CONCEPTIONS AND PRACTICES OF TEACHERS OF BASIC EDUCATION IN BRAZIL ON ENVIRONMENTAL EDUCATION[1]

CONCEPÇÕES E PRÁTICAS DE PROFESSORES DA EDUCAÇÃO BÁSICA NO BRASIL SOBRE EDUCAÇÃO AMBIENTAL

CONCEPCIONES Y PRÁCTICAS DE LOS PROFESORES DE EDUCACIÓN BÁSICA EN BRASIL SOBRE LA EDUCACIÓN AMBIENTAL

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ABSTRACT: Environmental Education (EE) is considered an educational proposal that aims to form reflective, responsible, and active subjects in relation to social and environmental changes. Therefore, with a qualitative approach, this research aimed to analyze teachers' conceptions and practices on EE in Brazil. For this, a semi-structured questionnaire was applied from Google Forms, which was answered by 112 teachers from all regions of Brazil. When analyzing the answers, it was noticeable that the majority (70.5%) of educators have conceptions and develop conservative practices because they do so according to a naturalistic bias. This finding shows that it is necessary to emphasize the importance of EE in initial and continuing teacher training since the teachers will problematize and instrumentalize environmental issues.

KEYWORDS: Conceptions and Practices of Teachers. Environmental Education. Basic Education.

RESUMO*: A Educação Ambiental (EA) é considerada uma proposta educativa que visa formar sujeitos reflexivos, responsáveis e ativos em relação às mudanças socioambientais. Diante disso, esta pesquisa com abordagem qualitativa teve como objetivo analisar as concepções e práticas de professores sobre a EA no Brasil. Para isso, foi aplicado um questionário semiestruturado do Google Forms, o qual foi respondido por 112 professores de todas as regiões do Brasil. Ao analisar as respostas, foi perceptível que a maioria (70,5%) dos educadores possui concepções e desenvolvem práticas conservadoras, pois o fazem segundo um viés naturalista. Tal constatação demonstra que é preciso salientar a importância da EA na formação inicial e continuada docente, uma vez que são os professores que irão problematizar e instrumentalizar as questões ambientais.*

PALAVRAS-CHAVE*: Concepções e Práticas de Professores. Educação Ambiental. Educação Básica.*

RESUMEN: *La Educación Ambiental (EA) es considerada una propuesta educativa que pretende formar sujetos reflexivos, responsables y activos en relación a los cambios socioambientales. Por lo tanto, esta investigación del caracter cualitativo tuvo como objetivo analizar las concepciones y prácticas de los profesores sobre la EA en Brasil. Para ello, se aplicó un cuestionario semi-estructurado de Google Forms, que fue respondido por 112 docentes de todas las regiones de Brasil. Al analizar las respuestas, se notó que la mayoría (70,5%) de los educadores tienen concepciones y prácticas conservadoras, ya que la hacen según un esquema naturalista. Este hallazgo de investigación demuestra que es necesario enfatizar la importancia de la EA en la formación inicial y continua de los docentes, ya que son los docentes quienes problematizarán e instrumentalizarán las cuestiones ambientales.*

PALABRAS CLAVE: *Concepciones y Prácticas de los Docentes. Educación Ambiental. Educación Básica.*

Introduction

Environmental Education (EE) has emerged as a proposal aimed at addressing the socio-environmental crisis. In formal education, EE should not be considered merely as the transmission of knowledge since education is a form of international intervention (Freire, 1996). However, the way EE is implemented in schools does not promote significant changes in students' reality. This is because during the process of developing EE themes, we encounter uncertainties and contradictions (Reigota, 2002).

Layrargues and Lima (2014) mention the existence of macro-trends in Brazilian EE that have emerged over time: the conservationist macro-trend, centered on ecology and of a romanticized nature; the pragmatic trend, emphasizing sustainability through the individual use of products considered "ecological"; and finally, the critical trend that seeks to integrate the economic, social, and political context, considering local realities.

As there are still difficulties within the teaching community regarding the definition of the nature of Environmental Education, from its conception to its applicability, the project aimed to analyze the conceptions and practices of teachers regarding EE in Brazil. Teachers are responsible for shaping citizens who are conscious, reflective, and active in the socio-environmental scenario.

Methodology

This work is classified as qualitative research, which, according to Denzin and Lincoln (2011), is characterized as an interpretative and reflective process based on the collection of descriptive data through various means, such as interviews, observations, and cultural productions, among others. In this type of approach, it is essential to highlight flexibility and interaction with participants, considering different opinions or perspectives on a particular subject (Merriam; Tisdell, 2015).

A semi-structured questionnaire was developed using Google Forms to facilitate the nationwide distribution process and data analysis. The questionnaire for this research (Figure 1) was administered from February to July 2022 and comprised 39 semi-structured questions, including 23 open-ended and 16 closed-ended questions related to participants' profiles and the thematic focus of the investigation.

Figure 1 – QR Code of the questionnaire

Source: MEQR, free QR Code generator

Thus, this questionnaire was distributed to teachers in the basic education system (elementary and high school) across Brazil and disseminated through Facebook groups, WhatsApp, and Instagram, among other platforms, to reach as many participants as possible nationwide. It is important to emphasize that the instrument underwent validation. Five researchers working in Environmental Education, including one master's degree holder, two doctoral candidates, and two Ph.D. holders, analyzed the questionnaire for writing, impartiality, and the objectives of the questions, checking if adjustments were necessary. After the analysis by these researchers, most questions received approval ranging from 80% to 100%, with suggestions for rewriting recorded for only three questions.

In this perspective, empirical-analytical method-supported analysis was used to interpret and validate, especially open-ended questions, to implement a qualitative data treatment. The procedure involved interpreting a semi-structured questionnaire, investigating the phenomenon within its current context, and using sources of evidence. The information was systematically organized to obtain answers to the objectives (Gil, 2008).

Results and Discussion

The questionnaire received a total of 112 responses, distributed as follows: 56 from the Northeast region, 19 from the North region, 18 from the Southeast region, 13 from the South region, and 6 from the Midwest region. The 112 participants will be designated as P1, P2, P3, ... P112 for identification purposes. Additionally, the acronyms NE, N, SE, S, and CO will be used to represent the Northeast, North, Southeast, South, and Midwest regions, respectively.

Participant Profile

In this section, some characteristics related to the questionnaire participants are highlighted, including the regions where they reside, professional affiliations of the teachers, teaching stages, subjects they teach, years of teaching experience, age groups, academic degrees, professional qualifications, and duration of involvement in education.

Regarding the regions in which the participants reside, there is a notable predominance of the Northeast Region at 50.0%, followed by the North at 17.0%, the Southeast at 16.1%, the South at 11.6%, and finally, the Midwest at 5.4%. Additionally, from the results, it was observed that there is a predominance of females, representing 58.9%. In contrast, males account for 41.1%.

Regarding the professional affiliation of teachers, there is a significant contingent of permanent teachers in state education networks, totaling 47 individuals. Next are permanent teachers in municipal networks, with a total of 40, and those employed in this context, totaling 25 teachers. Subsequently, there are professionals associated with other types of contracts, totaling 13 participants. Private schools, in turn, have a total of four teachers, thus presenting the lowest number. The distribution of the questionnaire may have influenced this result, as the teachers who agreed to participate are mostly professionals working in public education networks.

Concerning the teaching stage in which they give classes, it is observed that the majority of educators are involved in High School, corresponding to 37.66%. Next are the final years of Elementary School, with 33.11%, and the initial years of Elementary School, with 16.88%. Subsequently, there are those who work in other modalities, representing universities and technical courses, among others, totaling 9.1%. Lastly, there is Early Childhood Education,

with 3.25%. It is worth noting that the number of responses exceeded the total number of teachers due to some respondents working in more than one teaching stage. The predominance of teachers in High School and the final years of Elementary School results from a higher number of teachers specializing in a specific area, whereas a teacher in the initial years of Elementary School deals with various areas of knowledge, as is the case with a pedagogue.

It was noted that the majority of participating teachers in the research teach the subjects of Mathematics (21.4%), Sciences (17.9%), Portuguese (17.9%), Geography (17.9%), Various or Generalist subjects (17%), and Biology (12.5%). On the other hand, in smaller quantities, we have teachers of subjects such as History (8.9%), Arts (7.1%), Chemistry (6.3%), Physical Education (5.4%), Physics (3.6%), Literature (3.6%), Religion (3.6%), Sociology (0.9%), and other(s). The term "other(s)" was created to encompass subjects that are not considered mandatory in the curriculum (Agroecology, Life Project, Entrepreneurship, Architectural Drawing, etc.). These results may be linked to the fact that the workload of some subjects is higher than others, influencing the number of active teachers.

Regarding the teaching periods of the respondents, it is observed that the majority of educators (31.3%) have more than a decade of teaching experience, ranging from 11 to 15 years. Next are those who have been teaching for over 21 years (24.1%) and from 16 to 20 years (15.2%). Subsequently, there are those who have been teaching for two to five years (14.3%) and six to ten years (12.5%). Finally, there are those who have been preparing for only one year (2.7%). The analysis of these results indicates that the interviewed participants have extensive experience in the field of education.

The predominance of the age group above 48 years (26.8%) is observed, followed consecutively by the age group of 42 to 47 years (24.1%) and 36 to 41 years (17.0%). Next are age groups of 30 to 35 years (16.1%) and 24 to 29 years (9.8%). Lastly, there is the age group of 18 to 23 years (6.3%). This result is in line with the research conducted by Polena and Gouveia (2013) regarding the profile of teachers in the years 2007, 2009, and 2011. The authors observed that the age group of 30 to 49 years prevails, highlighting the aging trend in the teaching profession.

It was evident that undergraduate degrees in Pedagogy (31.3%), Biological Sciences (18.8%), Geography (14.3%), and Mathematics (12.5%) stood out as the most prevalent. In contrast, Physics (0.9%), Philosophy (0.9%), Arts (1.8%), and Spanish Literature (3.6%) showed the lowest results. It is worth noting that, despite Mathematics having the highest number of teachers, there was a lower number of graduates in Mathematics than expected. This

result may have occurred due to the possibility of teachers from other areas teaching this discipline.

A significant portion of the graduates in the study attended public universities, such as the Regional University of Cariri (Urca) in the state of Ceará, with a total of 19 individuals, and the Federal University of Sergipe (UFS), with 15 participants.

Regarding postgraduate education, it is observed that a significant proportion of the participants, totaling 88 teachers (54.65%), have some specialization at the postgraduate level (lato sensu), with only 4 of these professionals specializing in Environmental Education (EE). Following this, 54 teachers (33.55%) hold master's degrees, given the majority with backgrounds in Education, Teaching of Sciences and Mathematics, and Geography. Subsequently, there are 18 teachers (11.18%) with doctoral degrees, specializing in areas such as Education, Science, and Geography, among others. Finally, only 1 teacher with a postdoctoral degree (0.62%) did not specify the corresponding area. It is important to note that the number of responses exceeds the number of teachers, as some have more than one postgraduate qualification.

Regarding the time spent in other educational positions (manager, director, coordinator, among others), the result obtained was as follows: the category "above 21 years" (28.6%) has the highest number of participants, followed by the range "from 11 to 15 years" (27.7%), "from 6 to 10 years" (15.2%), "from 16 to 20 years" (15.2%), "2 to 5 years" (10.7%), and, finally, "up to 1 year" (2.7%). This result highlights that the majority of teachers participating in the study have extensive experience in pedagogical work, extending beyond teaching alone.

In this way, it is understood that teachers from all regions of Brazil were represented in this research. They exhibit an experienced profile with a substantial period of activity in the education sector, and there is a predominance of females, along with a diversity of knowledge areas, with Pedagogy being the most prominent. Furthermore, most participants work in the final years of Elementary and High School in public school systems. Concerning qualifications, we have teachers with expertise, master's, and doctoral degrees, with the majority being specialists.

Concepts and Practices of Environmental Education

In this section, the participants' concepts and practices regarding Environmental Education (EE) are addressed through the following items: educators' understanding of EE, their knowledge of authors discussing the theme, their initial training, how they approach EE, the methodologies or activities developed, how the participants' students feel about EE development, the importance of working on EE in Basic Education, the difficulties encountered when working on EE individually, the use of didactic-pedagogical materials, knowledge of the existence of projects and workshops on the theme in the municipalities where they reside, teachers' opinions on how to develop EE, knowledge of legislation addressing EE, as well as related laws in force in the municipalities where they reside, and their opinions on how EE development in schools could be improved. It is worth noting that, in the testimonials, we added next to the letter P, representing the research participants, the trend to which the respective testimonial belongs, and, in some questions, the acronym meaning the geographical region.

Regarding educators' concepts of Environmental Education, it is noteworthy that among participants from the Northeast region, the conservative macro-trend predominated (78.6%), followed by the pragmatic (12.5%) and the critical (7.1%). There were also those who could not answer (1.8%). The teachers' opinions are highlighted below:

> Discipline that addresses environmental issues, concepts, history, problems, and alternatives related to the Environment (P 47, Conservative, our translation).
> Environmental Education encompasses the processes through which the individual and the community build social values, knowledge, skills, attitudes, and competencies aimed at the conservation of the environment, a good for common use, essential for a healthy quality of life, and its sustainability (P 111, Pragmatic, our translation).
> It is an educational process that seeks to develop individuals who are conscious, reflective, responsible, and participative in addressing socio-environmental issues. Additionally, it involves processes that build social, cultural, political, and economic values aimed at environmental transformation, addressing and solving problems for the collective, and a more just and egalitarian society (P 91, Critical, our translation).

A significant number of conservative responses were observed in the Northern region, accounting for 79%. Subsequently, both pragmatic and critical approaches emerged, representing 10.5%. Examples of these responses include:

> It is the study of environmental balance (P 29, Conservative, our translation).

> It is the process of forming individuals to care for natural resources consciously, using these resources sustainably (P 103, Pragmatic, our translation).
> Environmental Education is an opportunity to break with political, economic, and social models involving environmental issues. This education provides a critical perspective and action regarding the disorderly exploitation of natural resources and the workforce. Environmental education goes beyond phenomena; it questions the essence of societal crisis (P 89, Critical, our translation).

Among teachers in the Southeast region, a significant number of conservative responses were observed, totaling 72.2%. Additionally, critical approaches were recorded at 16.7%, pragmatic at 5.6%, and some respondents did not know how to answer, accounting for 5.5%. Exemplary statements include:

> It directs your classes toward ecological awareness (P 19, Conservative, our translation).
> I understand it as a branch of formal education that aims to discuss topics related to environmental preservation and aspects related to sustainability (P 102, Pragmatic, our translation).
> A formative process in which values, concepts, and attitudes are built, seeking to establish relationships between humans and their environment. It involves issues related to the individual, society, and the environment (P 86, Critical, our translation).

Concerning teachers in the Southern region, conservative opinions proved to be predominant, reaching 53.8%. Subsequently, pragmatic approaches were observed at 38.5%, and critical ones at 7.7%:

> Being prepared to care for and live in harmony with the surrounding environment (P 2, Conservative, our translation).
> It is the teaching of sustainable practices for environmental preservation. It also involves polluting activities and how we can minimize and recycle materials and their correct disposal (P 97, Pragmatic, our translation).
> It is an arm of education that seeks to develop socio-environmental awareness in the individual. Improve their relationship with the environment in which they live and of which they are a part. Multiply good actions for the preservation of the environment (P 84, Critical, our translation).

Finally, respondents from the Central-West region, like those from the other regions, exhibit a high prevalence of conservative views, totaling 66.6%. Subsequently, among teachers in this region, there are both pragmatic and critical perspectives, each representing 16.7%:

> I believe these are subjects or themes that lead us to think about a healthy environment for everyone, or the balance between humans, animals, and the environment (P 82, Conservative, our translation).
> Set of values, knowledge, and attitudes that seek to conserve the environment sustainably (P 112, Pragmatic, our translation).
> Recognizing that we are intrinsically connected to the environment and other species and that in the face of this realization, we must be active participants through conscious and reflective attitudes, as well as multipliers of actions and formations that promote awareness of the importance of the vital web that binds us throughout the planet (P 84, Critical, our translation).

From these results, it was noted that the majority of teachers from all regions of Brazil demonstrate a conservative bias, as the responses showed naive, generalistic views based on ecological currents or even romanticized views of Environmental Education (EE) (Layrargues; Lima, 2014). From this perspective, Loureiro and Layrargues (2013, p. 65-66, our translation) state that this macro-trend "[...] relies on the principles of ecology, valuing the affective dimension about nature and changing individual behaviors in relation to the environment [...]".

Following this, the pragmatic macro-trend prevailed among participants, considered an evolution from the conservative trend but with a focus on sustainability or the conscientious use of natural resources. Despite the importance of addressing sustainability, recycling, and conscious consumption, large companies take advantage of EE to introduce concepts related to market environmentalism, overlooking other dimensions such as social, political, and historical, among others (Layrargues; Lima, 2014). In this regard, Loureiro and Layrargues (2013, p. 66, our translation) describe the pragmatic trend as "Especially covering the currents of education for sustainable development, education for sustainable consumption, and environmental education in the context of solid waste and climate change."

In smaller numbers, responses from the critical trend were obtained, characterized by involving social, cultural, and political aspects associated with environmental problems. The aim is to educate autonomous and active individuals who problematize inequalities, the dynamics of capitalism, and socio-environmental injustice (Layrargues; Lima, 2014). From this perspective, Loureiro and Layrargues (2013, p. 68, our translation) add, "This trend brings a pedagogical approach that problematizes societal contexts in their interface with nature. From this perspective, it is not possible to conceive environmental problems dissociated from social conflicts."

These results are in line with the study conducted by Almeida, Jesus, and Vasconcelos (2021, p. 34), which investigated the conceptions and practices of elementary school teachers in the state of Sergipe. Regarding their findings, "it was observed that 65.5% of the teachers

demonstrated a conservative bias, while 24.1% leaned towards the pragmatic macro-tendency, and only 1.4% of the participants aligned with the critical tendency" (Almeida; Jesus; Vasconcelos, 2021, p. 34, our translation).

Regarding familiarity with authors discussing Environmental Education (EE), a portion of the teachers responded negatively (49.2%), while the other segment affirmed their knowledge (50.8%). Those who claimed to have knowledge mentioned the following authors: Paulo Freire, Reigota, Guimarães, Carlos Frederico, and others. Although nearly half of the participants are familiar with some authors, this percentage remains low, considering the diversity of Brazilian and foreign authors addressing Environmental Education in books, scientific articles, events, and videos, among other mediums. However, the authors mentioned by the teachers play a significant role in the context of Environmental Education, as they are widely referenced in national works in Brazil.

Regarding the initial training of educators regarding concepts and activities related to Environmental Education, a significant portion (36.6%) indicated that they had not received preparation. Others stated that they had received such training, representing 32.1%, while some responded affirmatively but only partially (31.3%). These data are concerning, as the National Environmental Education Policy (PNEA), in its Article 11, establishes that "the environmental dimension must be included in teacher training curricula at all levels and all disciplines" (Brasil, 1999, our translation).

In light of this, all teaching degrees should provide activities and discussions related to environmental themes, as this training can influence the conceptions and teaching practices in schools (Reis *et al*., 2013). It is worth emphasizing the importance of initial training with a critical bias, as "not every teacher has initial or continuing education in the field of Environmental Education that allows for a theoretical foundation based on critical awareness and focused on the socio-environmental" (Ventura, 2021, p. 16, our translation).

However, initial education in Brazil still predominantly exhibits technical characteristics directed toward teaching specific content related to the undergraduate course chosen by the future teacher. This approach neglects diversity, variations in pedagogical practices, and the integration of resources and interfaces with teaching methodologies—elements that could serve as support for teachers during classes (Gatti *et al.*, 2019).

These issues are even more pronounced when analyzing initial and continuing education regarding Environmental Education (EE). There is still an idea that Environmental Education is only addressed when discussing issues related to sustainability, conservation, environmental

preservation, and resource exploitation, overlooking the social values constructed from discussions about environmental issues (Oliveira; Vasconcelos, 2021).

Regarding the acknowledgment of whether teachers work with Environmental Education, a significant portion (47.3%) responded that they develop approaches on EE, followed by 37.5% who partially work on the theme, and 15.2% who do not engage in activities related to the subject. Despite the obligation to develop EE in schools, there is resistance among some to enhance projects and activities, while others promote it incorrectly. This fact may be related to the negligence of the school community and the government in directing and encouraging EE practices.

Concerning the methodologies or activities developed for Environmental Education, there was a significant diversity of practices, as teachers mentioned examples such as projects, case studies, the use of audiovisual resources, gamification, lectures, workshops, and flipped classrooms, among others. Various methodologies and activities are essential to prevent teaching from becoming uninteresting, focused on long classes and repetitive activities. According to Reigota (2006), even lectures can be necessary as long as the student is a protagonist in knowledge construction, actively participating in questioning proposed themes and seeking solutions. Active teaching methods characterize all these aspects.

Regarding how students feel about the development of Environmental Education (EE) in the school context, most teachers responded that students feel engaged. Regarding this topic, the following responses were obtained: "Motivated, happy to contribute to the improvement of the world they live in, fully dedicated to the proposed work" (P 24, N, our translation), "They like it a lot because the classes are more relaxed" (P 19, SE), "Interested because they realize they are part of the environment" (P 6, CO, our translation), "Enthusiastic because EE is present in everyday life. Reflective about their actions" (P 92, NE, our translation), "They are very interested and have doubts about why it is a little-discussed content due to its importance" (P 20, S, our translation).

The work on the socio-emotional aspect is also part of the school's competencies because, through these emotions, students feel more integrated, motivated, and involved (ABED, 2014). Thus, these responses demonstrate an effort on the part of teachers to find ways to captivate students' interest in learning about Environmental Education.

Regarding the importance of incorporating Environmental Education (EE) into Basic Education, educators emphasized its relevance. Below are the identified statements: "Very important to work on EE because it contributes to the student's education" (P 9, SE, our

translation); "Environmental Education worked in basic education awakens students' awareness of preservation and citizenship. These students come to understand, from an early age, that they need to take care, preserve, and that the future depends on the balance between humans and nature and the rational use of natural resources" (P 111, NE, our translation); "Teachers need to work on environmental education with children in Basic Education so that they feel responsible for environmental preservation" (P 26, N, our translation); "So that students see the importance of taking care of the place where they study, giving value" (P.15, CO, our translation); "The construction of critical thinking and a sense of care in the individual" (P.51, S, our translation). It is evident that educators understand the importance of working on EE in primary education.

Due to the difficulties educators face in working on EE individually, the majority of them (41.1%) responded that they have little difficulty. Some (33.9%) reported having difficulties, while others (25%) said they had no difficulty. In light of these results, there is a noticeable concern about individual EE work. Dias (2003), for example, emphasizes the Intergovernmental Conference on Environmental Education in Tbilisi (1977), which defined the importance of environmental content being discussed in an interdisciplinary manner, as all areas of knowledge contribute to the critical formation of EE.

Regarding the inquiry about the use of didactic-pedagogical materials by teachers to address Environmental Education (EE), responses were provided, such as: textbooks, films, reports, videos, magazines, cell phones, computers, drawings, cartoons, gardens, models, streaming, games, and discussion circles, among others. From this data, it is understood that there is an effort or concern to bring a variety of tools for the development of EE. According to Reigota (2006), Environmental Education presents diverse resources or tools with different levels of complexity for its development; however, its effectiveness depends on the teacher's creativity and contextualization in local reality.

Regarding whether they know or not about the development of EE projects and workshops in the schools or municipalities where they reside, some teachers stated that they do not know (34.9%), while the majority said yes (65.1%). Those who claimed to know mentioned examples of projects and/or workshops: "My environment, which includes work with the school's organic garden, rescue of Non-Conventional Food Plants, composting, vermicomposting, production of crafts with alternative materials, and others" (P 7, S, our translation); "We have the recycling project, we have the soap factory project, we have the garden project for teas" (P 28, N, our translation); "There is a project developed in partnership

with the company Águas Cuiabá and the Municipality of Cuiabá, through the Municipal Department of Education, the start-up of Environmental Education Teoria Verde, Biomavi Recycling, responsible for the purchase and reuse of the collected material, and the *Instituto Lixo Zero Brasil*, promote the collection of used cooking oil, and students participate in Environmental Education activities in making soap with teachers" (P 94, CO, our translation); "Yes, water project, awareness of deforestation, garbage recycling" (P 67, NE, our translation); "Yes, the Campo Limpo Environmental Education Program promoted by the National Institute for the Processing of Empty Packages" (P 100, SE, our translation).

Based on the responses, it is evident that teachers seek differentiated methodologies and themes, with projects being the most commonly used resource. Teaching through projects enables the decompartmentalization of students' reality through collective action from various areas of knowledge, aiming to contextualize environmental themes in a way that integrates the individual with the environment (Amaral; Carniatto, 2011).

Regarding the teachers' opinions regarding the development of Environmental Education (EE), a variety of responses were obtained relevant to the purpose of EE, such as: "Interdisciplinary" (P 9, CO, our translation); "In a transversal and interdisciplinary manner, not focused solely on sciences but on other areas of knowledge" (P 84, S, our translation); "Mainly based on the reality of the school community's context in dialogue with the studies conducted, in a way that leads students to reflection and critical thinking" (P 17, SE, our translation); "Interdisciplinary, continuous, and through projects that promote students' creativity and collaboration, as well as produce sustainable products for the school and community" (P 19, NE, our translation); "In a way that makes the child understand their role in this discussion and understand the roles of the State and the Municipality and what can be done within each level of responsibility" (P 30, N, our translation). Therefore, some teachers have knowledge related to EE practices, with the majority falling within a critical perspective.

When asked about their knowledge of EE-related legislation, most stated that they were not familiar with the laws governing EE (54.5%), while the other part claimed to be aware of the regulations (45.5%). They mentioned the main examples, such as the Law of Guidelines and Bases of National Education (LDB), the National Environmental Policy, the National Policy on Environmental Education (PNEA), and the Environmental Crimes Law. Furthermore, when questioned about their knowledge of laws related to the environment and Environmental Education in the municipalities where they reside, the majority responded that they are unaware

of the laws (51.8%), followed by those who know (33%), and those who claim there is no environmental law for the municipality (15.2%).

Regarding how Environmental Education (EE) could be improved in schools, teachers emphasized the primary agenda of initial and ongoing teacher training. Authors such as Fazenda (2003) and Lopes and Abílio (2021) highlight that these training programs, when characterized by a critical nature, contribute to reflective thinking about one's own practice and the environmental issues affecting the world. They also encourage the formation of a participatory and environmentally conscious individual. Teachers also identified increased investment in projects and school infrastructure, along with engagement and commitment from all stakeholders (administrators, teachers, students, community, etc.), as ways to contribute to EE teaching.

Final Considerations

The results demonstrate that the majority of educators hold conservative conceptions and practices. Responses were characterized by a generalist, ecological, or romantic nature, indicating an idea of protecting and conserving nature. Another portion of participants had pragmatic conceptions related to consumerism, recycling, and sustainability, reflecting a market-oriented view of nature. The few critical responses emphasized the importance of EE that promotes the formation of reflective and participatory individuals in the socio-environmental context.

Despite this data, most teachers recognize the importance of addressing EE, its interdisciplinary and transversal nature, and the significance of diverse practices in EE teaching. This raises the question: why does this approach not materialize in the school reality even when teachers acknowledge the importance of approaching EE critically? I hope that future research in the field of Environmental Education can further analyze this issue.

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