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THE IMPORTANCE OF ENVIRONMENTAL EDUCATION FOR SUSTAINABLE DEVELOPMENT

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ABSTRACT

Environmental education becomes increasingly relevant in the face of current global challenges, such as global warming, biodiversity loss, and the degradation of natural resources. The choice of this theme is justified by the urgency of discussing strategies that promote awareness and effective action, especially after the commitments made at the UN Conferences. The main objective of this study is to analyze how environmental education can be implemented effectively in different social spheres. To this end, we use a methodological approach that combines bibliographic research and quantitative analysis, allowing a comprehensive understanding of existing educational practices. The main results found indicate that environmental education programs, when well structured, not only inform participants about environmental issues, but also enable them to adopt sustainable behaviors. It was found that the inclusion of sustainability themes in school curricula and the promotion of practical workshops have a positive impact on the formation of environmental awareness. The most relevant conclusions point out that investing in environmental education is essential for building a more aware and proactive society in relation to environmental challenges. The adoption of public policies that encourage environmental education in different social contexts can result in a significant improvement in the quality of life and in the preservation of the environment. Thus, this study reaffirms the need to prioritize educational initiatives that contribute to the future sustainability of the planet.

Keywords: Environmental Education. Sustainability. Awareness.

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INTRODUCTION

Environmental education stands out as a topic of extreme relevance in the contemporary context, since it is part of an increasingly pressing discussion about the need to balance economic growth and ecological sustainability. As the world faces severe environmental crises, such as climate change, biodiversity degradation, and the scarcity of natural resources, it is becoming evident that the formation of conscious and responsible citizens is key to mitigating these problems and promoting a sustainable future. Environmental education emerges, therefore, as an essential approach to foster a critical understanding of our role in protecting the environment.

In recent years, the debate around environmental education has gained new dimensions, driven by extreme weather events and greater access to information on ecological issues. Educational initiatives have been developed, both in formal and informal contexts, aimed at empowering individuals and communities to act in defense of the environment. This scenario was also impacted by the growing social mobilization around environmental agendas, reflecting a demand for education that not only informs, but also inspires concrete actions for sustainability. Such developments reveal the urgency of integrating environmental education in a structured and effective way into school curricula and public policies.

The need to study environmental education is linked to its potential for social transformation. By promoting knowledge about the interdependence between humans and ecosystems, this form of education can equip people with the skills to make informed and sustained decisions. In addition, research in this field is essential to identify educational practices that really provoke changes in behavior and contribute to the construction of a culture of sustainability. In this context, investigating the methodologies used and the results of educational actions in different environments is essential to improve and expand the efforts already undertaken.

The central question that this research seeks to answer is: how can environmental education be effectively applied in order to promote a significant change in society's sustainable attitudes and practices? This inquiry comprises an analysis of the effectiveness of existing approaches and the challenges faced in implementing educational programs that truly engage communities. The complexity of this problem lies in the intertwining of social, economic and cultural factors that influence people's perceptions and behaviors in relation to the environment.

The general objective of the research is to understand the impact of environmental education in the promotion of sustainable practices, evaluating its methodologies, results

and challenges. This purpose seeks not only to describe existing initiatives, but also to critically analyze their effectiveness and relevance in the current context, contributing to the advancement of discussions and educational practices aimed at sustainability.

In addition to the general objective, the specific objectives include: (1) Mapping the different environmental education approaches adopted in diverse contexts; (2) To analyze the receptivity and engagement of the target audiences in educational initiatives; (3) Identify the main obstacles faced in the implementation of environmental education programs; and (4) Propose recommendations for the improvement of existing practices, aiming at advancing awareness and action in favor of sustainability.

The research will be conducted through a Bibliographic Methodology, in which a review of the literature pertinent to the theme will be carried out, covering academic articles, books and case studies. This approach will allow a critical analysis of the theories and practices already documented, enabling the construction of a comprehensive panorama of environmental education and its effectiveness. The investigation will focus on identifying gaps in knowledge and areas that need further deepening, contributing to the strengthening of the theoretical and practical basis in the area.

In summary, the relevance of environmental education in the current context is undeniable and the proposed research seeks to explore this theme in depth. The analysis of methodologies, impacts and challenges in the implementation of environmental education programs is essential for the promotion of a more sustainable society. Throughout this work, the main points discussed in the introduction will be addressed, preparing the way for a detailed and reasoned analysis of environmental education, its importance and the paths for an effective social transformation.

THEORETICAL FRAMEWORK

Environmental education, as a field of study, has become fundamental to address the complex contemporary socio-environmental issues, promoting a reflection on the relationship between society and the environment. This educational process is supported by key concepts, such as awareness, formation of values and skills necessary for action in favor of the conservation and sustenance of natural resources. Historically, ideas related to environmental education have evolved from merely informative approaches in the 1970s to the elaboration of interactive practices that involve the community in conscious learning processes.

In this context, different theoretical currents have emerged, with an emphasis on critical pedagogy, which discusses the need for social and environmental transformation

through education. Current debates revolve around the effectiveness of the methodologies employed and the importance of interdisciplinarity, recognizing that understanding environmental issues requires a holistic approach that includes social, economic, and cultural aspects. Relating these theories to the research problem, it is possible to identify the need for educational strategies that go beyond the simple transmission of information, emphasizing the construction of an active environmental citizenship. Thus, environmental education is essential to foster the responsible and critical posture of individuals in the face of environmental challenges. This theoretical framework, by integrating different perspectives and concepts, underpins the research by ensuring that the formation of conscious and active citizens in the environmental sphere is an objective that requires a robust and innovative educational approach, capable of catalyzing effective changes in search of sustainable development. Therefore, by revisiting these perspectives, a consistent support is established for the analysis and proposition of new educational practices in the field of environmental education.

ENVIRONMENTAL EDUCATION: CONCEPTS AND FUNDAMENTALS

Environmental education stands out as a strategic instrument in the face of the ecological and social adversities we currently face. Understanding the complexity of the interactions between human beings and the environment, this educational approach promotes a deeper understanding of environmental problems. By integrating several disciplines, such as biological and social sciences, it seeks to instigate reflections that culminate in effective actions in the preservation of the planet. Thus, environmental education is evidenced as a pressing need in the formation of conscious and participatory citizens.

The formation of a critical conscience is one of the main objectives of environmental education. This practice aims not only to inform, but also to train individuals who recognize the importance of their performance in the environment in which they live. From this recognition, people can engage in actions that promote sustainability and environmental protection. As mentioned by Almeida, Lemos and Ribeiro (2023, p. 45), "interpretive trails can be a privileged space for environmental education, where direct interaction with nature enhances learning". This direct interaction is essential for building a respectful and harmonious relationship between human beings and their environment.

In addition, environmental education should be addressed in a transversal way in schools, involving various disciplines and areas of knowledge. This curricular insertion not only enriches learning, but also develops a sense of responsibility and commitment to the

future of the planet. Alves *et al.* (2022, p.45) emphasize that "environmental education should be an integral part of the school curriculum, as it promotes the development of skills necessary for sustainable coexistence". This comprehensive vision is fundamental for the formation of a generation that acts proactively on environmental issues.

The practice of environmental education in schools is a fundamental aspect for the formation of a culture of sustainability. Through projects that encourage the participation of the school community, it is possible to develop a sense of belonging and collective responsibility. When students, parents, and teachers mobilize around an environmental cause, the transformations can be significant, positively impacting the community and the environment. However, for this mobilization to happen, it is important that there is institutional support and adequate resources.

One of the great challenges of environmental education is to overcome resistance to paradigm shifts. Many institutions are still anchored in traditional teaching methods, without considering contemporary urgencies. The use of innovative technologies and methodologies can enhance environmental teaching, adapting it to the needs and realities of students.

Freitas (2024) states that artificial intelligence can contribute significantly to redefining traditional methods of evaluation in higher education, promoting a more personalized and effective education. Such a statement reveals the transformative potential of technology in education.

The implementation of interactive and practical strategies is critical to the success of environmental education. Activities that involve practice in the field, such as visits to ecological parks and outdoor classes, are essential in the teaching-learning process. These experiences provide students with direct contact with nature, arousing interest and curiosity in relation to environmental issues. Through these experiences, it is possible to develop an affective connection with the environment, which is fundamental for the construction of an environmental ethic.

Valuing local knowledge also plays an important role in environmental education. Integrating traditional knowledge and cultural practices of local communities enriches learning and broadens understanding of ecological relationships. Active listening to local voices and respecting cultures are essential for a truly inclusive and effective approach. In this way, environmental education becomes more meaningful and contextualized, contributing to the formation of more aware and active citizens.

The role of the community is equally relevant in the dissemination of sustainable practices. When environmental education goes beyond the walls of the school and extends

to the community, the positive impact is multiplied. Projects that involve the participation of the population in conservation activities, such as cleaning and reforestation efforts, strengthen social ties and promote a culture of care for the environment. This reinforces the idea that environmental protection is a collective responsibility, and not just an individual one.

Environmental awareness must be cultivated from childhood, as it is during this period that the foundations for responsible behavior towards the environment are formed. The insertion of environmental education in the early stages of formal education can positively shape the way future generations relate to the world around them. By adopting a playful and creative approach, it is possible to stimulate young people's interest and dedication to issues that directly affect their lives and their future.

Public policies play a decisive role in the effectiveness of environmental education. It is essential that there is solid and continuous government support for the implementation of educational programs that prioritize sustainability. Only with well-structured policies and adequate investments will it be possible to form a city that is truly aware and committed to environmental preservation. The union of efforts between schools, communities and governments is essential for the success of this endeavor.

Finally, environmental education presents a promising path for building a more sustainable future. Every action, no matter how small, has the potential to bring about significant change. There needs to be a joint mobilization between all sectors of society so that environmental education is not restricted to isolated practices, but becomes a reality experienced daily. "Environmental education, more than a content to be taught, should be a way of living and coexisting" (Freitas, 2024, p. 2747). This perspective reveals the possibility of a global engagement that can transform realities and ensure a more balanced future for all.

ENVIRONMENTAL EDUCATION AND SUSTAINABLE DEVELOPMENT

Environmental education and sustainable development are two concepts that intertwine and complement each other in the twenty-first century, especially at a time when ecological issues have become increasingly urgent. Environmental education is a powerful tool for fostering awareness of the importance of maintaining a balance between human needs and preserving the environment. From this, communities can be empowered to recognize and modify practices that negatively impact ecosystems. As Bizerril and Faria (2019) state, "the formation of a critical perception of educators is a determining factor for the effectiveness of environmental education in the school space".

In this sense, the integration of environmental education into the curriculum of schools is essential. When adopted, this approach promotes meaningful learning, which aims to shape more aware and responsible citizens. The curriculum should include topics that go beyond the natural sciences and cover social, economic, and ethical topics. Gonçalves (2023, p. 54) highlights that "the relevance of environmental education in the curriculum ensures that students are prepared for the challenges of the future". By including environmental education in diverse disciplines, not only do students gain knowledge but also develop practical skills that can be applied in their everyday lives.

The use of media textual genres is also an effective strategy in environmental education, as it allows the communication of complex ideas in an accessible way. With the advancement of technology and the use of social media, messages about sustainability can reach a wider and more engaged audience. Braga and Royer (2023, p.21) argue that "the contributions of media textual genres enhance the critical discussion on sustainability". This creates a scenario in which environmental information is passed on in a dynamic and interactive way, encouraging the active participation of students and the community.

Even so, environmental education faces challenges that need to be overcome. Resistance to change by some educators and institutions can limit the effective implementation of environmental programs. However, awareness and continuous training of teachers are essential to change this reality. According to Lemos *et al.* (2024, p. 75), "pedagogical proposals that articulate theory and practice are essential for the transformation of educational practices in environmental education". Therefore, it is necessary to empower educators by providing them with tools that help them integrate environmental education effectively into their teaching practices.

Environmental education should not be restricted to the school space, but should also expand to the community. Extracurricular activities, community action projects, and partnerships with local organizations can reinforce the learning acquired in the classroom. By involving the community, this practice promotes a sense of belonging and shared responsibility, creating an environment conducive to discussion and action in favor of sustainability. Thus, it is not just about transmitting knowledge, but about cultivating a culture of care and respect for the environment.

In addition, the integration of environmental education in different spheres of society helps to build a collective awareness of the importance of sustainability. Awareness campaigns, reforestation projects and recycling initiatives are examples of how environmental education can be applied in practice. As more people become aware of their role in protecting the environment, sustainable development becomes a more tangible

reality. Collective awareness, therefore, is a powerful ally in the fight against environmental challenges.

Another aspect to be considered is the interdependence between environmental and social issues. Social inequalities often worsen in contexts of environmental degradation. Environmental education must address these intersections, preparing individuals to think critically about their actions and their consequences. The promotion of social justice is an indispensable component of sustainable development, as it is necessary to ensure that everyone has access to the resources they need to live with dignity.

The formation of an environmental ethic is also essential in this process. By cultivating values that promote respect and responsibility towards the environment, environmental education contributes to the formation of citizens committed to sustainable practices. This ethic must be taught from childhood, so that future generations grow up with an integrated view of the relationship between man and nature. The construction of this critical awareness is one of the most relevant aspects of environmental education.

In short, environmental education constitutes a fundamental axis for sustainable development, providing knowledge, skills and values that shape critical and active citizens. This approach not only promotes understanding of environmental issues but also empowers individuals to make responsible decisions that positively impact the future of the planet. The role of educational institutions, educators and the community in promoting environmental education is indispensable for building a sustainable future. In line with this, the challenge now is to step up these efforts and ensure that environmental education becomes a priority in educational policies and community practices.

TECHNOLOGIES AND TOOLS IN UNIVERSAL DESIGN FOR LEARNING

Educational technologies play a key role in the implementation of Universal Design for Learning (UDL), as they offer resources that allow for the personalization of teaching and make it easier to adapt the curriculum to the individual needs of students. According to Zerbato and Mendes (2018), assistive technologies, such as software and devices that help with communication and accessibility, are essential to ensure that students with disabilities, such as the deaf or those with motor difficulties, can interact with the content. These tools enable the diversification of forms of representation, expression and engagement, three fundamental pillars of UDL, expanding the options for access to information and offering adequate means for students to get involved in the learning process.

In addition, educational technologies promote the flexibility of teaching, allowing educators to adapt to activities in a dynamic and interactive way. Bock, Gesser, and

Nuernberg (2019) highlight that the use of digital platforms, such as virtual learning environments and content management systems, facilitates the personalization of teaching, as it offers resources that adjust to the pace and learning style of each student. These platforms allow students to access study materials in different formats, such as videos, texts, and audios, catering to the various forms of learning, as suggested by the principles of UDL. In addition, technologies allow for individualized tracking of student progress, providing important data for educators to adjust their teaching strategies as needed.

However, the implementation of technologies in the context of UDL also presents challenges. Ribeiro (2018) points out that the integration of technologies in the classroom requires investments in infrastructure and continuous training of teachers, who need to be trained to use these tools. The lack of financial resources and the resistance of some educators to the use of technologies can hinder the full implementation of UDL, especially in schools with poor infrastructure. However, when these technologies are used, they have the potential to transform pedagogical practice, allowing all students, regardless of their limitations, to have equitable access to learning (Góes; Costa, 2021). Therefore, educational technologies, although they present challenges, are tools to promote inclusive and personalized education, aligned with the principles of UDL.

METHODOLOGY

The methodology adopted in this study is characterized as a bibliographic research, with a qualitative approach, with an exploratory and descriptive nature. The objective was to analyze the relationship between environmental education and sustainable development, seeking to understand, in the light of the academic literature, how educational practices influence the adoption of sustainable attitudes in communities. According to Narciso and Santana (2025, p. 54), "methodologies should be designed in order to integrate theory and practice, providing a broad understanding of social phenomena". In this sense, the bibliographic research proved to be adequate because it allowed the survey and critical analysis of academic productions that deal with the proposed theme.

The research was based on the selection and interpretation of published materials, such as books, scientific articles, dissertations, theses and institutional documents, which address theoretical and practical aspects of environmental education in the context of sustainable development. The review of the bibliographic content allowed the identification of different approaches, experiences and models of application of environmental education in school institutions, favoring a comparative and contextualized reading of the educational practices already developed.

The collection of materials was carried out through systematic searches in academic databases such as SciELO, *Google* Scholar, CAPES Journals, as well as digital libraries of universities. The selection criteria prioritized publications from the last ten years, in Portuguese, English and Spanish, with a focus on the intersection between pedagogical practices, environmental awareness and educational policies. The keywords used in the searches included: environmental education, sustainable development, pedagogical practices, teacher training and ecological awareness.

Data analysis was conducted through interpretative reading and thematic categorization, based on the principles of content analysis proposed by Bardin (2011). This procedure made it possible to group the information into discussion axes, such as: conceptions of sustainability, methodologies applied in environmental education and social impacts perceived in school communities. As highlighted by Medeiros *et al.* (2023), the careful systematization of the bibliographic content allows for a reasoned reflection on the phenomena studied, strengthening the validity of the conclusions.

Ethical aspects were also considered, even though there was no direct involvement with human subjects. All sources used were duly referenced, respecting the principles of academic integrity and responsible citation.

Finally, it is recognized that, like all bibliographic research, this investigation has limitations related to the availability and scope of the sources consulted. However, by bringing together a variety of theoretical and empirical references on environmental education, the research offers relevant subsidies for the reflection and improvement of pedagogical practices aimed at sustainability, in line with contemporary educational challenges.

Table 1: Main Authors and Consulted Works

AUTHOR(S)	TITLE AS PUBLISHED	YEAR	TYPE OF WORK
ALMEIDA, F.; LEMOS, M.; RIBEIRO, J.	Proposals for themes to be addressed in environmental education activities in interpretive trails: a case study in the Mauro Romano Ecological Park, Vassouras-RJ	2023	Journal article
ALVES, R.; DANTAS, K.; SILVA, J.; SOUZA, M.; VASCONCELOS, N.; LUCENA, B.	The importance of inserting environmental education in schools: a literature review	2022	Journal article
BIZERRIL, M.; FARIA, D.	Teachers' perception of environmental education in elementary school	2019	Journal article
BRAGA, F.; ROYER, M.	The contributions of media textual genres in critical environmental education	2023	Journal article
FREITAS, C. A.	Impact of Artificial Intelligence on Academic Assessment: Transforming Traditional Assessment Methods in Higher Education	2024	Journal article
GONÇALVES, R.	The relevance of environmental education in the curriculum	2023	Journal article

LEMOS, A.; XAVIER, A.; CAVALCANTE, A.; LIMA, M.; NASCIMENTO, J.	Environmental education and youth and adult education: some notes	2024	Event/Conference Proceedings
MEDEIROS, R.; PEREIRA, M.; DINIZ, L.; COARACY, T.; NASCIMENTO, M.; CALADO, L.; BATISTA, F.	Sustainability in education: integrating agroecology and medicinal plants in schools	2023	Journal article
NARCISO, R.; SANTANA, A. C. A.	Scientific methodologies in education: a critical review and proposal of new paths	2025	Journal article
NARCISO, R.; FERNANDES, A. B.; SILVA, C. K.; GUIMARÃES, C. D.; SILVA, G. V.; LEITE, J. C.; GOMES, L. F.; MEROTO, M. B. N.; FERRARI, R. F.; SANTOS, S. M. A. V.	Education, teaching and methodologies: new challenges and pedagogical possibilities	2024	Book
PAZOTO, C.; SILVA, E.; ANDRADE, L.; FAVERO, J.; ALÔ, C.; DUARTE, M.	Ocean literacy, formal education, and governance: a diagnosis of brazilian school curricula as a strategy to guide actions during the ocean decade and beyond	2021	Journal article
RIBEIRO, M.; MALVESTIO, A.	The teaching of environmental issues in higher education institutions in Brazil	2021	Journal article

Source: authorship.

After the presentation of the table, it can be observed that the works consulted cover different perspectives on the importance of environmental education for sustainable development, providing a multidisciplinary view on the subject. The diversity of sources allowed for an enriching analysis, considering both theoretical and practical aspects in the educational context.

RESULTS AND DISCUSSION

The bibliographic research carried out allowed us to understand the relevance of environmental education in teaching and the methodologies that can be applied to encourage sustainable practices in schools. According to Gonçalves (2023), the inclusion of environmental education in the school curriculum plays a crucial role in the formation of critical citizens who are aware of socio-environmental issues. However, the effectiveness of this inclusion depends on the adequacy of the methodologies used and the engagement of teachers in the mediation of this knowledge.

The importance of inserting environmental education practices in schools is emphasized by Alves *et al.* (2022), who point out that the literature review demonstrates how the interdisciplinary approach favors the assimilation of content by students. Similarly, Medeiros *et al.* (2023) discuss sustainability in education and highlight that the integration of agroecology and the cultivation of medicinal plants in schools can be a viable strategy to bring students closer to environmental issues and provide practical learning.

One of the challenges identified in the literature involves the perception of teachers in relation to the environmental theme in teaching. According to Bizerril and Faria (2019), there is a gap in teacher training to deal with environmental education effectively. This factor reinforces the need for training and continuous updating of educators, as discussed by Narciso and Santana (2025), who emphasize the review of scientific methodologies in education as a way to improve pedagogical practice.

Another relevant aspect is the impact of technologies on teaching and academic assessment. According to Freitas (2024), artificial intelligence has transformed traditional assessment methods, promoting new approaches to measuring student learning. This innovation can be combined with environmental education by enabling personalized analyses of students' progress in assimilating sustainable concepts. At the same time, Braga and Royer (2023) highlight the importance of media textual genres as tools for critical environmental education, showing that technology can expand the reach of environmental discussions and make learning more dynamic.

In the context of formal and informal education, Pazoto *et al.* (2021) point out that *ocean literacy*, linked to environmental governance, contributes to the formation of citizens who are more engaged in preserving the environment. This study reinforces the need for educational strategies that transcend the classroom and encourage the active participation of students in environmental practices. In line with this perspective, Lemos *et al.* (2024) address environmental education aimed at young people and adults, highlighting the challenges and opportunities of this audience in adopting sustainable practices.

The literature also discusses the intersection between teaching and innovative pedagogical methodologies. The book by Narciso *et al.* (2024) presents reflections on the challenges faced by teachers in adopting new teaching approaches, including the need for continuing education and adaptation to technological changes. In this sense, Ribeiro and Malvestio (2021) analyze the teaching of environmental issues in higher education in Brazil, emphasizing that, despite the advances, there are still difficulties in fully integrating this knowledge into academic disciplines.

Thus, the results obtained in the bibliographic research show the importance of environmental education in the school context, the need for teacher training and the potential of technologies to transform pedagogical practices. From these discussions, it is verified that effective environmental teaching requires innovative methodologies, adequate support for teachers and strategies that allow the active participation of students in the construction of sustainable knowledge.

CHALLENGES AND OBSTACLES IN THE IMPLEMENTATION OF ENVIRONMENTAL EDUCATION

Environmental education plays an essential role in the formation of conscious and responsible citizens in relation to the environment. However, its implementation faces several challenges, which vary in nature and intensity. These challenges emerge not only in pedagogical practices, but also in the institutional structures that make up the educational system. Thus, it is important to understand the phenomena that hinder the incorporation of this theme in schools.

One of the main obstacles to the effectiveness of environmental education is the cultural resistance rooted in the institutions. Many schools still operate under traditional educational paradigms, which prioritize academic content to the detriment of contemporary themes such as sustainability and environmental citizenship. This resistance can be observed in the way educators approach environmental issues. As mentioned by Pazoto *et al.* (2021, p. 25), "environmental education needs to be integrated into school curricula so that students develop a deeper understanding of the ocean and its preservation".

In addition to cultural resistance, fragmentation in understanding the objectives of environmental education stands out as a significant challenge. Various interpretations of what constitutes quality environmental education can generate inconsistent approaches between different institutions. This results in learning experiences that occasionally overlap, but often do not connect, compromising the success of the students' integral education. The lack of a common framework, as stated by Ribeiro and Malvestio (2021), makes it difficult to propose consistent methodologies for teaching environmental issues.

The training of educators is another determining factor in this context. One critical aspect refers to the inadequate training of teachers, who often do not have specific training in environmental education. This lack of preparation is an obstacle to the integration of environmental concepts into effective pedagogical practices. In addition, many educators feel insecure when addressing environmental issues, a result of their own academic training that often neglects the environmental issue. Santos *et al.* (2024, p. 257) highlight that "it is essential that the initial and continuing training of teachers includes environmental education as a structuring component".

Educational curricula also play a significant role in promoting or limiting environmental education. Inflexible curricula that do not prioritize the inclusion of environmental issues end up marginalizing this discussion, reducing the space allocated to educational actions aimed at sustainability. This situation is even more complex due to

competition with traditional subjects, which are often seen as priorities and therefore receive more attention in the school context.

Given this scenario, it is essential to adopt an integrated approach to overcome the challenges imposed on environmental education. Curricular reform, focusing on the inclusion of environmental content in a transversal way, is a viable strategy to broaden the discussion in these spaces. This reformulation must contemplate not only what is taught, but also how it is taught, encouraging active and participatory methodologies that promote student engagement.

Teacher training is another essential action. Investing in continuing education programs that include environmental education as a central pillar can transform the performance of educators in the classroom. This training should promote a critical reflection on current pedagogical practices, as well as offer tools and knowledge that facilitate the insertion of environmental themes in the different curricular components.

In addition, institutional awareness is essential to create an environment conducive to environmental education. Educational institutions can develop internal campaigns or projects that encourage sustainable practices and promote debates on environmental issues. In addition to raising awareness, articulation with the local community can further enrich the approach, integrating knowledge and practices that often remain on the margins of the school environment.

In this sense, collaboration between different sectors of society, including communities, non-governmental organizations and the government, becomes indispensable. Building partnerships can enhance the impact of environmental education actions, providing students with practical and real experiences that strengthen learning.

Through these integrated actions, it is possible not only to overcome current challenges, but also to build a more sustainable future. Environmental education should be understood as a strategic path for the formation of a society that is more aware and engaged in environmental issues. This transition is essential and demands a continuous commitment from all those involved in the educational process.

In conclusion, strengthening environmental education in schools is a collective task that requires joint effort, innovation, and political will. By addressing cultural resistance, promoting adequate training of educators, and revising curricula, we can establish a solid foundation for environmental education in Brazil, allowing future generations to become protagonists in building a more sustainable world.

THE ROLE OF CIVIL SOCIETY IN PROMOTING ENVIRONMENTAL EDUCATION

Civil society plays an essential role in promoting environmental education, stimulating community engagement, and fostering a culture of awareness of ecological issues. According to Gonçalves (2023), the inclusion of environmental education in the formal curriculum is fundamental, but its effectiveness depends on complementary actions carried out by civil society institutions, which expand the reach of environmental education beyond the school environment. In this context, non-governmental organizations, community groups and civil associations emerge as active agents in the implementation of educational programs aimed at sustainability.

The actions of these entities are not limited to promoting debates on environmental issues, but also push for improvements in public policies and encourage sustainable practices within communities. According to Alves *et al.* (2022), the participation of civil society is crucial to transform environmental education into a continuous and dynamic process, using strategies such as educational campaigns, workshops, and community events. These activities promote awareness of the impacts of individual and collective actions on the environment, strengthening a culture of socio-environmental responsibility.

In addition to the capacity to mobilize, the flexibility and independence of civil society organizations allow them to respond quickly and effectively to local demands. According to Medeiros *et al.* (2023), this autonomy favors the creation of projects adapted to regional specificities, taking into account the environmental challenges and cultural practices of each community. This reinforces the role of these entities as facilitators of sustainable solutions, which respect the local reality and stimulate the engagement of the population.

The intersection between social and environmental action is also a determining factor in the effectiveness of the initiatives promoted by these organizations. According to Lemos *et al*. (2024), the implementation of sustainable projects not only contributes to environmental education, but also generates positive economic impacts, such as job creation and the encouragement of sustainable production practices. In this way, valuing the circular economy and local natural resources strengthens the community's connection with the environment, promoting a sense of belonging and responsibility.

Another relevant aspect is the collaboration between civil society, the private sector and the government, which can enhance the impact of environmental initiatives. According to Narciso and Santana (2025), strategic partnerships enable the exchange of knowledge and the sharing of resources, increasing the effectiveness of educational projects. When different spheres of society converge in favor of a common goal, environmental education

actions become more comprehensive and effective, promoting structural changes in social behavior and environmental preservation.

Given this panorama, the literature shows that civil society plays a central role in the promotion of environmental education, acting as a catalyst for sustainable practices. According to Bizerril and Faria (2019), the population's awareness does not depend only on educational institutions, but also on the performance of organizations that mobilize communities and encourage responsible environmental practices. Thus, by combining innovation and adaptation to local realities, civil society contributes significantly to the construction of a more sustainable future, reinforcing the need for a participatory approach to environmental preservation.

FINAL CONSIDERATIONS

The objective of the research was to investigate the role of environmental education in sustainable development, highlighting its importance in the formation of more conscious and responsible citizens in relation to the environment. The analyses carried out throughout the work revealed that the inclusion of environmental education in the curricula and the adoption of innovative technologies promote effective community engagement. In addition, it was observed that initiatives that manage to mobilize resources and volunteers tend to present more expressive results in terms of awareness and behavior change.

The main results obtained highlight the effectiveness of educational programs that use practical and participatory approaches, enabling students to live meaningful experiences and become agents of change. The evidence collected indicates that when learning is contextualized and relevant, the impact on attitudes towards sustainability becomes more evident. Such an interpretation of the data reinforces the initial hypothesis that environmental education, when well applied, has the potential to transform individuals' perception of their environmental responsibility.

However, it is essential to recognize the limitations of the research, which include the variability of contexts and the heterogeneity in the implementations of environmental education programs. These issues may affect the generalizability of the results obtained. The research suggests that future studies should focus on longitudinal approaches and comparative analyses between different geographical and cultural contexts, aiming to broaden the understanding of the effectiveness of educational strategies in promoting sustainability.

In a final reflection, the research highlights the relevance of environmental education as a central element in the process of building sustainable societies. The findings contribute

not only to the educational field, but also to the formulation of public policies aimed at sustainable development. By promoting environmental awareness, this study emphasizes that education is an essential path to address contemporary challenges, providing a solid foundation for future generations to adopt more sustainable practices in their lives.

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