

A PERCEPÇÃO DOS DOCENTES SOBRE A PRÁTICA DA EDUCAÇÃO AMBIENTAL NO CONTEXTO DAS ESCOLAS ESTADUAIS DO MUNICÍPIO DE ESPERANÇA-PB

TEACHERS' PERCEPTION ABOUT THE PRACTICE OF ENVIRONMENTAL EDUCATION IN THE CONTEXT OF STATE SCHOOLS IN THE MUNICIPALITY OF ESPERANÇA-PB

PERCEPCIÓN DE LOS DOCENTES SOBRE LA PRÁCTICA DE LA EDUCACIÓN AMBIENTAL EN EL CONTEXTO DE LAS ESCUELAS ESTATALES DEL MUNICIPIO DE ESPERANZA-PB

ttps://doi.org/10.56238/sevened2025.021-076

Alan de Angeles Guedes da Silva<sup>1</sup>, Márcia Adelino da Silva Dias<sup>2</sup>

#### **ABSTRACT**

This work consisted of a survey conducted with Basic Education teachers. Considering the environmental impacts caused by human actions, it is important to conduct studies on the practice of Environmental Education in the school context. Through this, and based on the teachers' perception, we formulated two questions: What pedagogical actions are favorable for the approach to Environmental Education? And, in what way can didactic activities on Environmental Education be developed in Basic Education? Through this, we propose the following objective with this work: to analyze the teachers' perception on the practice of Environmental Education in the school context. Thus, we developed quantitative-qualitative research. For data collection, a semi-structured questionnaire was applied to a group of teachers from two state public schools in the city of Esperança/PB. From the semistructured questionnaire, we obtained answers regarding the profile, perception and teaching practice regarding Environmental Education. After analyzing the data, it was found that 76% of teachers stated that they work on Environmental Education in their disciplines, relating it to the curricular contents. The results obtained showed that 78% of teachers stated that they had not received training on Environmental Education in their undergraduate courses. Even so, it was observed that most educators include Environmental Education in the scope of their pedagogical actions. With this research, we emphasize that the practice of Environmental Education in the school context must encompass all areas of knowledge. In fact, it can be worked on in an interdisciplinary and transdisciplinary way, to educate individuals who understand the environmental crises that have been affecting planet Earth.

**Keywords:** Pedagogical actions. Environmental Education. Basic Education.

Institution: State University of Paraíba (UEPB)

Address: Campina Grande - PB, Brazil

E-mail: alan.angeles.guedes.silva@aluno.uepb.edu.br.

Orcid: https://orcid.org/0009-0004-3774-9813

Institution: Federal University of Rio Grande do Norte (UFRN)

Address: Campina Grande – PB, Brazil E-mail: marcia@servidor.uepb.edu.br

Orcid: https://orcid.org/0000-0002-8427-9170

<sup>&</sup>lt;sup>1</sup> Master in Science Teaching and Mathematics Education

<sup>&</sup>lt;sup>2</sup> Doctor in Education



#### **RESUMO**

Este trabalho consistiu em uma pesquisa realizada com docentes da Educação Básica. Tendo em vista os impactos ambientais ocasionados pelas ações antrópicas, é importante realizarmos estudos sobre a prática da Educação Ambiental no contexto escolar. Através disso, e a partir da percepção dos professores, elaboramos duas questões: Quais ações pedagógicas são favoráveis para a abordagem da Educação Ambiental? E, de que modo, as atividades didáticas sobre Educação Ambiental, podem ser desenvolvidas na Educação Básica? Através disso, propomos com este trabalho o seguinte objetivo: analisar a percepção dos professores sobre a prática da Educação Ambiental no contexto escolar. Assim, desenvolvemos uma pesquisa quanto-qualitativa. Para a coleta de dados, foi aplicado um questionário semiestruturado para um grupo de professores de duas escolas públicas estaduais do município de Esperança/PB. A partir do questionário semiestruturado, obtivemos respostas quanto ao perfil, percepção e prática docente quanto à Educação Ambiental. Após a análise dos dados, foi verificado que 76% dos professores afirmaram trabalhar a Educação Ambiental nas suas disciplinas, relacionando-a com os conteúdos curriculares. Os resultados obtidos, mostraram que 78% dos docentes, afirmaram não ter recebido formação sobre Educação Ambiental na graduação. Mesmo assim, foi observado que a maioria dos educadores incluem a Educação Ambiental no âmbito de suas ações pedagógicas. Com esta pesquisa, ressaltamos que a prática da Educação Ambiental no contexto escolar, deve abranger todas as áreas do conhecimento. Inclusive, podendo ser trabalhada de forma interdisciplinar e transdisciplinar, para a formação de indivíduos que compreendam as crises ambientais que vêm afetando o planeta Terra.

Palavras-chave: Ações pedagógicas. Educação Ambiental. Educação Básica.

#### **RESUMEN**

Este trabajo consistió en una encuesta realizada a docentes de Educación Básica. Considerando los impactos ambientales causados por las acciones humanas, es importante realizar estudios sobre la práctica de la Educación Ambiental en el contexto escolar. A partir de esta, y con base en la percepción del profesorado, formulamos dos preguntas: ¿Qué acciones pedagógicas favorecen el enfoque de la Educación Ambiental? Y, ¿Cómo se pueden desarrollar actividades didácticas de Educación Ambiental en la Educación Básica? Por lo tanto, nos proponemos el siguiente objetivo: analizar la percepción del profesorado sobre la práctica de la Educación Ambiental en el contexto escolar. Para ello, desarrollamos una investigación cuantitativa-cualitativa. Para la recolección de datos, se aplicó un cuestionario semiestructurado a un grupo de docentes de dos escuelas públicas estatales de la ciudad de Esperanca/PB. A partir del cuestionario semiestructurado, obtuvimos respuestas sobre el perfil, la percepción y la práctica docente en materia de Educación Ambiental. Tras analizar los datos, se encontró que el 76% del profesorado afirmó trabajar la Educación Ambiental en sus disciplinas, relacionándola con los contenidos curriculares. Los resultados obtenidos mostraron que el 78% del profesorado declaró no haber recibido formación en Educación Ambiental en sus carreras de grado. Aun así, se observó que la mayoría de los educadores la incluyen en el ámbito de sus acciones pedagógicas. Con esta investigación, enfatizamos que la práctica de la Educación Ambiental en el contexto escolar debe abarcar todas las áreas del conocimiento. De hecho, puede trabajarse de forma interdisciplinaria y transdisciplinaria para formar personas que comprendan las crisis ambientales que han estado afectando al planeta Tierra.

Palabras clave: Acciones pedagógicas. Educación ambiental. Educación básica.



# **INTRODUCTION**

With the advance of Capitalism in recent years, human consumption has increased, and consequently, there has been a decrease in natural resources and a greater accumulation of undesirable objects and substances, most of the time, polluting the environment, without any awareness of environmental impacts.

According to Steffen *et al.* (2015), Socioeconomic activities on Earth have grown significantly over the last two hundred years and today are being compared to the geophysical forces that shape our planet. The accumulation of greenhouse gases, the uncontrolled exploitation of natural resources, the incorrect disposal of solid waste, and the use of nuclear energy would be some of the factors that triggered the environmental crises.

For Green (2021), human beings are an ecological catastrophe. For, in just two hundred and fifty thousand years, man's behavior has annihilated several species and led many others to be threatened with extinction. Humans are a threat to the life of several species on Earth, including the human species itself. Unfortunately, the environmental impacts caused by anthropic actions in various environments are notorious. Despite this, the Earth has already suffered profound threats, even before the emergence of Man.

Green (2021) states that 250 million years ago, during the extinction of the Permian-Triassic period, the surface of the oceans reached 40° C and 95% of the species on Planet Earth became extinct. In addition, 66 million years ago, the impact of an asteroid caused the Earth to be dark for two years, directly affecting the photosynthesis process and driving 75% of terrestrial animals to extinction.

In fact, nowadays, it is essential that there are numerous discussions related to environmental crises. Based on this, Environmental Education becomes essential for understanding the environmental impacts caused by anthropic actions. In view of the various problems that our society has been going through, such as the decrease in natural resources and the excessive increase in human consumption.

Jacobi (2003, p.196) shows that the focus of Environmental Education must assume a holistic perspective, with the challenge of "formulating an environmental education that is critical and innovative, at two levels: formal and non-formal". When referring to Law No. 9,795/1999 that instituted the National Policy for Environmental Education - PNEA, it is necessary to consider, from the perspective of Environmental Sustainability, the conception of the environment in a total way, taking into account the interdependence between the natural, socioeconomic and cultural environments (Brasil, 1999).

Santana, Frederico and Almeida (2011, p. 2) state that "One of the stages of great relevance in Environmental Education projects is the process of evaluating them" since it is



at this moment that the effectiveness of the proposed actions and the activities carried out is absorbed.

It is essential to be very clear, as Carvalho (2008, p. 42) emphasizes, that Environmental Education is a form of struggle against environmental crises and the authoritarian and extractivist way in which individuals have related to the environment.

The discussion of environmental crises must be present in all environments: schools, families and communities. In a larger dimension, Environmental Education has a great importance with regard to ethical discussions that integrate economic growth with social justice.

According to Cintra (2008), Environmental Education has an intense relationship with the reality of students, adopting an approach that considers social, cultural, political and other aspects as catalysts for education for conscious citizenship, leading to a possible improvement of the local environment and the quality of human life.

Quintas (2003) emphasizes that the practice of Environmental Education must have as one of its assumptions, respect for the cultural processes characteristic of each country, region or community. This means recognizing that there are different modes of relationship between man and nature, depending on the region or country.

In Brazilian society, for example, these different modes of relationship determine the existence of knowledge, values and attitudes that must be considered in the formulation, execution and evaluation of the practice of Environmental Education.

Therefore, through the promotion of research on environmental crises, it is expected to create conditions for reflections on human actions. And, through this, to be able to analyze in a meaningful way the students' way of thinking, in addition to promoting individual and collective changes, regarding the importance of environmental conservation and preservation.

For this, we elaborated two questions for the development of this research: Which pedagogical actions are favorable for the approach of Environmental Education? And, in what way, can didactic activities on Environmental Education be developed in Basic Education? The objective of this was to analyze the perception of teachers about the practice of Environmental Education in the school context.

The discussions carried out in this article, based on the experiences and the trajectory of teachers, arising from the research on the environmental perception of teachers of Basic Education, allowed contributions and inspirations to the investigated theme, enabling new paths and opening to the application of new research.



## **METHODOLOGY**

This is an exploratory study, with a quantitative-qualitative approach, carried out with fifty teachers from two state public schools. For Marconi and Lakatos (2003), quantum-qualitative research consists of empirical investigations that aim to delineate the main characteristics of a phenomenon. In this type of study, techniques such as interviews and questionnaires, and sampling procedures are used.

In this expectation, the present research valued quantitative analysis, understood in this study as that which is characterized by quantification in data collection and in the treatment of information through statistical techniques. For Reis (2008), quantitative research aims to guarantee results and avoid distortions of analysis and interpretation, translating the information analyzed and the data collected into numbers.

And, due to the requirement of the theme for the direct participation of the researcher in the field of research and the theoretical-methodological deepening of the theme, the option was for exploratory research. According to Gil (1999), exploratory research is developed in the sense of providing a greater approach and an overview of a certain subject or fact.

Some authors, such as Cervo and Bervian (2002), designate exploratory, relevant and scientific research, as it is usually an initial step in the process of research through experience and also a contribution to later research. Thus, the sum of more knowledge on the subject in question is sought, incorporating new characteristics and stimulating the study of more researchers interested in the area.

According to Creswel (2014), qualitative research begins with assumptions and the use of interpretive frameworks that inform the study of the research problem, addressing the meanings that are attributed to social or human problems. This type of research "involves attention to the interpretative nature of the investigation, situating the study within the social, political, and cultural context of the researchers" (Creswell, 2014, p. 51).

This research is also part of the qualitative research approach in Science Teaching. For Stake (2011), qualitative research focuses on the search for human perception and understanding. In fact, the interest of qualitative research is the understanding of everyday phenomena in all their complexity and in their natural context.

For Bogdan and Biklen (1994), qualitative research is interpretative and has anthropological origins, especially associated with social and cultural studies that began in the first decades of the last century.

We will deepen the discussion about the qualitative research defended by Stake (2011) that is closer to the line of social constructivism. Among the possible study methods



that are part of the qualitative research focus, we chose the case study technique, from the perspective of Stake (2011). According to this author, the case study is the investigation of the particularity and complexity of a singular case, where it is possible to understand its activities in important circumstances.

The approach to the environmental theme justifies qualitative research, as it is a social science, which does not have as its main objective the use of statistical data, since the problem goes beyond the scope of numbers and extends to much more complex processes of environmental perception of a group of teachers.

Data collection was carried out in two schools of the state public education network in the municipality of Esperança/PB. According to data from the City Hall in 2024, the municipality of Esperança is located in the mesoregion of the agreste of Paraíba, (see fig. 1), 146 km from the capital, João Pessoa/PB.

According to data from IBGE (2014), the municipality of Esperança has a population of 32,530 inhabitants. It has a territorial area of 163,781 km². The seat of the municipality registers an altitude of 631m and has a tropical climate. The geographic coordinates of the municipality are Latitude: 7° 1' 37" South Longitude: 35° 51' 34" West. It is limited to the north by the municipalities of Remígio and Areia; to the south with the municipalities of São Sebastião de Lagoa de Roça and Montadas; to the east by the municipalities of Areial and Pocinhos and to the west by the municipality of Alagoa Nova.

The seat of the municipality is 110 km from the capital João Pessoa and 26 km from Campina Grande. Cities with which they maintain greater commercial and service ties.

Access is made from João Pessoa by the BR/230 – BR/104 highways (IBGE, 2014).



Figure 1: Location of the municipality of Esperança, PB.

Source: IBGE, 2024.

The present work was developed with the perspective of analyzing the perception of teachers about Environmental Education. The information was collected through a semi-



structured questionnaire, containing questions about the profile, perception and knowledge of the teachers about Environmental Education.

With the application of the semi-structured questionnaire, questions related to the teachers' teaching plan were analyzed, such as: the syllabus of the subjects, the curricular contents, the methodologies and the evaluation procedures worked.

For Gil (2008), the questionnaire can be defined as a social investigation technique composed of a set of questions that are submitted to people with the purpose of obtaining information about knowledge, beliefs, feelings, values, interests and expectations.

After applying the questionnaires, the data were tabulated and then the data were analyzed. The initial goal of covering at least 75% of the research subjects, in the case of Basic Education teachers, was significantly exceeded, so that the data collected were sufficient and met the research objectives.

## **RESULTS**

From the data analysis, it was possible to characterize the profile of the teachers, which occurred through the application of a semi-structured questionnaire, directed to the teachers who were available to answer. Based on the data analyzed, and focusing on the profile of the research participants, it was possible to initially characterize the age group of the teachers, as shown in Table 1:

Table 1 - Characterization of Teachers by Age Group

Age	f	%
19 I30	15	30
30 I40	20	40
40 I40	7	14
50 I60	7	14
60 I65	1	2
Total	50	100

Source: Prepared by the author, 2025.

According to Table 1, age ranged from 19 to 63 years, with a mean of 37 years. With 30% of teachers under the age of 30. Of these collaborating professors in the present study, only 30% are in the age group over 40 years. These figures indicate teachers with considerable life experience.

There is a significant concentration of these professionals in the 36 to 45 age group. "Teachers up to 25 years of age accounted for 8.8% of the total and 21.9% of those over 45 years of age" (Andrade *et al.* 2004, p. 47).

Currently, in Basic Education, the average age of teachers is practically 38 years old. The ages that appear most frequently vary between 28 and 42 years (Pestana, 2009).



**Table 2 – Teachers' Characterization of Naturalness** 

Naturalness	f	%
Areia/PB	1	2
Esperança/PB	33	66
Campina Grande/PB	6	12
Guarabira/PB	1	2
Itaquaquecetuba/SP	1	2
Nova Floresta/PB	1	2
Pocinhos/PB	1	2
Pombal/PB	1	2
Recife/PB	1	2
Rio de Janeiro	2	4
São Paulo	1	2
Taperoá	1	2
Total	50	100

Regarding place of birth, the majority stated that they were from the municipality of Esperança, as shown in Table 2. An important factor with regard to the sociocultural relationship of educators regarding local environmental problems.

Table 3 - Teachers' characterization of marital status

Marital status	f	%
Married	35	70
Single	11	22
Single Widower	2	4
Other	2	4
Total	50	100

Source: Prepared by the author, 2025.

Research shows that in Brazil the majority of teachers declare themselves married (55.1%), a situation that does not vary much according to sex (Puentes *et. al.*, 2011). In the specific case of high school teachers in Esperança/PB, the rate of married teachers also represents the majority, about 70%. 22% declared themselves single and 4% widowed, as shown in Table 3.

Table 4 - Characterization of Teachers in terms of Basic Education and Titles

Basic training in Bachelor's Degree	f	%
Life Sciences	7	16
Social sciences	3	7
Philosophy	2	4
Physics	4	9
Geography	3	7
History	7	16
Lyrics	12	27
Mathematics	5	11
Chemistry	2	4
Total	45	100
Basic training in Bachelor's Degree	f	%
Life Sciences	3	60
Media	1	20



Sociology	1	20
Total	5	100
Titration	f	%
Specialization	25	50
Specialization in progress	3	6
Graduation	10	20
Graduation in progress	5	10
Masters	1	2
Master's degree in progress	6	12
Total	50	100%

According to Table 4, a percentage of 50% is made up of specialists, with 10% (n=5) who are studying for undergraduate studies. According to the 1996 Law of Guidelines and Bases of National Education (Brasil, 1996), only teachers with higher education in a full undergraduate degree course or with pedagogical training could teach in high school. The Law itself established that this determination would come into effect from 2007 and until the end of the Decade of Education only teachers qualified at higher education or trained by inservice training would be admitted.

In order to strengthen the Law and help advance in the realization of a quality High School for all, the Ministry of Education (MEC) instituted by ordinances no. 1189 of December 5, 2007 and no. 386 of March 25, 2008, an Interministerial Working Group that drafted and circulated the document entitled "Restructuring and expansion of High School in Brazil" (MEC, 2008).

One year later, 91.31% of its teachers already have completed higher education (Brasil, 2009). Most (87%) of these teachers have a degree (Pestana, 2009). In the specific case of high school teachers in Esperança/PB, 90% of the teachers are graduates, and of these, most are graduates and only 10% have a bachelor's degree.

In the case of High School, especially, according to the sample analyzed, as reported in Table 4, the vast majority (90%) of the teachers have higher education, while 10% are still studying for undergraduate studies. Regarding post-graduation, it was found that 50% of the graduated professors have a postgraduate degree at the lato sensu level (specialization), while only 2% at the stricto sensu level (master's degree).

Table 5 - Characterization of Teachers in terms of Professional Relationship and Length of Service

Professional Bond	f	%
Effective	24	48
Service Provider	26	52
Total	50	100
Length of service in years	f	%
15 years	24	48
510 years	8	16
1015 years	5	10
1520 years	3	6
2025 years	3	6



2530 years	7	14
Total	50	100

Of the total sample, 48% are permanent and 52% are service providers, as shown in Table 5. In any case, the proportion of teachers with functional stability is reasonable. But the rate of teachers who work with precarious or temporary contracts is close to the number of permanent staff. In addition, most teachers have an effective employment relationship in the state education network for more than ten years of work.

In short, the percentage of permanent teachers is low in relation to the national average. More than half of the teachers have a temporary contract, which represents a significant proportion if we take into account that it is the public sector. Unlike the 2004 data, presented by Andrade *et. al.* (2004), in which tenured teachers predominated in the country, in relation to teachers inserted in other functional situations. More than half, about 66.1% of the teachers who taught in public schools were civil servants.

Abramovay and Castro (2003) reach a similar conclusion, in a study carried out based on the analysis of a sample of teachers representing 13 federal capitals. According to the authors, in 11 of the 13 capitals, permanent teachers stood out over teachers who were service providers, temporary or occasional substitutes.

Table 6 - Distribution of Frequencies and Percentages about the Curricular Component taught

Total	50	100	
Sociology	2	4	
Chemistry	4	8	
Mathematics	9	18	
Portuguese language	10	20	
English language	3	6	
History	6	12	
Geography	3	6	
Physics	3	6	
Philosophy	2	4	
Spanish	1	2	
Physical education	1	2	
Biology	5	10	
Arts	1	2	
Curricular component you teach	F	%	
Table 6 - Distribution of Frequencies and Percentages about the Curricular Component taught			

Source: Prepared by the author, 2025.

Table 6 shows the distribution of the disciplines in each of the teaching degrees. The study shows us that the components of Portuguese Language (20%) and Mathematics (18%) are the most frequent. Reinforcing several studies that show the Portuguese Language and Mathematics, the subjects with the highest workload in basic education (Gatti *et al.*, 2008, v. 2; Gatti and Nunes, 2009).





**Table 7 –** Characterization of Teachers in relation to Professional Practice

Works in more than one school	F	%
No	29	58
Yes	21	42
Total	50	100
Works in more than one municipality	F	%
No	43	86
Yes	7	14
Total	50	100
Where he lives	F	%
Alagoa Nova	1	2
Sand	1	2
Campina Grande	3	6
Hope	44	88
Remigio	1	2
Total	50	100

Source: Prepared by the author, 2025.

Regarding the number of schools in which they work, according to Table 7, 42% stated that they teach in more than one school, in addition, 86% work in only one municipality and most of these live in the municipality where they work, which allows more time and dedication to the school's projects.

Table 8 - Characterization of Teachers in Relation to Family Income

Household income	F	%
1 minimum wage	4	8
2 to 3 minimum wages	17	34
3 to 4 minimum wages	14	28
4 to 5 minimum wages	10	20
5 to 6 minimum wages	2	4
Above 6 minimum wages	3	6
Total	50	100

Source: Prepared by the author, 2025.

With regard to family income, as shown in Table 8, it is necessary to mention that, despite the devaluation of the teaching profession, reflected in the low salaries, the situation of teachers is significantly higher than the average of the Brazilian population, which demonstrates the precarious financial situation of the population in general. A study published in 2004 reveals that 65.5% of teachers had a family income between two and ten minimum wages and 36.6% between five and ten (Andrade *et. al.,* 2004).

### DISCUSSION

The research sought to identify and understand the responsible conduct of teachers on environmental issues, environmental education and quality of urban life. With reflections in the light of theories related to the environment and environmental education.

From this perspective, environmental education has the function of producing and disseminating information and promoting awareness among people, contributing to the



active participation of society, taking into account the political, economic, social and cultural dimensions of society.

**Table 9 –** Distribution of Frequencies and Percentages regarding the Inclusion of Environmental Education

Inclusion of environmental education in the discipline he teaches	f	%
Yes	38	76
No	12	24
Total	50	100
Discipline that includes environmental education	f	%
Biology	7	18
Spanish	1	3
Philosophy	1	3
Physics	3	8
Geography	3	8
History	7	18
English language	2	5
Portuguese language	6	16
Mathematics	3	8
Chemistry	3	8
Sociology	2	5
Total	38	100

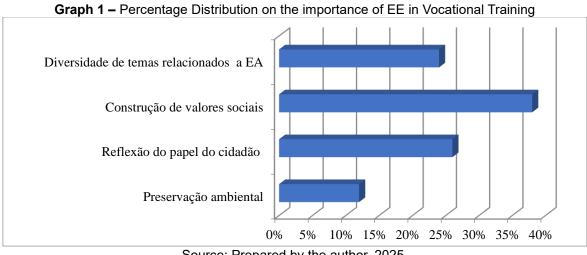
Source: Prepared by the author, 2025.

Of the total number of subjects, 76% (Table 9) of the teachers stated that they included environmental education in their disciplines. Through the present research, a great diversity of disciplines was observed, including environmental education. In view of the above questioning and the answers obtained, it was found that most teachers include environmental education, relating it transversally to the syllabus.

Further justifying this proposition, Oliveira (2007) argues that the transversality of the environmental issue is important due to the fact that its contents, both conceptual and procedural, and also attitudinal, form fields with certain characteristics in common and that are not configured as areas or disciplines. The contents can be discussed from a multiplicity of areas linked to the knowledge acquired through experience in everyday life.

Environmental Education consists of a process of formation for the individual, that is, once started, it continues indefinitely throughout life, improving and incorporating new social and scientific meanings. Due to the very dynamism of society, the awakening to the environmental issue in the educational process must begin from childhood. The determination for Environmental Education to be integrated, continuous and permanent implies the beginning of its development in early childhood education without future interruption.





When considering Environmental Education relevant to professional training, the vast majority confirmed its importance. According to Graph 1, 38% of the teachers stated that through environmental education individuals build social values, while 26% recognized its importance for directing a reflection on the role of the citizen in relation to the world and its problems. As a minority, he stated that Environmental Education is part of the context of life due to the diversity of topics to be discussed. In addition, it is an obligation of the human being in environmental preservation.

Thus, Leme (2006) emphasizes that the teacher must be aware of his reports of experiences with environmental education in schools and practical knowledge of teachers and their continuing education. For the author, this knowledge should begin to be constituted in the initial training of teachers, perpetuating it throughout their professional performance.

Table 10 - Characterization of Teachers regarding Training in Environmental Education through the School

Received EE training through the school	f	%
Yes	11	22
No	39	78
Total	50	100
How long ago did you receive this training	f	%
Six months	2	18
2 years	3	27
More than 2 years	5	45
Don't remember	1	9
Total	11	100
How often this training has occurred	f	%
Semiannually	2	18,18
Annually	2	18,18
Biennially	1	9,09
There is no programming	6	54,55
Total	11	100,00



According to Table 10, most teachers (78%) did not receive training in environmental education through school. And as for the time they received this training, 45% said they had received it more than two years ago. While 54.55% of the educators answered that there is no programming for the occurrence of training in education. Studies point to deficient training in EE in HEIs, including teacher training.

These deficiencies are described in detail in the Mapping of Environmental Education in Brazilian Institutions of Higher Education (Órgão, 2007) and in Oliveira *et. al.* (2008).

The concern about environmental issues, here understood not as a new teaching modality, but with the character imprinted on the teaching performance, emphasizing the critical, reflective postures, linked to a transformative pedagogical practice, focused on the relationship between theory and practice.

# **CONCLUSION**

Through this work, we conclude that most education professionals are still very far from the emergency reality related to the objectives of environmental education and, therefore, most teachers are not sufficiently prepared to discuss this complex topic.

In view of the reality of the two schools surveyed, it is essential to sensitize all participants involved, teachers and students to obtain better results. The inclusion of environmental education in the curricular structure is not enough to achieve a change in attitude. It is necessary to be committed, willing, and aware of the importance of adopting personal attitudes and social behaviors that contribute to the formation of responsible citizens.

Thus, it is important for the school to realize that environmental education increasingly assumes a transformative function and the educator has the role of mediator in the construction of environmental references, but it is necessary to know how to use it as an instrument of social development, addressing the themes in a systematic and transversal way at all levels of education.

In view of this, the need to apply projects and activities that develop the environmental theme in schools is reinforced so that teachers are more apt to develop the skills and abilities of their students as well as to encourage the discussion of related themes, thus contributing to the formation of environmentally conscious citizens.

It is necessary to consider here that, despite all these conceptual distortions and precarious continuing education for discussions about environmental issues, there is still



hope for change in the current situation. Thus, despite the isolated attitudes of a few teachers, it is still possible to change people's behavior and, possibly, in the very near future, the reality we experience today in our schools with regard to environmental education is more promising.

The results obtained point to the need to develop a globalizing vision, with a view to working not only with concepts, but practical, reflective and critical actions, which broaden the students' worldview and point to changes, aiming at a better quality of life.

The results also show that there is a need for improvement in the work of teachers. Therefore, it is the school's duty to act around this objective, which will undoubtedly reflect on the way of thinking about education and especially environmental conservation. Training courses in the environmental area are needed. Another way would be to research, together with the students, content that is of interest to both parties and develop actions that can contribute to the formation of conscious citizens, to act in the social reality in a contextualized way and committed to society.

It was evidenced through the present research that the teacher has a great challenge to be conquered - to form environmental awareness in himself and in the students - awareness that should be carried out through strengthened contents, as well as highly outlined pedagogical procedures. Research on environmental issues needs to be increasingly present in spaces such as the school, in order to advance and solve problems through changes in attitudes.

It is hoped that this work will be complemented and expanded in the future by other authors or researchers who are interested in the theme and are aware of the importance of actions for the benefit of the relationship between man and nature.

# **ACKNOWLEDGMENTS**

We thank the state schools for providing the infrastructure and resources necessary to carry out this work.



# **REFERENCES**

Abramovay, M., & Castro, M. G. (Eds.). (2003). \*High school: Multiple voices\*. Brasília, Brazil: UNESCO, MEC.

Andrade, E. R., et al. (2004). \*The profile of Brazilian teachers: What they do, what they think, what they aspire to\*. São Paulo, Brazil: Moderna.

Bogdan, R. C., & Biklen, S. K. (1994). \*Qualitative research in education\* (M. J. Alvarez, S. B. dos Santos, & T. M. Baptista, Trans.). Porto, Portugal: Porto Editora.

Brazil, Ministry of Education. (2009). \*Teacher's synopsis\*. Retrieved December 8, 2024, from http://www.inep.gov.br/basica/censo/Escolar/Sinopse/sinopse.asp

Brazil, Ministry of Education, Secretariat of Technological Education. (2008). \*Federal institutes of science, education and technology: Conception and guidelines\*. Retrieved December 8, 2024, from http://portal.mec.gov.br/setec/arquivos/pdf3/ifets\_livreto.pdf

Brazil. (1996). \*Law No. 9394/96. LDB: Law of guidelines and bases of national education\* (2nd ed.). Brasília, Brazil: Senado Federal, Coordenação de Edições Técnicas.

Carvalho, I. C. de M. (2008). \*Environmental education: The formation of the ecological subject\* (3rd ed.). São Paulo, Brazil: Cortez.

Cervo, A. L., & Bervian, P. A. (2002). \*Scientific methodology\*. São Paulo, Brazil: Prentice Hall.

Cintra, G. A. R. (2008). Environmental education for responsible tourism: A study of the relationship between geography, tourism and the environment. In \*1st Symposium of Graduate Studies in Geography of the State of São Paulo - SIMPGEO/SP\*, Rio Claro, Brazil.

Creswell, J. W. (2014). \*Qualitative inquiry and research design: Choosing among five approaches\*. Porto Alegre, Brazil: Penso.

Gatti, B. A., & Nunes, M. M. R. (Eds.). (2009). \*Teacher training for elementary education: Study of curricula of the degrees in pedagogy, Portuguese language, mathematics and biological sciences\*. FCC Texts, 29, 155.

Gatti, B. A., et al. (2008). \*Teacher training for elementary education: Training institutions and their curricula; Research report\* (Vols. 1-2). São Paulo, Brazil: Carlos Chagas Foundation; Vitor Civita Foundation.

Gil, A. C. (2008). \*How to develop research projects\*. São Paulo, Brazil: Atlas.

Gil, A. C. (1999). \*Methods and techniques of social research\*. São Paulo, Brazil: Atlas.

Green, J. (2021). \*Notes on life on Earth\*. Rio de Janeiro, Brazil: Intrínseca.

IBGE – Brazilian Institute of Geography and Statistics. (2014). Retrieved February 10, 2024, from http://www.ibge.gov.br

Jacobi, P. (2003). Environmental education, citizenship and sustainability. \*Cadernos de Pesquisa, (118)\*, 189–205.



Leme, T. N. (2006). Practical knowledge of teachers and their continuing education: A path to environmental education at school. In M. Guimarães (Ed.), \*Paths of environmental education: From form to action\* (pp. XX–XX). Campinas, Brazil: Papirus.

Marconi, M. de A., & Lakatos, E. M. (2003). \*Fundamentals of scientific methodology\* (5th ed.). São Paulo, Brazil: Atlas.

Oliveira, H. T., Farias, C. R. O., & Pavesi, A. (2008). Environmental education in Brazilian higher education: Paths taken and perspectives for public policies. \*Brazilian Journal of Environmental Education, (3)\*, XX–XX.

Oliveira, H. T. (2007). Environmental education – To be or not to be a discipline: This is the main question? In \*Let's take care of Brazil: Concepts and practices in environmental education at school\* (pp. XX–XX). Brasília, Brazil: Ministry of Education, General Coordination of Environmental Education; Ministry of the Environment, Department of Environmental Education; UNESCO.

Managing Body of the National Policy for Environmental Education. (2007). \*Mapping environmental education in Brazilian institutions of higher education: Elements for public policies\* (Technical Documents Series, No. 12). Brasília, Brazil: MMA/ME.

Pestana, M. I. (Ed.). (2009). \*Exploratory study on the Brazilian teacher based on the results of the school census of basic education\*. Brasília, Brazil: Inep.

Puentes, R. V., Longarezi, A. M., & Aquino, O. F. (2011). The socio-demographic and professional profile of high school teachers in Uberlândia. \*Revista Profissão Docente, 11\*(23), 132–153.

Quintas, J. S. (1997). For an emancipatory environmental education: Considerations on the training of the educator to act in the process of environmental management. In \*Thinking and practicing environmental education in environmental management\* (pp. XX–XX). Brasília, Brazil: IBAMA.

Reis, L. G. (2008). \*Monograph production: From theory to practice\* (2nd ed.). Brasília, Brazil: Senac.

Santana, P. M. C., Frederico, I. B., & Almeida, E. M. P. (2011). The child and its conceptions of environment: Drawing and dialogue as potential evaluation instruments in environmental education projects. In \*6th Encontro Pesquisa em Educação Ambiental\*, Ribeirão Preto, Brazil. Retrieved from USP Electronic Annals.

Stake, R. E. (2011). \*Qualitative research: Studying how things work\*. Porto Alegre, Brazil: Penso.

Steffen, W., Broadgate, W., Deutsch, L., Gaffney, O., & Ludwig, C. (2015). The trajectory of the Anthropocene: The great acceleration. \*The Anthropocene Review, 2\*(1), 81–98. https://doi.org/10.1177/2053019614564785