



RESEARCH ARTICLE

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ENVIRONMENTAL EDUCATION: AN APPROACH IN MUNICIPAL SCHOOLS IN THE CITY OF LIMOEIRO - PE - BRAZIL

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ABSTRACT

Due to the environmental problems that have been occurring over time, environmental education has been the subject of major discussions on the world political scene. Observing the importance that the school has in the propagation of teaching and in the formation of more ethical, critical and responsible citizens, there was a need to research how municipal schools in the city of Limoeiro - PE have contributed to the dissemination of Environmental Education. The objective of this research was to investigate the way in which Environmental Education works in schools in the city of Limoeiro - PE, through the application of a questionnaire with students and teachers of the schools that were part of the research. It was found that all schools deal with Environmental Education and the approach methodology most cited by students and teachers was the lecture. The research showed that the interdisciplinary approach to the theme needs to be improved, since not all teachers work on this theme in their classes, this is perceived when students point out geography and sciences as those that most approach the theme. The teachers stated that there is a lack of provision of training directed to the theme by the municipality.

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INTRODUCTION

Environmental problems and the way in which man has been related over time to the environment in which he lives has been a matter of concern and debate among countries for some decades. The nations have been mobilized to establish public policies that will cover in several areas, including the educational one, the insertion of methods that can contribute to the improvement of relations between Man and Environment. Conferences such as Stockholm, in Sweden in 1972, Tbilisi, in Georgia in 1977 and Rio-92, in Brazil were held in order to improve the way Environmental Education should be

incorporated into the public policies of nations in general and in their educational policies. The school has a fundamental role with regard to the civic education of its students and in the construction of ethical and moral values and critical and rational thinking. Thus, the school must be considered as the appropriate environment for the dissemination of Environmental Education (EE), through raising students' awareness of environmental issues.

"For Environmental Education to occur, it is necessary to reflect on the relationships of beings with each other, of the human being with himself and with his fellow men. In

this context, schools stand out as multipliers in the preservation of the environment, through activities that will favor reflection and commitment". (Stein, 2011, pages 16-17)

Working with Environmental Education in an interdisciplinary and continuous way can present obstacles to be overcome by schools. As for interdisciplinarity, the problem is linked to the difficulty that professors of disciplines that are not directly linked to the study of the environment may feel in addressing and working with the students. With regard to continuity, the problem presents itself when the approach to the theme is carried out only in specific periods, as it happens in the Environment Week. This research has as general objective to investigate the way in which Environmental Education works in schools in the municipality of Limoeiro - PE, Brazil. We tried to identify, among the schools chosen for the research, which ones work on the theme of environmental education and which actions related to environmental education are developed in the school. The understanding that the resources available in the environment are scarce and that when exploited in an exaggerated and irrational way will cause their extinction at a given moment, it seems to have not been a focus of concern on the part of man, so much so that environmental degradation and its effects have been intensifying and can be clearly perceived and felt today (Nascimento, 2012).

This, nations began to turn to environmental problems that were increasingly accentuated, as Effting (2007) points out that in the 1960s environmental problems were already quite visible, but the topic of Environmental Education had not yet been addressed. Considering this sad reality, countries began to move through conferences and events at the international level to establish action plans that would improve it (RAMOS, 2001). The 70's were decisive for the beginning of these changes. According to Bard *et al.* (2017), regarding the ways used to implement EE, Lucie Sauv e, lists 15 streams of Environmental Education, each presenting a more specific focus on a certain factor. These currents are divided into two types, the oldest and the most current.

Among the older streams of environmental education are the naturalist, conservationist / recursionist, resolute, systemic, scientific, humanist, moral / ethical trends. Among the current trends in environmental education are the holistic, bioregionalist, praxic, critical, feminist, ethnographic, eco-education and sustainability. According to Bard *et al.* (2017), "it is possible to identify a correlation between them, for this reason they do not necessarily replace the others, over time". Thus, it is possible to realize that although each one has more specific focuses, it is possible to relate them to each other, as if in some points they were completed. Among the cited currents, some have characteristics closer to the objective of this research, among which the following currents stand out:

The moral / ethical current traces a relationship between ethics and the environment in order to generate behaviors that are social that are desirable. The school has an important role in the process of forming more aware, responsible, ethical individuals, in the construction of moral values and in this way this current can be inserted in the process of approaching EE in schools.

- The sustainability chain has as its central objective the promotion of sustainable development, where current

resources are used rationally so that in the future others can also benefit from them. In this sense, the school can, through actions, activities, among other methods, show the importance of using natural resources so that this does not lead to their extinction.

Another relevant issue is to work interdisciplinarity in the educational process starting from the realization "[...] of projects, as they enable various activities for reflecting on school content in interaction with the various areas of knowledge". (Collere, 2005, p. 77). As stated by Oliveira (2006, p. 87) "The interdisciplinary approach, which appears as an intention in most proposals, is not effective in practice due to the lack of qualified personnel, coupled with the lack of appropriate methodology and material to deal with the topic." . It is important to emphasize that in addition to interdisciplinary work, the training process for teachers with a focus on Environmental Education, also has relevance, which according to Oliveira (2006, p. 97) is considered as "Improvement of technical personnel to exercise control, preservation, conservation, inspection and education activities for the environment, as support for formal and non-formal education actions".

MATERIAL AND METHODS

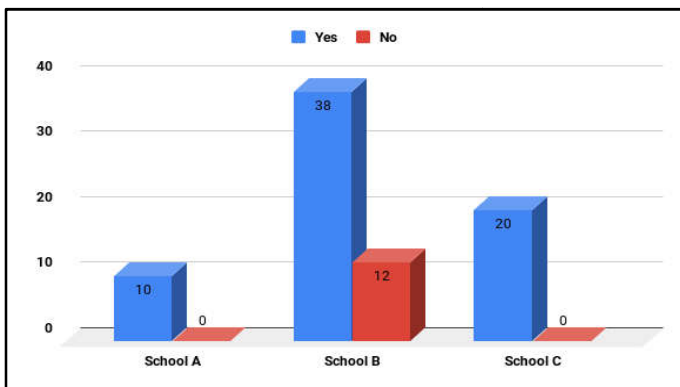
The municipality of Limoeiro is located in the Mesoregion of Agreste of the state of Pernambuco and in the Microregion of the Middle Capibaribe. It has a population of 55,439 thousand people according to the last Demographic Census carried out by the Brazilian Institute of Geography and Statistics (IBGE) in 2010, with an estimated growth for 56,302 in 2018 and an estimated population density of 202.53 inhab./km². The survey carried out with the Municipal Department of Education presented an amount of 26 municipal schools, which range from Early Childhood Education and Elementary Education I and II, to Phase IV of Youth and Adult Education (EJA). Schools have different sizes and for this reason the teaching modalities differ from one to another. They are divided between the Urban and Rural Zones of the city, distributed in a total of 12 and 14 respectively. Were initially selected the schools that offer elementary education II, comprising classes from the 6th to the 9th grade, because it was evaluated through research on the interdisciplinary work of teachers from different disciplines with respect to the approach to Environmental Education in your classes. From the total of schools, only 8 of them offer elementary education II, of which three were selected to carry out the research. Among the chosen ones, one of them is located in the urban area of the city and the others, in the rural area.

The students participating in the research were chosen randomly, with 5 from each class participating in the research among the selected schools, totaling 80 students. The teachers who teach the respective classes were the ones who responded to the survey to collect the necessary data, totaling 18 teachers. Before conducting the research itself, bibliographic surveys were carried out in order to have knowledge about the topic to be addressed. As for the objectives, this research can be considered as exploratory and descriptive. Exploratory research can be defined as one that "[...] aims to provide more information on the subject that we are going to investigate, making it possible to define and outline it, that is, to facilitate the delimitation of the research theme [...]" (Prodanov & Freitas, 2013, pages 51 and 52). The descriptive research aims

to “[...] describe the characteristics of a certain population or phenomenon or establish relationships between variables”. (Gil, 2008, p. 28).

RESULTS AND DISCUSSION

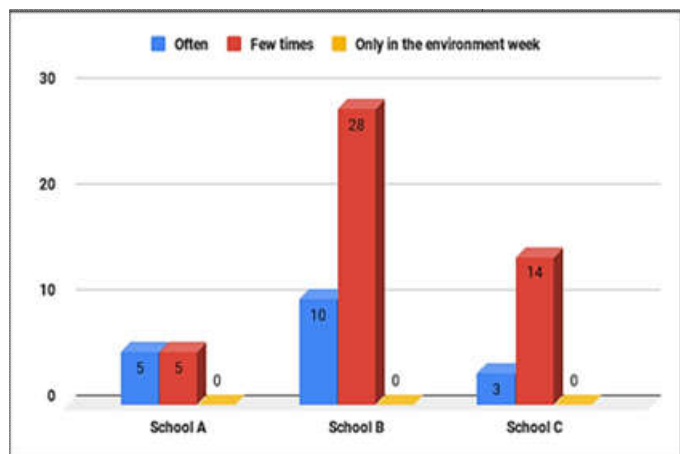
Among all respondent students, 10 (12.5%) were from school A, 50 (62.5%) from school B and 20 (25%) from school C. The first question of the questionnaire was related to the knowledge of students with respect to the theme “Environmental Education”, of the 80 respondent students, 46 said they did not know the topic. However, after an explanation from the researcher they understood what it was about and the interview could be carried out, it shows that these students know about the theme, but do not know the term "Environmental Education". Figure 1 shows the students' response to what was asked in the second question, whether they consider that their school works on this topic or not.



Source: Field research (2019)

Figure 1. Approach to the theme Environmental Education by the school

In school A and C all respondents said that in their respective schools the theme EE is worked on and in school B, the vast majority also consider that there is work on the part of the school aimed at promoting Environmental Education. In the third question, (Figure 2), the students were asked about the frequency with which the EE is worked. In this case, the responses considered only the students who answered that the EE theme is worked on at school. The same will happen with questions 5 to 7 Below, Figure 2 shows this result.

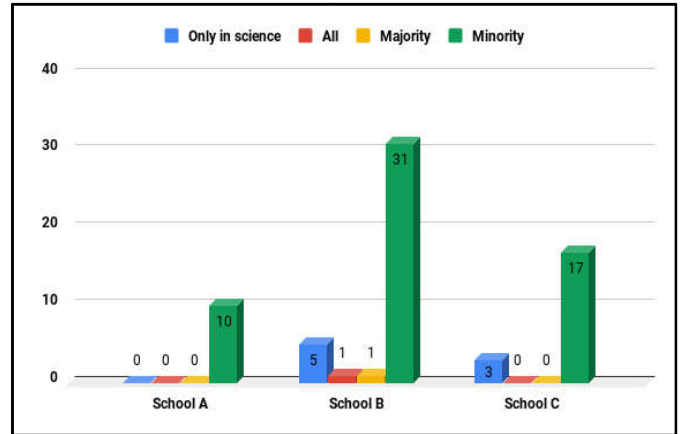


Source: Field research (2019)

Figure 2. Frequency of the Environmental Education approach

Although it was verified from the responses of the students that the researched schools develop a work of approach to Environmental Education, it is possible to observe in their view, it is something little done, mainly in schools B and C.

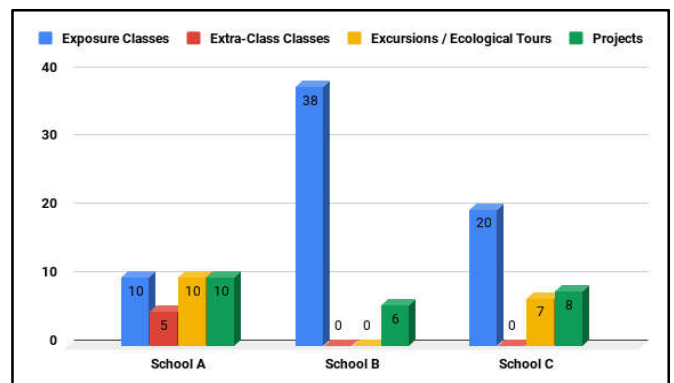
Figure 3 presents the students' answers on which subjects studied approach the topic on EE.



Source: Field research (2019)

Figure 3. Disciplines that address Environmental Education

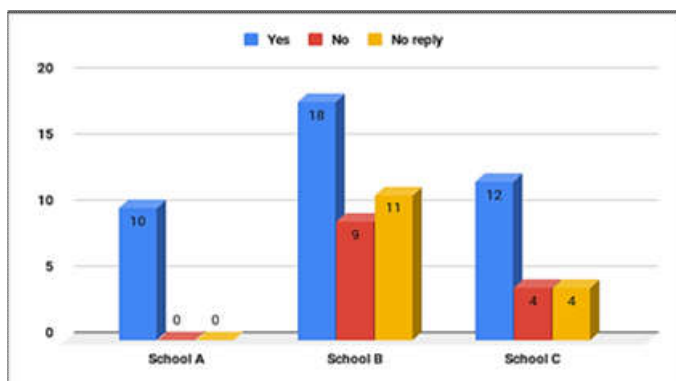
At school B, the subjects pointed out by the students were science, geography, history, arts, Portuguese, mathematics and religion. At school C, students considered science, geography, religion, history and the arts as the subjects in which the theme EE is worked by teachers. Figure 4 shows the result of the answers to the sixth question, where students were asked about ways of approaching Environmental Education. The data obtained showed that in all schools there is the approach of the theme by teachers through lectures. In addition to this item, which was pointed out by all the students who answered this question, others were mentioned by the students, such as the projects developed by the schools, including the creation of a school garden in the three researched schools, however, this garden is still only active at school A. there is also the use of recyclable material for the creation of toys and objects, as well as the use of this material in the manufacture of recycled products in the Parade of the Independence Day of Brazil, September 7, 1822. Some educational excursions / tours were also pointed out in schools A and C, among the destinations are the Zoo, a school of alternative technologies for small farmers (SERTA), the museum "Espaço Ciência" and the Rio Capibaribe (part of the river that crosses the County).



Source: Field research (2019)

Figure 4. Ways of approaching Environmental Education

Question 7 asked the students if they find a difference in the approach of the subject by the science discipline of the other subjects. Figure 5 shows the result of these responses.



Source: Field research (2019)

Figure 5. Difference between the approach to the theme EE in Sciences and other disciplines

At School A, everyone was unanimous in stating that they perceive a difference in the way the science teacher works on EE in relation to the others, while at Schools B and C the opinions were divided between those who perceive difference and those who say that there is no difference. . Furthermore, in these two schools, some of the students did not answer the question since they mentioned only the science discipline as the one that addresses the theme EE. The eighth question, asked the students if they believe it is important to study Environmental Education to reduce and resolve existing environmental problems. The answer was unanimous, all 80 students answered yes. Regarding the research carried out with the teachers of the participating schools, of the total respondents, 3 were from School A, 7 from School B and 8 from School C. Of the three teachers from school A, two of them claim to work the theme EE with students, teachers of History, Geography and Physical Education. At School B, all teachers said that they address the topic EE. At School C, five of the teachers said that they work with Environmental Education, among them teachers of Portuguese, Science, History, Geography, Arts, Religious Education and Physical Education. When asked in Question 3 about the frequency of approaching the topic in their classes, the result was as follows: At School A , two teachers said that they do this “few times ”; at School B, 4 stated that they perform the approach “almost always” while the other 3 considered that they work “a few times”. At School C, 4 said they approached the topic “almost always” and 1 of them “a few times”, this corresponds to Portuguese and English subjects. In Question 6, teachers were asked about the methods used by them when they approach Environmental Education in their classes, table 1 shows this result.

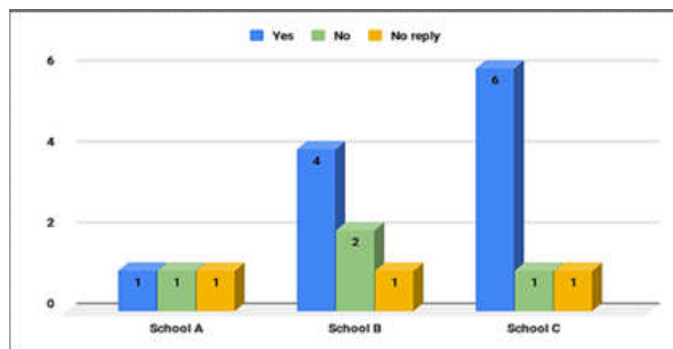
Table 1. Environmental Education approach method

	Exposure Classes	Extra-Class Classes	Excursions / Ecological Tours	Projects Others	Others
School A	X		x		x
School B	X		x	X	x
School C	X		x	X	x

Source: Field research (2019)

It is possible to observe that in all schools, teachers report that as a way to approach the theme in their classes, they make use of expository classes and tours. Only at School A, the

“projects” method was not mentioned. Figure 6 shows the role of teacher in environmental education projects.



Source: Field research (2019)

Figure 6. The role of teachers in environmental education projects

In Schools B and C most respondents consider that the schools promote the involvement among teachers. Approximately 61% of respondents, that is, the majority gave an affirmative answer to this question. Question 8 asked whether the municipality offers training focused on the theme EE for teachers. The result was as follows: 5 teachers (approximately 27.8%) answered yes; 10 teachers (approximately 55.5%) answered that they did not; 2 teachers (approximately 11%) were unable to answer; and 1 (approximately 5.55%) teacher did not answer the question. In question 9, teachers were asked about the degree of importance they attach to the provision of training aimed at EE, the result was as follows: the vast majority of them, approximately 61.1%, attributed a high degree of importance, corresponding to 11 teachers; about 22.2% of them awarded a medium degree, corresponding to 4 teachers; approximately 11% attributed a low degree of importance, which corresponds to 2 teachers; and 1 (5.55%) of them did not answer.

Conclusion

It was observed that all the schools approach the theme EE through expository classes, however, with respect to projects, excursions / ecological tours and extra-class classes, there was a constant non-approach, which may cause, for students, a non-apprenticeship. Another factor analyzed from the research result is that a large part of the students perceive a difference in the way the Science teacher works with Environmental Education in their classes in relation to the teachers of the other disciplines, since they consider the teacher of this discipline more qualified and informed to address the theme.

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