ENVIRONMENTAL EDUCATION IN RURAL HIGH SCHOOL: A DIDACTIC SEQUENCE BASED ON THE STORY "MONICA'S GANG: CARING FOR THE WORLD"

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ABSTRACT

The article "Environmental Education in Rural High School: A Didactic Sequence Based on the Story 'Monica's Gang: Caring for the World'" proposes an educational approach that uses the narrative of comics to introduce concepts of environmental awareness to high school students in rural areas. The story of Monica's Gang addresses issues such as pollution, deforestation, and waste of resources, presenting practical solutions through the adventures of the characters. Through a didactic sequence, students are encouraged to explore environmental problems and reflections on conscious consumption, recyclability, and nature preservation, seeking to promote changes in students' attitudes towards ecological issues. The methodology highlights the use of comics as an effective tool in teaching, as it creates a playful and participatory learning environment, favoring student engagement. The study was carried out in Vila Santa Ana, a rural community in Pará, where teaching challenges include a lack of infrastructure and resources, making it essential to adapt methodologies to the local context. The results indicate that the use of the story of Monica's Gang has a significant positive impact on student engagement and awareness of sustainable practices. Students reported an increased interest in environmental education activities, demonstrated a better understanding of sustainable practices, and developed a more positive attitude towards the environment. The project reinforces the importance of environmental education in the formation of responsible citizens, empowering students to face contemporary environmental challenges and promoting sustainable actions in their daily lives. In short, the article shows that environmental education is essential for raising awareness and building a sustainable future.

Keywords: Didactic Sequence. Environmental Awareness. Conscious Consumption. Sustainable Practices. Environmental Education.

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INTRODUCTION

CONTEXTUALIZATION OF ENVIRONMENTAL EDUCATION

Environmental education is essential for the formation of conscious and responsible citizens. In a world increasingly affected by environmental problems, new generations must be prepared to face these challenges. In rural areas, where interaction with the environment is more direct, environmental education takes on an even more important role. The proximity to nature and the dependence on natural resources make students in these regions more sensitive to environmental issues, which can be an opportunity to implement effective educational practices (GONÇALVES, 2012).

Environmental education should be understood as a permanent process, in which the individual and the community build social values, knowledge, skills and competencies aimed at the conservation of the environment" (SILVA et al., 2016, p. 292). According to Pereira, Picanço, and Antiqueira (2020), environmental education needs to be addressed in a continuous and integrated way with the social context of students, promoting inclusion and the development of ecological awareness.

The contextualization of environmental education contributes to students understanding the relationship between their daily practices and environmental impacts, allowing the development of a critical and transformative posture in the face of ecological issues" (LACERDA, 2018, p. 134). According to Moura, Porto, and Cunha (2021), the use of investigative didactic sequences facilitates the construction of environmental knowledge, promoting the development of scientific thinking from elementary school.

PRESENTATION OF THE STORY "MONICA'S GANG: CARING FOR THE WORLD"

The story "Monica's Gang: Caring for the World" is a didactic tool that uses familiar characters to address environmental issues in a playful and accessible way. The narrative follows the characters of Monica's Gang as they discover and face environmental problems, such as pollution, deforestation, and waste of resources. Through the adventures of the characters, the story conveys important lessons about recycling, conscious consumption, and nature preservation (SOUSA, 2019).

Comics establish a technical and methodological support, as a facilitator of the teaching-learning process, effective in the process of appropriation of knowledge by the student to promote reflections in the classroom." (RAVANELLO, 2020, p. 1). According to Lima (2018), comics can enhance the development of ethical-aesthetic values in basic education, providing a playful environment that facilitates students' critical reflection.

The study of comics has the possibility of offering education professionals, especially historians, a teaching methodology that makes learning more meaningful and expository classes more participatory and playful, in addition to being able to make use of the analysis of comics as a historical source." (ALEXANDRE et al., 2019, p. 1).

OBJECTIVES OF THE ARTICLE

The main objective of this article is to develop a didactic sequence based on the story "Monica's Gang: Caring for the World" (APPENDIX B) for high school students in rural schools. Specifically, it seeks to (1) evaluate the effectiveness of history as a didactic resource for environmental education, (2) identify students' perceptions of the topics covered, and (3) propose practical activities that can be implemented in schools. The choice of the story as the basis for the didactic sequence is justified by its ability to engage students and facilitate the understanding of complex concepts in a fun and accessible way.

IMPORTANCE FOR HIGH SCHOOL STUDENTS

The implementation of a didactic sequence based on the history of Monica's Gang can have a significant impact on the education of high school students, especially in rural areas. By using a playful and interactive approach, the story can help to arouse students' interest in environmental topics and encourage the adoption of sustainable practices. In addition, students' proximity to the environment makes them more likely to apply the knowledge acquired in their daily lives, contributing to the preservation of natural resources and the sustainable development of their communities (BARROSO, 2024).

According to Pereira et. al. (2020), it is then up to the teacher to show the student the everyday situations in which he can reflect on whether he is proceeding in a beneficial or harmful way towards the environment and what can be modified to improve this relationship. For this to happen in a solid and meaningful way and not in the form of mechanical learning that is forgotten in a short time, the teacher must use didactic strategies that present the best results in the pedagogical process, and it is up to him to know different materials and approaches in his teaching practice to provide the necessary motivation for the student to learn concretely and become a multiplier of knowledge Acquired.

ARTICLE STRUCTURE

This article is structured into six main sections. In the introduction, the importance of environmental education is contextualized, and the story "Monica's Gang: Caring for the

World" is presented as a didactic resource. The literature review addresses studies and theories on environmental education, the use of comics in education, and teaching methodologies in rural areas. The methodology describes the pedagogical approach adopted and the proposed didactic sequence. In the results section, the data collected and the analysis of the results are presented. The discussion interprets the results in light of the reviewed literature and considers the limitations of the study. Finally, the conclusion summarizes the main findings and makes practice recommendations.

PLACE OF STUDY

The study will be concentrated in Vila Santa Ana, located 23 km from the seat of the municipality of Mãe do Rio/PA, 215 km from the capital Belém. This rural community, governed by the 18th URE – Regional Education Unit, depends on family farming and livestock. The 18th URE, headquartered in Mãe do Rio, coordinates and supervises educational activities in the region. The study aims to promote environmental education through the comic book "Monica's Gang: Caring for the World", involving students, teachers, and the community. The results are expected to serve as a model for other rural communities, encouraging sustainable practices and environmental protection.

LITERATURE REVIEW
IMPORTANCE OF ENVIRONMENTAL EDUCATION
Definition and Importance

Environmental education is defined as an educational process that aims to form citizens who are aware and capable of making informed and responsible decisions regarding the environment. It is essential to promote sustainability and the conservation of natural resources. Studies show that environmental education can lead to significant changes in behavior, encouraging sustainable practices and active participation in the preservation of the environment (GONÇALVES, 2012).

Environmental education is essential to form citizens who are conscious, responsible, and committed to protecting the environment and promoting sustainability. (ORR, 1992, p. 85). Environmental education should not be seen as an isolated discipline but rather as a transversal approach that permeates all areas of knowledge, promoting an integrated understanding of the environment in its multiple and complex relationships (JACOBI, 1997, p. 45).

Positive Impacts

The implementation of environmental education programs has shown positive results in various contexts. In rural areas, where dependence on natural resources is greater, environmental education can promote sustainable agricultural practices, biodiversity conservation, and proper waste management. In addition, environmental education can strengthen cultural identity and the relationship of communities with their territory, contributing to sustainable development (Barrosso, 2024).

The implementation of environmental education programs in Brazilian rural communities has promoted the adoption of sustainable agricultural practices, resulting in the conservation of natural resources and the improvement of agricultural productivity (IDEIAI, 2025, p. 1). According to Toriyama (2024), environmental education programs have contributed to the preservation of natural resources by encouraging conscious practices, such as saving water and energy, in addition to reducing the use of disposable materials, promoting more responsible behavior in relation to the environment.

Challenges in Implementation

During the implementation of the environmental education project using the comic book "Monica's Gang: Caring for the World", several challenges were encountered, reflecting the common difficulties in the introduction of new pedagogical practices. These challenges are consistent with the existing literature, which highlights the obstacles faced by teachers when trying to innovate in education.

Despite the benefits, the implementation of environmental education faces several challenges. Among them, the lack of material and human resources, the resistance to change on the part of educators and managers, and the need for continuing education for teachers stand out. In rural areas, these challenges are even greater due to limited infrastructure and restricted access to adequate teaching materials (CARVALHO, 2013).

Examples of Successful Programs

Several environmental education programs have been successfully implemented in different regions. For example, the Environmental Education Program of the Tamar Project in Brazil, which aims at the conservation of sea turtles, and the Environmental Education Program of the Iguaçu National Park promotes biodiversity conservation and ecotourism. These programs demonstrate that with adequate support and community participation, it is possible to achieve significant results in preserving the environment (ALVES, 2021).

As reported by Chawla and Cushing (2007), the Roots & Shoots program, created by Dr. Jane Goodall, is an initiative that encourages young people to get involved in conservation and sustainability projects. The program is present in more than 100 countries and promotes experiential learning through youth-led projects that address environmental, social, and animal welfare issues. The Roots & Shoots methodology involves identifying local problems, planning and implementing practical solutions, and sharing results with the community. Research indicates that participation in the program increases young people's engagement with environmental issues and develops leadership and citizenship skills.

USE OF COMIC BOOKS IN EDUCATION

History of Comics in Education

Their combination of text and image makes learning more accessible and engaging, especially for children and teenagers. In addition, comics can address a wide range of topics, from social issues to scientific concepts, in a playful and understandable way (MACHADO, 2015).

Santos and Vergueiro (2012) argue that, after decades of rejection, comics began to gain space in Brazilian classrooms in the late 1990s. Despite the advances, it is still necessary to adapt its applications to the needs of the learning process.

Benefits of Using Comic Books

The use of comic books in education offers several benefits. They can increase student motivation, facilitate the understanding of complex concepts, and promote active learning. In addition, comics can be used to develop reading and interpretation skills, as well as to stimulate creativity and critical thinking (NASCIMENTO et al., 2022).

Examples of Use in Education

Several examples of the use of comics in education can be found in the literature. An example is the "Science in Comics" project, which uses comic books to teach scientific concepts to elementary school students. Another example is the use of comics to address historical and social themes in history and geography classes (CARVALHO, 2013). Comics, by combining text and image, provide a more dynamic and interactive reading experience, which can be particularly beneficial for students with reading and textual comprehension difficulties" (RAVANELLO, 2020, p. 2).

The use of comic books in education is an effective strategy to engage students and facilitate learning. In the context of environmental education, comic books such as

"Monica's Gang: Caring for the World" can be particularly useful for conveying important messages in an accessible and engaging way. The next subsection will discuss teaching methodologies specific to rural areas. According to Alexandre et al. (2019), the use of comics in classes allows the creation of a more participatory and playful learning environment where students feel more motivated to interact and express their ideas.

TEACHING METHODOLOGIES IN RURAL AREAS

Challenges of Teaching in Rural Areas

Education in rural areas faces specific challenges, such as limited infrastructure, lack of teaching resources, and difficulty in accessing technologies. In addition, teachers in rural areas often have to deal with multigrade classes and the need to adapt the curriculum to local realities (SILVA, 2018).

Education in rural areas faces a number of specific challenges that make it difficult to implement effective educational practices. Among the main obstacles are the lack of adequate infrastructure, the scarcity of teaching resources, and the difficulty of accessing modern technologies. Education in rural areas faces unique challenges, such as the lack of adequate infrastructure, the scarcity of teaching resources, and the difficulty of accessing modern technologies (BARROSO, 2024, p. 15).

In addition, education in the countryside requires pedagogical approaches that consider the local and cultural specificities of students, promoting contextualized and meaningful learning. Education in the countryside requires pedagogical approaches that consider the local and cultural specificities of students, promoting contextualized and meaningful learning." (ALVES, 2021, p. 22).

Effective Pedagogical Strategies

To overcome these challenges, several pedagogical strategies have been proposed. Among them, the use of active methodologies, such as project-based learning and cooperative learning, which encourage the active participation of students and the practical application of the knowledge acquired, stand out. In addition, the integration of local themes and the appreciation of traditional knowledge can make teaching more relevant and meaningful for students (BARROSO, 2024).

Implementing effective pedagogical strategies is crucial to overcome the challenges of teaching in rural areas and promoting meaningful and contextualized learning. One approach that has proven particularly effective is teaching based on experience and interaction with the environment. According to Dewey p. 34, 1938), Education should be

based on experience and interaction with the environment, promoting active and reflective learning.

Examples of Successful Methodologies

Examples of successful methodologies in rural areas include the Escola da Terra Program, which promotes the continuing education of teachers and the implementation of innovative pedagogical practices, and the Roots Project, which integrates science teaching with the appreciation of local culture. These programs demonstrate that, with adequate support, it is possible to offer quality education in rural areas (ALVES, 2021).

The application of successful pedagogical methodologies is essential to promote meaningful and engaging learning. One notable example is the project-based approach, which allows students to explore topics of personal interest and develop practical skills. According to Papert (p. 67 1980), learning is most effective when students are engaged in projects that are meaningful to them, allowing for deep exploration and a connection with their own experiences.

Another effective methodology is active learning, where students are encouraged to interact with the environment and experiment in a practical way. Piaget (p. 44, 1952) highlights the importance of this interaction in which he says that knowledge is built through the active interaction of the student with the environment, where he is encouraged to explore, experiment, and discover.

The theory of multiple intelligences also offers a valuable approach, suggesting that students have different ways of learning and expressing their knowledge. The theory of multiple intelligences suggests that students have different ways of learning and expressing their knowledge, and methodologies must be adapted to meet these diverse capacities (GARDNER, 1983, p. 21).

METHODOLOGY
PEDAGOGICAL APPROACH
Introduction to the Methodology

The methodology adopted in this study is based on the teaching-by-inquiry approach, which promotes the active participation of students in the learning process. This approach is particularly effective in environmental education, as it encourages students to explore, question, and reflect on environmental problems and their possible solutions (CARVALHO, 2013).

The methodology adopted in this study is based on principles of educational research and experiential learning, aiming to promote effective and contextualized teaching. Educational research should be a systematic process of investigation, where the educator is a researcher in his classroom, continuously seeking to improve pedagogical practice (STENHOUSE, 1975, p. 142).

In this context, the experiential learning approach proposed by Kolb (1984) is particularly relevant, as it involves a continuous cycle of concrete experience, reflective observation, abstract conceptualization, and active experimentation. The experiential learning cycle involves four stages: concrete experience, reflective observation, abstract conceptualization, and active experimentation, providing a holistic approach to learning (KOLB, 1984, p. 21).

In addition, the action research methodology, as described by Elliott (1991), allows teachers to investigate their practices, identify problems, and implement changes to improve teaching and learning. Action research is a methodology that allows teachers to investigate their practices, identify problems, and implement changes to improve teaching and learning." (ELLIOTT, 1991, p. 49).

Description of the Approach

The proposed didactic sequence uses the story "Monica's Gang: Caring for the World" as a starting point for the exploration of environmental themes. The pedagogical approach includes reading and history analysis activities, group discussions, poster production, and hands-on recycling and composting projects. The objective is to promote the understanding of environmental concepts and encourage the adoption of sustainable practices (NASCIMENTO et al., 2022).

DIDACTIC SEQUENCE

Description of Activities

The didactic sequence consists of five classes, each lasting 50 minutes. Activities include:

➢ Reading and analysis of the story "Monica's Gang: Caring for the World".
➢ Group discussions on the topics covered in the story.
➢ Production of posters about recycling, conscious consumption, and nature preservation.
➢ Hands-on recycling and composting projects.
➢ Presentation of the projects and reflection on the lessons learned.

Materials Used

Materials used include:

- Copies of the story "Monica's Gang: Caring for the World".
- Cardboard, pens, colored pencils, and other materials for the production of posters.
- Containers for selective garbage collection.
- Materials for composting, such as food scraps and dry leaves.
- Tablets or computers for research and presentations.

Class Schedule

The class schedule:

Lesson 1: Introduction to history and group reading.
Lesson 2: Group discussions on the topics covered in the story.
Lesson 3: Production of posters on recycling and conscious consumption.
Lesson 4: Practical recycling and composting projects.
Lesson 5: Presentation of the projects and final reflection.

EVALUATION METHODS

Questionnaire Used

The questionnaire (APPENDIX A) used to evaluate the impact of the didactic sequence is composed of two parts: quantitative questions and qualitative questions. The quantitative questions assess students' understanding of the topics covered in history and the applicability of sustainable practices in their everyday lives. The qualitative questions allow students to express their opinions and suggestions about the didactic sequence.

Data Collection Methods

Data were collected through the application of the questionnaire at the end of the didactic sequence. In addition, observations were carried out during classes and interviews with students to complement quantitative and qualitative data. The answers were analyzed in order to identify patterns and trends in the students' perception of environmental issues.

ETHICAL CONSIDERATIONS

Consent of Participants

Before the implementation of the didactic sequence, informed consent was obtained from the students and their guardians. The objective of the study, the nature of the proposed activities, and the way in which the data would be collected and used were

explained. All participants were told that they could withdraw from the study at any time without prejudice.

Anonymity and Confidentiality

To ensure the anonymity and confidentiality of the participants, the data collected was encrypted and stored securely. The answers to the questionnaires and interviews were analyzed in aggregate, without individual identification of the students. All ethical procedures were followed by the guidelines of the educational research.

RESULTS

PRESENTATION OF DATA

Quantitative Results

The quantitative results were obtained from the answers of the 45 students to the questionnaire. Table 1 below summarizes the answers to the quantitative questions:

Table 1: Quantitative of the students' Responses

Question	Alternative A	Alternative B	Alternative C	Alternative D
1.	10 (22%)	8 (18%)	7 (16%)	20 (44%)
2.	18 (40%)	15 (33%)	9 (20%)	3 (7%)
3.	12 (27%)	5 (11%)	10 (22%)	18 (40%)
4.	8 (18%)	20 (44%)	12 (27%)	5 (11%)
5.	15 (33%)	17 (38%)	8 (18%)	5 (11%)
6.	10 (22%)	9 (20%)	16 (36%)	10 (22%)
7.	20 (44%)	8 (18%)	7 (16%)	10 (22%)
8.	12 (27%)	5 (11%)	10 (22%)	18 (40%)

Source: The Author

Qualitative Results

The qualitative responses were analyzed to identify recurring themes and perceptions of the students. The questions addressed the addition of a chapter to the story and the students' perception of the role of youth in preserving the environment. The answers indicated that the students consider local action important, recognize shared responsibility, and see youth as multipliers of sustainable practices.

ANALYSIS OF THE RESULTS

Interpretation of Quantitative Data

The quantitative data indicate that most students understood the main message of the story and considered the attitudes of the characters applicable in their everyday lives. Selective garbage collection and tree planting were identified as the easiest sustainable practices to adopt. Most students adopt sustainable practices with some frequency, but there is still a significant group that rarely or never adopts them.

Interpretation of Qualitative Data

The qualitative answers revealed that the students have a positive perception of the importance of environmental education and the role of youth in preserving the environment. Many students suggested adding chapters addressing problems such as fires, hunting of wild animals, and inappropriate use of pesticides. The proposed solutions include educational campaigns, the creation of environmental protection areas, and the encouragement of sustainable agriculture.

EXAMPLES OF ACTIVITIES CARRIED OUT

Description of Activities

The activities carried out included the production of posters about recycling, conscious consumption, and nature preservation. The students also participated in practical recycling and composting projects, where they learned how to separate waste and transform organic waste into fertilizer. These activities were well received by the students and helped to reinforce the concepts covered in the story.

Image 1: Results of the activity

Source: The Author

Observed Impacts

The impacts of the activities were observed through the students' answers and the interviews conducted. Many students reported that they started to adopt sustainable practices in their homes, such as separating garbage and saving water and energy. In addition, the practical activities helped to consolidate learning and arouse students' interest in environmental issues.

The result of the environmental education activity carried out by the students is highly positive. Through the creation of the poster "MATERIALS AND THEIR DECOMPOSITION TIME", the students demonstrated a deep understanding of the importance of waste management and recycling practices. The inclusion of different categories of materials, such as plastic, glass, paper, metal, and organic, showed that the students understood the need to separate and treat each type of waste properly. In addition, the mention of World Environment Day (June 5) highlighted awareness of the importance of protecting the planet and promoting sustainable practices.

Analysis of the outcome of the activity also reveals that students have developed important skills, such as the ability to work as a team, create educational materials, and communicate information clearly and effectively. The poster created is an example of how environmental education can be presented in an attractive and accessible way, making it more effective in inspiring behavior change. In addition, the activity may have awakened in students a broader awareness of individual and collective responsibility towards the environment, which is essential for building a more sustainable future. In summary, the result of the activity is a reflection of the success of the educational approach adopted, which combines knowledge, creativity, and environmental awareness through the Story "Monica's Gang: Caring for the World".

DISCUSSION
INTERPRETATION OF RESULTS
Comparison with the Revised Literature

The results obtained in this study are in line with the reviewed literature, which highlights the importance of environmental education and the use of active methodologies to engage students. The use of the story "Monica's Gang: Caring for the World" as a didactic resource proved to be effective in promoting environmental education, corroborating the findings of GONÇALVES (2012) and CARVALHO (2013).

Observational learning allows individuals to acquire new skills and behaviors by observing and imitating others, which is essential for cognitive and social development

(BANDURA, 1977, p. 22). Meaningful learning occurs when the student is actively involved in the learning process, feeling motivated and responsible for his learning (ROGERS, 1969, p. 157).

Implications of the Results

The results obtained indicate that the story "Monica's Gang: Caring for the World" had a significant impact on the students' perception of environmental issues. Most students recognized the importance of the sustainable practices presented and showed interest in applying them in their daily lives. These findings are consistent with the literature, which highlights the effectiveness of comics as educational tools (MACHADO, 2015). The playful and visual approach to the story makes it easier for students to understand and engage, making learning more meaningful.

Education should promote the freedom and independence of the student, allowing him to develop his skills and interests in a prepared environment (MONTESSORI, 1964, p. 15). Education is a process of living and not a preparation for the future life; the school must represent the present life, as real and vital for the student as the one he lives at home, in the neighborhood or the countryside." (DEWEY, 1938, p. 34).

EFFECTIVENESS OF THE APPROACH ADOPTED

Students' Point of View

Students reported that the story helped them better understand environmental problems and how to tackle them. Most students considered the attitudes of the characters applicable in their daily lives, highlighting the relevance of the story for environmental education. According to Gonçalves (2012), this perception is corroborated by the literature, which suggests that educational methods involving familiar stories and characters can increase students' motivation and interest.

The collaborative approach used in the project allowed students to interact and dialogue with their peers and teachers, promoting deeper and more meaningful learning. The cognitive development of students is profoundly influenced by social interaction and dialogue with peers and teachers." (VYGOTSKY, 1978, p. 86). In addition, the relevance of the content to the lives of students is a determining factor for meaningful learning. Students reported that learning about sustainable practices through comic books made the content more accessible and relevant to their daily lives (ROGERS, 1969).

Teachers' Point of View

Visiting teachers observed that students were more engaged and participatory during story-based activities. According to Carvalho (2013), the didactic sequence provides a practical and interactive approach, facilitating the teaching-learning process. The literature points out that active methodologies, such as the use of investigative didactic sequences, are effective in promoting meaningful learning.

Brookfield (1995) also emphasizes the importance of teachers continually reflecting on their practices and looking for ways to improve the learning experience for their students. The teachers reported that the activities proposed in the project encouraged the autonomy of the students and the active construction of knowledge.

Schön (1983) argues that reflective practice is essential for teachers, allowing them to analyze their pedagogical actions and decisions to promote more effective teaching. The teachers involved in the project highlighted the importance of personalizing the activities to meet the diverse needs of the students.

STUDY LIMITATIONS

Challenges Encountered

During the application of the didactic sequence, some challenges were identified, such as the lack of material resources and the need for more time to carry out practical activities. In addition, the variation in the level of students' prior knowledge about environmental issues may have influenced the results. These challenges are common in studies conducted in rural areas, where access to educational resources may be limited (BARROSO, 2024).

Elmore (2004) argues that the lack of continuous professional development and adequate support are significant barriers to the effective implementation of new pedagogical practices. According to Fullan (2001), the implementation of educational changes faces several challenges, including teacher resistance, lack of resources, and inadequate support.

Possible Improvements

For future implementations, it is recommended to make more material resources available and more flexible planning to accommodate the time needed for practical activities. The continuous training of teachers is also essential to ensure the effectiveness of the methodologies adopted. The literature suggests that teacher training is essential for the success of innovative educational programs (NASCIMENTO et al., 2022).

Desimone (2009) argues that collaboration between teachers and the creation of communities of practice are fundamental for the sharing of knowledge and the successful implementation of pedagogical innovations. Fostering collaboration among teachers through regular meetings and discussion groups can facilitate the exchange of experiences and problem-solving.

SUGGESTIONS FOR FUTURE RESEARCH

New Themes to Explore

Future research may explore the application of didactic sequences based on other comics or audiovisual resources. In addition, it is important to investigate the effectiveness of these methodologies in different educational contexts, such as urban and peri-urban schools. The inclusion of emerging themes, such as sustainability and climate change, is also recommended (ALVES, 2021).

Tilbury (1995) highlights the importance of an interdisciplinary approach in sustainability education, integrating knowledge from diverse areas to comprehensively address environmental challenges. Topics such as the relationship between science, technology, and society, as well as the integration of traditional and scientific knowledge, can be explored in future initiatives.

Methodological Recommendations

Based on the results obtained and the challenges faced during the implementation of the environmental education project, several methodological recommendations were identified to improve future initiatives. These recommendations are consistent with the existing scientific literature, which highlights the importance of continuous training, collaboration, and a focus on the specific needs of teachers and students.

It is recommended to use multimodal approaches that integrate different teaching resources, such as videos, educational games, and practical activities. Collaboration between schools and communities can strengthen environmental education, promoting joint actions and extension projects. In addition, it is important to develop assessment instruments that more comprehensively capture the impacts of didactic sequences on students' education (CARVALHO, 2013).

Timperley et al.. (2007) argue that effective professional development is continuous, embedded in the work, and focused on the specific needs of teachers and students. Implementing a regular evaluation system to monitor the progress and impact of activities can help identify areas of improvement and ensure the success of the project.

CONCLUSION

SUMMARY OF KEY FINDINGS

The results of the environmental education project, using the comic book "Monica's Gang: Caring for the World", indicate a significant positive impact on student engagement and awareness of sustainable practices. The main findings include an increase in student engagement, who showed greater interest and participation in activities related to environmental education, evidenced by enthusiasm and interaction during activities. In addition, there was an improvement in the understanding of sustainable practices, facilitated by the use of comic books that made the concepts of sustainability, recycling, and environmental preservation more accessible and understandable. Students have also developed more positive attitudes towards the environment, showing a willingness to adopt sustainable practices in their daily lives. Finally, the project strengthened collaborative learning by fostering a cooperative learning environment where students could share knowledge and experiences.

REAFFIRMATION OF THE IMPORTANCE OF ENVIRONMENTAL EDUCATION

Environmental education is crucial to form conscious and responsible citizens, capable of facing the environmental challenges of the twenty-first century. This project reaffirms the importance of environmental education by demonstrating that innovative methodologies, such as the use of comic books, can effectively engage students and promote a deep understanding of sustainability concepts. As evidenced in the literature, environmental education must be integrated into the school curriculum in a continuous and contextualized way, providing students with the necessary tools to act as agents of change in their communities.

RECOMMENDATIONS FOR PRACTICE

Based on the findings of the project, the following recommendations are proposed for educational practice: the integration of active methodologies, such as the use of comic books, educational games and practical projects, to make learning more dynamic and engaging; investing in continuous training of teachers on sustainable practices and innovative methodologies, ensuring that they are prepared to implement environmental education activities effectively; the implementation of continuous assessment systems to monitor student progress and adjust pedagogical practices as needed, ensuring the effectiveness of educational activities; and the promotion of collaboration between teachers,

students and the school community to share experiences and develop joint projects that address local environmental issues.

FINAL CONSIDERATIONS

The implementation of the environmental education project using the comic book "Monica's Gang: Caring for the World" proved to be an effective approach to engage students and promote a deep understanding of sustainability concepts. The results obtained highlight the importance of innovative methodologies and the need for a continuous commitment to environmental education. By integrating these practices into the school curriculum and providing the necessary support to teachers, it is possible to form a generation of citizens who are aware and prepared to face the environmental challenges of the future.

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Quiz: Caring for the World with Monica's Gang
Part A – Quantitative Questions (Closed Answers)
Select the correct or most appropriate alternative.

1. **What is the main message about the environment conveyed in the story?**
   (a) Importance of recycling
   b) Preservation of fauna and flora
   c) Reduction of consumption and reuse of materials
   d) All of the above

2. **Do you consider that the attitudes presented by the characters in the story can be applied in your everyday life?**
   a) Yes, totally
   b) Yes, in part
   c) Not sure
   d) No, not at all

3. **In your opinion, which sustainable practice presented in the story is easiest to adopt in your community?**
   a) Selective garbage collection
   b) Reduction of plastic use
   c) Water and energy saving
   d) Tree planting

4. **How often do you adopt sustainable practices like those covered in the story?**
   a) Always
   b) Sometimes
   c) Rarely
   d) Never

5. **Has history helped you better understand environmental problems and how to address them?**

a) Yes, clearly
b) Yes, but there are still doubts
c) Little
d) No

6. **What lesson presented in the story do you consider most important?**
   a) Conscious consumption
   b) Recycling and reuse
   c) Nature preservation
   (d) Community participation

7. **What actions practiced by the characters of Monica's Gang would you like to see implemented in your school?**
   a) Creation of school gardens
   (b) Recycling campaigns
   c) Reduction of plastic consumption
   d) Environmental education in all disciplines

8. **In your opinion, what harms the environment the most in your community?**
   a) Lack of selective collection
   b) Waste of water and energy
   c) Air and water pollution
   d) Deforestation and incorrect waste disposal

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Part B – Qualitative Questions (Open-ended Responses)
Answer completely and clearly.

9. **If you could add a chapter to the story, what environmental problem would you address and what solutions would you present?**
   10. **How has history changed (or reinforced) your perception of the role of youth in preserving the environment?**