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Title

"Green Voices": Art and Science to Transform the Environmental Issues of the La Ribera Neighborhood.

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Introduction

The Green Voices Project: Young People Communicating for the Environment is an interdisciplinary educational initiative carried out by students from 5th grade D of the secondary school at Public Self-Managed School No. 10 "Master Sculptor Vicente Lucero" in Villa Mercedes, San Luis, Argentina.. Its main objective is to foster critical thinking through situated environmental education, which goes beyond simply transmitting information,

promoting awareness, youth empowerment, and transformative action in community contexts. Green Voices is conceived as an educational intervention with a political and community focus, seeking to transcend the institutional boundaries of the classroom (Freire, 1970, 1984, Giroux 2001) and promote civic engagement in response to the multiple expressions of the contemporary socio-environmental crisis. The initiative adopts a critical pedagogy perspective (Freire, Giroux), understood as an emancipatory tool that links knowledge with transformative practice, fostering the collective construction of ecological citizenship.

The project was implemented starting May 28, 2025, at the Self-Managed Public School No. 10 "Maestro Escultor Vicente Lucero," located in Villa Mercedes, San Luis, Argentina with 5th-grade students. The teaching team, composed of Sergio Quiroga, Osvaldo De la Canal, Romina Olaviaga, and Daniela Díaz Gabutti, brings an interdisciplinary and dialogic perspective that allows for addressing environmental issues from multiple epistemological and methodological angles.

Students actively work on identifying and researching local environmental conflicts—such as pollution, deforestation, and waste management—and on designing communicative actions with social impact, using diverse artistic, technological, and narrative languages (Quiroga, 2021) This educational practice is based on a multi-causal and interdisciplinary approach that promotes student autonomy, challenges the traditional banking model of education, and enables situated and participatory learning.

The project aligns with the Priority Learning Areas (NAP) for Social Sciences and Art Education at the secondary level. From the perspective of Social Sciences, it aims to analyze environmental phenomena in their structural dimensions—economic, political, cultural, and spatial—fostering a critical perspective on power relations and the historical relationship between society and nature. From an artistic perspective, creation is conceived as a political and cultural act, aimed at fostering memory, identity, social justice, and civic participation, while incorporating digital media and collaborative approaches. The project advocates for an education that not only imparts knowledge, but also engages, empowers, and involves young people in transforming their reality, promoting active, creative, and committed environmental citizenship (UNESCO, 2017).

The School as a Territory of Resistance and Care: Critical Pedagogy in the Context of La Ribera

In the context of the La Ribera neighborhood in Villa Mercedes, the school is much more than a formal institution: it becomes a space of support, a guarantee of rights, and an effective presence of the State in areas marked by inequality. It is not just a building, but a symbolic and material refuge where pedagogical strategies are developed, focused on listening, support, and community building. Thus, a pedagogy of care emerges, anchored in concrete practices of empathy, commitment, equity, and inclusion, which redefine teaching as a tool for social justice.

This approach echoes the words of Paulo Freire (1997), for whom teaching is an act of love and commitment to the freedom of others, and aligns with the thinking of Henry Giroux (2001, 2014), who champions the school as a democratic public space where the meaning of citizenship is debated, challenging neoliberal logics that reduce education to a commodity. From this perspective, teaching is not simply transmitting content, but fostering critical thinking and empowering individuals to transform society.

The Self-Managed Public School No. 10 "Maestro Escultor Vicente Lucero" – inaugurated in 2003 as EPED No. 2 – embodies this paradigm. With an enrollment of approximately 2,400 students and an educational program that spans from early childhood to adult education, this institution is one of the most important in the province. Its pedagogical work goes beyond the curriculum, integrating interdisciplinary projects such as Green Voices, which link environmental education, art, and communication in a critical and transformative way.

The La Ribera neighborhood, for its part, is an urban space with its own identity, emerging in 2003 and currently home to more than 20,000 people. Its growth has been accompanied by infrastructure that combines health, education, security, and public spaces, consolidating a dynamic and diverse community. The collective memory of the neighborhood is evident in the layout of its streets—named in honor of victims of state terrorism and figures of social activism—and in its urban and cultural projects, such as La Pedrera Park and the recently inaugurated gas infrastructure and recreational spaces.

The urban design, characterized by curves and diagonals, breaks with the traditional grid pattern of the city and reinforces a unique symbolic geography. As Sergio Quiroga (2023) points out, La Ribera encapsulates the tensions between belonging and displacement, between active citizenship and structural marginalization. Its story reflects a community that, though initially perceived as peripheral, has forged a robust, resilient, and constantly evolving identity. Within this complex interplay of school, neighborhood, and urban policies, a deeply contextualized educational model emerges, one that integrates pedagogical knowledge, community engagement, and a critical perspective. In times of social fragmentation and environmental crisis, experiences like those of La Ribera and EPA No. 10 invite us to rethink public education as a driving force for democratic, community-based, and emancipatory transformation.

Main Objective and Pedagogical Approach

The main objective of the project is to raise awareness of and address environmental problems in the La Ribera neighborhood of Villa Mercedes, San Luis. The project is based on the STEAM model (Science, Technology, Engineering, Arts, and Mathematics) and Project-Based Learning (PBL).

Methodology

The initiative arises from the key question: How can we communicate and address the environmental problems in our community through art, technology, and citizen participation?

Working Hypothesis: The project posits that art, by generating a deeper emotional and visual impact than conventional information, can increase public awareness and social engagement.

The Green Voices Project was based on a comprehensive information gathering strategy implemented during the initial stages of the project: diagnosis and research. The objective was to obtain a contextualized and in-depth understanding of the environmental problems in the La Ribera neighborhood of Villa Mercedes.

The strategy was organized through three main methods:

1. Community Surveys (Participatory Diagnosis)

The students used surveys as a teaching tool for community research. Surveys were conducted with 147 residents of the La Ribera neighborhood in Villa Mercedes, San Luis, and this phase took place between May and June 2025. The survey sought to understand the community's perception of the neighborhood's environmental situation. Topics included the overall state of the environment in the neighborhood, the most concerning environmental problems (such as accumulated garbage, open burning of waste, water and air pollution, pests, and deforestation), waste management (collection frequency, sufficiency of containers, and recycling practices), water and sanitation issues (pollution in rivers/canals, access to drinking water, and sewer problems or overflows), and citizen participation and interest in engaging in community actions to improve the environment.

To facilitate data collection and organization, Google Forms was used.

2. Direct Observation and Mapping

To complement the quantitative data from the surveys, the students conducted direct fieldwork. Observation walks were carried out, and critical points in the neighborhood were photographed during June 2025. This observation served to create a participatory environmental map using Google My Maps, identifying environmentally sensitive areas. The observation documented the residents' lack of awareness regarding proper waste disposal, noting garbage placed in inappropriate locations and plastic bags in the drainage channels.

3. Interviews with Key Stakeholders and Institutional Visits

The students sought to enrich their learning and research process through dialogue with institutional stakeholders. Interviews were conducted with key stakeholders. • Institutions Visited:

- Villa Mercedes City Council: The young people met with the Environmental Committee to discuss current ordinances, waste management, and environmental policies, enriching their understanding of the democratic process and the application of local laws.
- Sub-Secretariat of Green Spaces of the Municipality of Villa Mercedes: The students met with Sub-Secretary Fabricio Mena to learn about the planning and management of parks, urban tree planting, and the planting of native species.

All the information gathered through these methods (surveys of residents, direct observation, and interviews with authorities) was used during the analysis and reflection stage to systematize the data and to generate the comprehensive and scientific assessment that later formed the basis for the project's artistic production and communication campaign.

Conclusion

The project "Green Voices: Young People Communicating for the Environment," developed by students from 5th grade D of the Self-Managed Public School No. 10 "Master Sculptor Vicente Lucero," is a transformative educational experience that successfully integrated school research, citizen participation, and artistic production to critically address environmental issues in the La Ribera neighborhood of Villa Mercedes. From a methodological perspective, the project utilized a mixed-methods approach: direct observation walks in the neighborhood, interviews with institutional representatives, and a structured survey completed by 147 members of the school community. This quantitative, exploratory-descriptive survey identified trends, perceptions, and levels of citizen engagement regarding environmental problems in the area. The data reveals a three-dimensional nature of the environmental conflict in the neighborhood: structural, educational, and communicative. Structurally, deficiencies in urban infrastructure were identified (lack of trash bins, informal dumpsites, water pollution, and insufficient tree cover), along with a weak coordination of sustainable public policies at the neighborhood level. Educationally, while there is significant recognition of the importance of the environment (94.2% consider it important for quality of life), gaps in information and a lack of systematic dissemination of environmental knowledge through digital media were identified, limiting informed decision-making. Finally, in terms of communication, a high level of citizen willingness to get involved was detected (77.5%), but with low frequency of everyday practices such as waste separation. The results also identify social and environmental assets that can be strengthened. The positive evaluation of green spaces (rated as good or very good by 77.1% of respondents), interest in recycling and using native species, and the emerging awareness of the link between health and the environment, constitute a solid foundation for designing future participatory public policies. Far from being indifferent, the community shows clear signs of latent engagement, demanding more effective institutional channels for participation. Regarding the institutional dimension, the interviews conducted with council members of the Municipal Council, the Undersecretary of Green Spaces of the municipality, and the Provincial Secretary of the Environment revealed the educational value of intersectorial dialogue. These interactions allowed students to question the officials, learn about current environmental regulations, and propose improvement strategies. Through these interviews, the project fostered an experience of active citizenship, where young people not only "learned about the environment," but also exercised their right to participate, ask questions, and develop proposals. From a pedagogical perspective, Green Voices demonstrates the power of the STEAM approach and Project-Based Learning (PBL) when combined with a critical and contextualized pedagogy. The project not only promoted disciplinary learning (in science, technology, art, and communication), but also generated a process of youth empowerment, where students assumed the roles of researchers, communicators, and social actors committed to transforming their community. Politically, the initiative redefines the role of public schools as a space for producing legitimate knowledge, capable of engaging in dialogue on equal footing with the State and influencing the design of environmental policies from the grassroots level. The celebration of Arbor Day with provincial authorities, held at the school itself, symbolizes this transformation: the school ceased to be a passive recipient of policies and became an active, community-based actor. A multi-format communication strategy, titled Green Horizons, was proposed. This initiative aims to raise awareness of the environmental problems in the La Ribera neighborhood and stimulate citizen participation, integrating art, digital communication, and community-based practices from a critical, pedagogical, and transformative perspective (Quiroga, 2021). The campaign targets the school community of EPA No. 10, residents of the neighborhood, local public agencies and institutions, and the general public. This proposal emerges as a continuation and deepening of the diagnostic, research, and analytical phases of the Green Voices project, during which relevant environmental data was collected through surveys, interviews with institutional representatives, and field observations. The communication and awareness campaign called "Green Horizons," launched in September 2025, is based on the paradigm of critical environmental education, from a perspective of dialogic communication (Freire, 1970), in which young people are not merely passive recipients of information, but active participants in the creation, appropriation, and dissemination of knowledge. The strategy is structured around two complementary axes: local visual content production and a multiformat digital campaign. Both dimensions aim to generate accessible, relevant, and emotionally engaging content for the target audience, particularly the residents of the neighborhood, promoting community involvement through multiple channels.

Project Structure and Development

The project is organized into six main stages: diagnosis, research, analysis, artistic production, dissemination, and evaluation.

Diagnosis and Research: Students gain valuable, hands-on learning experience by addressing local problems. Through surveys of residents (147 surveys were conducted), direct observation in the neighborhood, and interviews with key stakeholders, they identified the environmental issues. • Identified Issues: The main environmental problems in the La Ribera neighborhood include garbage accumulation (cited by 55.1% of respondents), water and air pollution, pests or abandoned animals (50.3%), open burning of waste (38.1%), sewage overflows (55.8%), and inadequate urban tree cover.

Institutional Engagement: As part of the research and outreach activities, the students visited the Municipal Council and the Sub-Secretariat of Green Spaces of the Municipality of Villa Mercedes to discuss environmental policies with officials and enrich their learning experience.

Communication Strategy and Artistic Production

Based on the findings of the assessment, the students designed a communication plan and created digital artwork and campaigns.

Artistic and Visual Production: Creation of infographics and thematic murals, design of a logo, and development of sketches for artistic pieces. Art is used as an expressive and political language to raise awareness and address environmental issues.

Digital Tools and Dissemination: Use of low-cost, high-impact digital and online tools. This includes creating a map of environmental hotspots in La Ribera, digital campaigns on social media (Instagram: @vocesverdesvm, TikTok/Reels), using QR codes, and possibly a blog or podcast.

In-Person Activities: Design and distribution of flyers, use of community bulletin boards, artistic murals, talks, and organization of community clean-up events ("Mingas") or native tree planting campaigns ("Plantatón").

Impact and Results

The project has had a positive impact on the community's environmental awareness and on youth empowerment.

- Youth Empowerment: It positions young people as knowledge producers and agents of social change, breaking with traditional teaching models. The students learned about applied scientific research, critical thinking, public advocacy, and the functioning of democratic institutions.
- Community Awareness: Increased environmental awareness has been generated within the school and neighborhood community. The survey revealed that 76.2% of residents would like to be involved in environmental stewardship activities.
- Management Tool: The systematization of the diagnostic data serves as a valuable, free baseline for guiding municipal investment in public works (sanitation, waste collection infrastructure) and designing effective environmental education campaigns.

Green Voices is a service-learning project that uses the intersection of art and social/technological sciences to diagnose, communicate, and mobilize the community of Barrio La Ribera to address its environmental problems, while simultaneously fostering active and critical citizens.

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