educational activities for the rational use of energy and consumption without food waste, due to the degree of importance they have for our survival. When questioned about measures and actions for a more sustainable management in the school environment: 45.24% of the students in the CA and 61.9% of the CB stated that the subjects are already related to the discussion of sustainability. For Jacobi (2005), the role of educators is fundamental and determinant for the insertion of environmental education in the day-to-day school, making the students become critical citizens, conscious and transforming customs and practices. In order to do so, teachers need to be able and motivated to develop a work related to the environment approaching the EE in a systemic and interdisciplinary way in all the disciplines and contextualizing

with the reality of the community as indicated in the Brazilian Politics. When argued about the installation of presence sensors, 47.6% and 61.9%, respectively, consider that it is a necessary measure for the rational use of electric energy in the school. According to a feasibility study on measures for energy saving carried out by Cardoso & Raposo (2006) in a building of the University of Pernambuco, in the city of Recife, it was noticed that the use of presence sensors in bathrooms and rooms and photocells in the corridors of the institution could result in a reduction of close to 40% in the consumption of electric energy. Considering that hydraulic maintenance is an important action for water saving, 50% of the interviewees of the CA and 60% of the CB said they did not know how to respond. Regarding the qualification for the employees in the administrative area on sustainability, 47.6% and 50% of the interviewees of the CA and the CB, respectively, did not know if it was performed and whether or not there was a need for capacity building in this area. According to Dias (2006), company employees have to be convinced of the importance of adopting environmentally correct practices, so it is always important that this environmental management involves the change in the organizational culture of the company. Nogueiro (2008), complements that environmental management helps to improve the company's performance, optimizes the use of resources and avoids the production of waste.

It was also observed that, for 47.6% of the students of the CA, there is a need to hold a family reunion on environmental issues, while for 51.2% of CB students these family reunions are already held. It is necessary to insert the family in this discussion, because, Alves (2001), affirms that the educational process must be continued outside the school, by the family. Felizola (2007) defends the same idea so that there is an awareness to perceive the environment. Regarding solid waste management in the school environment, 43% of CA interviewees reported not knowing of the existence of selective collection of recyclable materials; while in CB, 97.6% reported knowing about the existence of this activity. Regarding the collection of hazardous / potentially hazardous waste - batteries and batteries, oil and cartridges, only CB students informed about the collection of this type of material in their school environment. According to Faggionato (2007) each individual perceives, reacts and responds differently to actions on the environment. The responses or manifestations are the result of the perceptions, judgments and expectations of each individual. For Silva (2007), the school that educates through all its spaces is a school that mobilizes all its structure for the conduction of activities, extending spaces from classroom to other environments. When it came to the positive actions taken in the school space, 18 interviewees of the AC cited actions to raise awareness / orientation of students; while in the CB, 56 students reported the achievement of selective collection as an activity to achieve sustainability. The students also suggested actions that they considered pertinent to achieve sustainability in their activities, the most mentioned by the interviewees of the CA was the selective collection (24 citations); already in the CB twenty (20) students considered it necessary to implement actions aimed at the conscious consumption of electric energy, as well as water saving mechanisms (11 citations). According to Gonçalves (2006), the use of water saving equipment, such as hydro mechanical taps, flow reducers, sensors and discharge valves with selective activation, in addition to the consumption of rainwater, are alternatives for economics most used today. For Felizola (2007), what is taught and valued in the school environment

represents a reflection of what society wants and approves. Environmentally sound practices should be learned in practice, thus contributing to the formation of ethical citizens and aware of their responsibilities.

Conclusions

The considerable difference between both schools investigated is associated with the strategies used by them. At school A activities focused on environmental issues with students are limited to the use of texts, debates and sensitization of students, the school also carries out some activities such as carrying out projects and activities at a knowledge fair. At school B, in addition to the activities described above, there are experiences in the extra-school environment with visits to environments where students can experience activities such as planting trees and technical visits. In addition to these activities, actions are observed aimed at the management of solid and hazardous waste in the school itself. In the perception of the students, the actions carried out in school A are not a sufficient strategy for the training of students in relation to education and environmental management and correlated themes. In this context, it is necessary to elaborate pedagogical proposals aimed at awareness-raising actions, combined with daily practices, structured by Environmental Management processes, transforming the school environment into a learning environment, promoting a change of attitude and usual practices. In the perception of its students, school B already managed to carry out many actions aimed at sustainability in the school environment and environmental education, but they suggested several other actions that could help even more in the adaptation of a sustainable attitude in the school environment. The actions that cover the environmental theme and sustainability, often carried out, as well as the availability of spaces for discussion on the environmental theme are essential in the training of students. In addition to these initiatives, the realization of events and the accessibility to the models applied to the practice, such as collectors favoring the selective collection of recyclable materials and pollutant or potentially polluting waste in school B, managed to make the students realize the necessity of engaging in these projects school children. It is perceived that school A is lacking the implementation of a project that provides for the implementation of actions and the engagement of students in the daily practice of environmental sustainability.

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