

From Riverbank to Ocean: Involving Young Generations With Their Territory Through Artistic Practices

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Abstract

Based on the project Minante: Prototyping a Natural and Cultural Experience for Public Space Co-Creation (2023–2024), this article presents and discusses how schools from a semi-rural region of northern coastal Portugal engaged with the natural and cultural water heritage that surrounds them through artistic practices. A total of four schools with classes of different ages took part (12–18 years old), with artistic interventions related to new digital media, illustration, wood construction, plastic arts, and painting. The project occurred in the public space around the old Minante watermill, on the banks of the Neiva River, near the river mouth. Subsequently, interviews, a survey, and a laboratory workshop were carried out with the involved teachers (and the survey also with students) to analyse and reflect on the Minante project and explore potential future actions in other parts of this territory, namely at the wider Neiva River coastal area. With the help of this empirical material, the article aims to reflect on the question: What can be the role of arts-based local interventions with schools in encouraging young generations’ more direct involvement with the material and immaterial heritage of the waterscapes and territories they live alongside and inhabit?

Keywords

arts; cultures of water; intergenerational; schools; territory; youth

1. Introduction

It seems impossible to overstate the importance that an aware and engaged youth can have for the continued care for both social ties and overall life in the local environments of today's world. This article discusses the importance of and alternatives for bringing young generations into the debate and reflections on the history, present, and future of cultures of water. It explores the particular potential of arts-based co-creative pedagogy by schools outside schools for increasing water and ocean literacy (Imaduddin & Eilks, 2024; Santoro et al., 2017) among young people, and how these activities co-create cross-generational understandings of local water heritage. The concept of cultures of water serves as a lens dedicated to looking at "the relationships created between human beings and water, in all its forms, which can be revealed through traditions, memories, arts, history, practices and imaginaries that are most notable among populations living close to bodies of water" (von Schönfeld et al., 2025, p. 7). Young generations are key for giving continued life to these cultures, which highlight "the close relationship between heritage, environment and society through the long-term bond that local populations have established with water" (von Schönfeld et al., 2023, p. 1111). The artistic methods of engagement and research discussed in this article draw attention to territories that incorporate meaningful relationships between local communities and the local rivers and oceans. These methods also help to think about the meaning of the physical presence and inclusion of young people in (the co-creation of) these spaces.

The article presents two initiatives to demonstrate the reciprocal value that is co-created when local artists, NGOs, and schools come together to make artistic interventions for water heritage in coastal regions. Both initiatives took place in the same geographical location and with some of the same people. The first directly involved students and teachers, and the second involved a reflection among teachers and the organizing team from the first initiative and sought ideas for future collaboration. The first initiative was a project called *Minante: Prototyping a Natural and Cultural Experience for Public Space Co-Creation* (henceforth simply denominated "Minante"). It entailed the implementation of several material and immaterial artistic interventions—ranging from the painting of a tree to the creation of sound installations, among many more. The project took place in the north of Portugal, along the Neiva River, at the Minante watermill and its surrounding space, which gave its name to the project. The project was carried out between 2022 and 2023 and involved the local Rio Neiva environmental NGO (Rio Neiva—Associação de Defesa do Ambiente), city councils of two municipalities whose border is marked by the Neiva River (Esposende and Viana do Castelo), four local schools and their students, and overall more than 500 participants from the local population. The project was investigated by a group of four researchers in history, heritage, arts, design, and planning from the University of Porto. The second initiative was a workshop on the topic of education and territory, which is inserted within the context of a wider action for exploring cultures of water in the north of Portugal, called *Laboratory of Cultures of Water* (henceforth denominated "Lab.CA"). Each of the two initiatives is briefly outlined here and is then more fully described in Sections 3 and 4.

The Minante project emerged from a need voiced by the local population during a previous project (*Stories From Both Sides*) during which Minante came up as a place people felt was especially important for local heritage, in both tangible and intangible forms. *Stories from Both Sides* was a project where local inhabitants connected to the sea and river—through fishing, the old watermills, the artisanal production of linen, popular festivals connected to the river and the sea, etc.—were asked to take a closer look at the history and current situation of the site, thinking about their desires and possibilities for the future. The Minante project then focused on reconnecting various generations around the specific rural location of the Minante watermill,

now in ruins, in such a way that could contribute to safeguarding (some) of the existing heritage, and to opening up to possibilities for new ways of life in this location. These would not necessarily be linked to the ancient functions of the old watermill but would bring several generations together to think about the present and future of the place, closely linked to the evolving local cultures of water that see this as more of a place for leisure and contemplation of nature. The key objectives of the Minante project were to bring back life to this relatively abandoned location through artistic interventions and to create and strengthen the cross-generational connection to local cultures of water. Although the Minante project also included initiatives organized by local artists, and by the Rio Neiva environmental NGO, the involved schools held a key role in helping the Minante project achieve these objectives. It was a unique opportunity for the students from these schools to get to know, and take ownership of, the Minante watermill, the surrounding area, and the Neiva River, as less known areas in the territory despite possessing relevant natural and cultural heritage.

Aware of the schools' special role, the researchers set out to pay attention to the school involvement. First, through interviews with the teachers (6 of 7 participating teachers were interviewed) and an online survey among teachers and students (3 teachers and 31 students responded, distributed across all four participating schools). Next, a workshop was held, denominated Education and Territory, which involved the participation of the teachers and others involved in the organization of the event to discuss and reflect on the work done and what future (joint) activities could be imagined (see more on this in Section 3). The workshop was part of the Lab.CA series, created in 2022 by the same researchers that formed part of the Minante project. The Lab.CA series entails varied activities, frequently including workshops but also film screenings and more classical discussions, always focusing on the interplay between heritage and the environmental and social issues related to oceans, rivers and all freshwaters, and the engagement of various publics about this interplay. As part of these wider aims of the Lab.CA action, and in follow-up to the Minante project, the Education and Territory workshop aimed to reflect on the role the schools had in the Minante project, but also on the role they could have in similar projects in the future. Many of the themes that had arisen during the Minante project and its precursor—Stories from Both Sides—had already highlighted how important a culture around water and the ocean was in the region. While to some extent the Minante's location and project set the focus more on the riverine side of the local cultures of water, during the project the local population clearly indicated their wish to come closer to the ocean in its process of re-enlivening local heritage across generations. Overall, the Minante project and the Lab.CA workshop Education and Territory together allowed for especially valuable insights about the role that arts-based interventions and pedagogy can have in the interplay between heritage, cross-generational change, and local cultures of water—beginning along the River Neiva, and culminating in the Atlantic Ocean.

The remainder of the article is structured as follows. After this introduction, the theoretical framework discusses the role of schools in ocean literacy, in the cross-generational evolution of heritage, and in the use of arts and co-creation concerning Heritage. Section 3 presents the cases of the Minante and the Education and Territory workshop in more detail. Section 4 presents and discusses the processes and results from the cases, and Section 5 concludes.

2. Theoretical Framework: Schools, Ocean Literacy, Arts, and the Co-Creation of Heritage

As Imaduddin and Eilks (2024, p. 2) note: "Water education is [found] crucial in developing water and ocean literacy among students of all ages." As UNESCO (Santoro et al., 2017, p. 6) states "knowing and understanding

the ocean's influence on us, and our influence on the ocean is crucial to living and acting sustainably. This is the essence of ocean literacy." As McKinley et al. (2024, pp. 2–3) highlight:

Knowledge in the context of ocean literacy must acknowledge, integrate and value different types of knowledge, including and championing local and Indigenous knowledge, and recognising that diversity of knowledges and "ways of knowing" the ocean should be encompassed within ocean literacy discourse.

In many contexts, water—and ocean literacy—is diminishing, because those with long-standing use-value knowledge in various locations are older generations, whose jobs are becoming obsolete, and whose capacity to pass on their knowledges to following generations diminishes when those generations move away to different contexts (Roberti, 2021; von Schönfeld et al., 2023). The family used to be an important source of passing on knowledge about oceans and waters, and about all related forms of work and culture—such as sargassum collection, fishing, or boat-building practices and cultures (Ferreira, 2025; Roberti, 2021). This family role has largely fallen away as an option since compulsory schooling and child-labour laws make such passing-on of practical knowledge more difficult, and as work prospects for young people are chiefly sought in service economies in urban centres (Ferreira, 2025; Roberti, 2021). While ocean literacy forms part of school curricula, this is quite focused on the natural scientific side of this knowledge, and often kept far away from the relevant locations, despite increasing awareness that more active engagement can be very fruitful for ocean literacy (Fauville, 2019; Gough, 2017; Mokos et al., 2020). To combat some of the lack of deeper knowledge and to mobilise ocean literacy across knowledges, various initiatives have emerged, such as Heritage Trails (Franks, 2020), artistic and creative initiatives (McDonagh et al., 2023), and the Minante project presented in this article. The argument here is that direct contact with a place, and most notably engagement through arts, can be important catalysts for deep-seated water—and ocean literacy and cross-generational care for these environments.

The expectation of such results is not a new invention; it comes from a significant evolving literature and experience with arts-based and experiential learning approaches (e.g., Dewey, 2015; Kolb, 2015; Pink et al., 2010; Strand et al., 2022). These not only highlight the added value of such creative and outdoor initiatives but also the important limitations that rigid schooling systems—insisting on largely immobile students learning chiefly through books and only during school activities—have in a rapidly changing, digitizing, smart-phone-based, and large-language-model-integrating world (Neto, 2020; Teschers et al., 2024; Visser & Visser-Valfrey, 2008; Wu et al., 2024).

For the purposes of this article, we highlight the use of arts methods as especially helpful for engaging students and creating connections with the socio-cultural and natural environment. Arts methods of different formats have been used widely to encourage participation and community communication in various arenas (Gregory & March, 2020; McKinley et al., 2024; Strand et al., 2022), and to engage children and youth in planning and placemaking (Derr et al., 2018), among other processes. These arts methods constitute a type of *co-creation* of space, knowledge, and heritage. As with ocean literacy, co-creation highlights the need to include various perspectives and kinds of knowledge when shaping the future of knowledge and engagement with space and history (Meetiyagoda et al., 2024; Ramaswamy & Ozcan, 2018; Shaw et al., 2021; von Schönfeld et al., 2023). For this purpose, co-creation literature emphasises the active inclusion of various stakeholders at all stages of any intervention in a given location, and the value of going beyond verbal engagement to also include more

hands-on activities and inclusion of participants even to the stage of creation and maintenance of an initiative (Meetiayagoda et al., 2024; Ramaswamy & Ozcan, 2018; Shaw et al., 2021; von Schönfeld et al., 2023). Through this active engagement with a place, then, co-creative arts-based activities can be powerful to include diverse knowledges, and bring new life to local heritage (von Schönfeld et al., 2023).

As is shown in the context of ocean literacy, heritage, and cultures of water, young generations will be the key to giving continuation to these realities in material and immaterial, natural, and human-made forms (Del Baldo & Demartini, 2021; Kreikemeier, 2021; von Schönfeld et al., 2023). As various authors have highlighted, heritage is ever-evolving, and new generations will share it in their own way (Del Baldo & Demartini, 2021). When that new interpretation of heritage clashes with the wishes and traditions of older generations, rupture and conflict can be experienced. In other cases, as older generations pass away, their families may see the loss of those people also as a loss of the heritage as a whole, especially when there was never enough time and effort to pass on the stories and experiences of heritage across generations (Roberti, 2021, 2024). Thus, connections created across generations, to local memories and physical environments, can help create a synergistic evolution of heritage, rather than one of rupture and conflict, filled with experiences of loss (von Schönfeld et al., 2023). By jointly weaving evolving tapestries of local cultures of water across generations, the power of these co-creative artistic methods for communicating this heritage socially and politically can be invaluable (von Schönfeld et al., 2023). The cases presented and discussed in the remainder of this article help clarify several of these processes and their potential.

3. Cases: Minante and Lab.CA Workshop Education and Territory

In this section, we introduce the two initiatives mentioned in the introduction in more depth. They function as the two cases which will help us uncover, in Sections 4 and 5, some insights on the ways schools, school teachers, students, and arts—and/or media-based interventions—can help trigger important experiences for students as well as (re)connect them with cross-generational, socio-cultural, and natural local heritages, both tangible and intangible. Examples are knowledge of now-obsolete forms of labour and related social interactions closely linked to water in the coastal region of northern Portugal, whether through the old grain mills, traditional celebrations, or fishing, learning to swim in the river, finding life partners at crossings over the boundary between municipalities embodied by the river, among others. This section shares information about the initiatives, the processes involved, and our methods of studying and following them. Section 4 will then present the results from the initiatives and Section 5 the conclusions.

3.1. Minante

The Minante project involved, over the course of eight months, the co-creation of 13 artistic interventions and 12 co-creative workshops, which overall hosted more than 500 people, from 6 to 80 years old (von Schönfeld et al., 2023). Five of the artistic interventions were led by schools, and these are the interventions this article focuses on—the remaining eight interventions were led by other groups: a collective of architects, a local cultural and artistic association, musicians, and invited and local visual artists. Beyond this, the project produced a documentary film (Roberti, 2024), a booklet (Monteiro, 2023), and a photographic exhibition, all depicting and discussing the artistic co-creation processes occurring during the project. As with *Stories From Both Sides*, Minante was open to the broader local community, and the strong connection the local NGO has had with the local population for 35 years contributed to a relationship of

trust between the people of the region, the members of the association, and the researchers. This, together with the involvement of schools, ensured a high level of participation—both in terms of numbers of participants and in terms of the in-depth quality of the participation.

The Minante project took place in a semi-rural region in the north of Portugal, in the municipalities of Esposende and Viana do Castelo (see Figure 1), from June 2023 until February 2024. The project was, from the outset, built on the principle that to fulfil its objectives, it had to be collaborative and truly co-created by different agents from the local community and its surroundings. In line with this, the project was led by the Rio Neiva environmental NGO, and counted with the Transdisciplinary Research Center for Culture, Space and Memory (CITCEM, from the University of Porto), and the city councils of Esposende and Viana do Castelo as partners. These objectives also aligned particularly well with those of the New European Bauhaus initiative of the European Commission, where the emphasis is on interconnections between aesthetics, sustainability, and inclusion (EU, n.d.), as also substantiated by the funding support to the Minante project by this EU policy. By connecting arts, sustainable local relationships to rivers and oceans, and the inclusion of diverse groups of the local population, Minante was a perfect fit for this policy.

As was noted in the introduction, Minante was the result of auscultation carried out by Rio Neiva NGO and the local city councils with the local community in a previous project called *Stories from Both Sides: Towards a Collective Narrative and Vision for the Neiva River Mouth*, in 2021 (Monteiro, 2022). During this project, the older generations, in workshops and interviews, claimed that they wished to understand and be active contributors to how the Minante watermill, and the surrounding area, could once again be important, lived in, and recontextualised. They were not proposing that the watermill should work again and cereals or linen be produced there, as in the past. But they wanted new uses to be co-created in the place, without losing its connection to the past and letting the sense of belonging fade with the older generations. The Minante



Figure 1. Map of the target area of the project, highlighting the Minante Watermill location, the Neiva River, the Atlantic Ocean, the Municipality of Viana do Castelo (north/upper side), and the Municipality of Esposende (south/lower side). Note: Other colours in the map represent a diversity of habitats.

project was thus built on the aspirations and motivations of the people on both banks of the Neiva River and the region's estuary and coastline. The reason for its existence comes from the desire of the people in the region to maintain a strong connection with water and to bring new generations to this territory, to occupy it, recreate it, and make use of it. This same generation's concerns, bearing in mind this semi-rural area is characterised by an ageing population and consistent population decrease in the past 10 years, helped to highlight a sense of urgency by the community to engage young people in this process; accordingly, local schools became a privileged medium to reach out to them and their teachers. Other agents, such as the local parishes, or artistic and musical collectives, were involved at various stages throughout the project. In this article the focus will be the active participation of the four local schools in the Minante project—which they gave recognition—through fieldwork and study visits to the riverside areas near the ocean and the old Minante watermill, and were able to think of new ways of artistically portraying and bringing life to the region, thinking about its past and present through its connection with water.

Considering the Minante project's community-centred principles, its methodological approach is organically divided into two main phases. The first phase aimed at organising open events and workshops as moments of participation and co-creation of interventions, also serving the purpose of mobilising the community and fine-tuning the project's approach. The second phase partially maintained the organisation of open events but placed greater emphasis on decentralised processes, namely the co-creation of interventions by students from local schools.

The first workshop focused explicitly on generating a dialogue between generations to highlight the various memories and wishes associated with the place. This dialogue was facilitated by the team of researchers, using as triggers a set of visual elements depicting the functioning watermill in previous decades. This approach allowed to set the stage to openly invite those who wished to share their memories and aspirations, resulting in an organic participation. These conversations were, for the most part, video recorded, and the main discussion topics were written throughout the workshop by the NGO volunteers on a large canvas board. Most importantly, this first workshop helped to delineate the narrative framework that ensued, calibrating the matching-up between subsequent interventions and the diversity of community members' interests. As part of the project's previous ethnographic work on *Stories From Both Sides*, some representatives of the local community were identified and invited to bring old photographs, maps, books, and poems of their own. All of this material was directly related to this population's proximity to water in the riverside and coastal areas and three central thematic axes were highlighted: nature, leisure, and work (Figure 2). The workshop was coordinated by two researchers from the University of Porto, who invited participants to tell their stories and accounts of the past, as well as to ask questions about the present and future of the region and the material and immaterial heritage linked to water. The children and young people were largely brought by their parents, grandparents, and teachers who were present. For this workshop, the art teachers from the local schools were invited to participate, providing the project team with an opportunity to engage and provoke them to join the project, kickstarting the ideation process for what would be their and their students' interventions in the coming months.

As the school year resumed in September, four school groups were engaged—two from each participating municipality. The schools are not located immediately at the river, but rather more towards the urban centres in their respective municipalities, and thus many of the students had never been to the Minante area, even though it is not very far away (see Figure 1, for an idea of the size and distances involved. Note that the area



Figure 2. Young volunteers took notes of keywords and phrases throughout the workshop. Note: At the end of the session, they reported what was highlighted in the areas of nature, leisure, and work. Source: Roberti (2023).

is generally quite car-dependent). Five different classes were involved in the process, each one leading their intervention, according to the following number and age distribution: two groups of 25 students each, aged 12–14 years old; one group of 15 students, aged 14–16 years old; and two groups of 25 students each, aged 16–18 years. In total, 115 students and seven teachers were involved. The results are discussed in section 4.

3.2. Lab.CA Workshop Education and Territory

Created in 2022 at CITCEM (University of Porto), the Lab.CA series has as the basic framework for the rapid pace of transformation of heritage, environmental and social issues related to oceans, rivers, and all types of freshwaters have experienced in recent years. The labs are conducted in different contexts—such as scientific conferences, non-profit environmental associations, in partnership with government agencies, and schools—with the aim to engage in dialogue with a diverse public on this subject, spreading and fostering a plural and complementary vision of the future of cultures of water with different spheres of society—local associations, town councils, schools, universities, and citizens in general. Examples of past Lab.CA activities include workshops about the conceptualisation of blue heritage and cultures of water within a transdisciplinary academic conference; discussions about digital and analogue photographic archiving and capture for (re-)valuing cultures of water with local NGOs and research centres working on digital humanities; the screening of documentaries about water-based local heritage and its relation to environmental challenges of local rivers, oceans, or other bodies of water. The Lab.CA have also inspired the further conceptualisation of cultures of water, through an article published in 2023 (von Schönfeld et al., 2023), and a special issue in the *Journal of Cultural Studies* published in 2025 (see von Schönfeld et al., 2025, for the introduction to the issue).

With this in mind, connecting the insights that emerged during Minante with the local wishes that had been voiced previously seemed a logical next step. Therefore, the Lab.CA Workshop on Education and Territory was created, to reflect on the participation of schools in the Minante project, and on ways those involved might follow up this action with further work in the coastal area of Esposende and Viana do Castelo. The central idea was to identify challenges and solutions for thinking about the future relationship between schools and the territory, and the tangible and intangible heritage linked to cultures of water in the context of the Neiva River and the region's coastline. As mentioned before, this cultural heritage is connected to work, leisure, and nature-related activities (artisanal and commercial fishing, sargassum harvesting, social gatherings in river and coastal areas, nature preservation through local community initiatives, water-powered mills, traditional water-related festivals, etc.).

As already pointed out, the participation of these schools in the Minante Project involved students of different ages experimenting and testing new ways of contemplating and enjoying the surroundings of the Minante watermill, namely the existing public paths and trails that run along both banks. By reflecting on the biggest challenges, strengths, and results of Minante, the Lab.CA workshop highlighted a series of good practices—things considered to not only have worked well in this instance but to be recommended for future joint initiatives—identified by the teachers and researchers who took part in the workshop. These included, for example, involving the school community from the early stages of project preparation and planning, considering the time needed to deepen knowledge and ensure the satisfaction of both students and teachers, and planning for the project's continuity beyond the funding period. The intention was to contribute to the success of future projects involving schools and other partners, such as environmental and cultural associations, city hall, universities, and others.

The workshop was carried out two months after the Minante project was completed, in April 2024. The previous interviews with six of the teachers participating in the Minante project helped shape the final program, which included presentations by the researchers, moments of individual reflection and collective sharing among teachers, and debates between teachers, researchers, and the local association leading the project. The final program was structured as follows:

Part I—Reflection and sharing about the Minante project: major challenges, strengths, and results).

Part II—From the river to the sea: What remains of the Minante project for the future? What good practices can help schools and partners in future projects and initiatives?; And future projects, i.e., ideas and proposals involving schools, the territory, and partners outside the school, in the context of cultures of water, in the region of Esposende and Viana do Castelo.

Part III: Conclusions and final discussions.

During Parts I and II, post-its were used to give participants the chance to share their individual input, as well as to discuss this afterwards in relation to pre-prepared themes of challenges, strengths, and results (outcomes), and of potential future projects close to the ocean. Part III allowed a more narrative, continuous discussion of overall reflections and ways forward.

4. Processes and Results

This section describes and discusses what the mentioned cases created and revealed, with a special focus on the school-based activities, the teachers' interviews, and the outcomes from the Lab.CA workshop. The results are also directly discussed in relation to the questions surrounding the broader role of schools and art methods with teachers and students for the co-creation of the future of local heritage across generations.

4.1. *Minante: Respecting the Old and Shaping the New, Just Like a River*

From the early stages of their involvement, the arts and media teachers from the four school groups were immersed in the project through a conceptual and operational briefing. Teachers were asked to adhere to the general rationale of the Minante project, as previously described, while still allowing adaptation to their school curricula and students' needs. From an operational perspective, the project agreed with the teachers that they would conduct field visits throughout their class's ideation and development process with the project team's support. Each class would then collectively decide the format of their interventions, in liaison with the project team to adhere to territorial constraints and environmental requirements. The project and the partner municipalities provided a small budget for materials and transport to the site visits.

Accordingly, each class decided on their own approach, with each teacher guiding the process, whilst ensuring the reciprocal nature of this project and curriculum learning outcomes. Each class, and their respective approaches and interventions, were followed closely by at least one of the researchers, to record the process, who was involved, which themes each group of initiators chose, etc. Some chose the more artisanal artistic approach, working with wood, others focused on creating multimedia pieces based on the student's fieldwork experience, also collecting plant materials for visual arts production, etc. Regardless of the approach, all of them had fieldwork along the river and coastal areas as the fundamental basis for their work. The documentary filmmaker following the work was also a researcher, which helped in both documenting and reflecting on the entire process as well.

Additionally, individual semi-structured qualitative interviews with six of the involved teachers were held towards the end of the project, to reflect on both the process and the outcome they perceived of their involvement. The interviews were audio-recorded by the researchers, and broached the questions of what the idea was behind the intervention the respective teacher had helped carry out with their students, how it came about, what the reactions of the students were, how their relationship with the place evolved during the process, and how the process went for the teachers themselves (including reflections on the process with the students and the involvement of the school, and the extent to which their own relation to the space evolved). A short online survey among students and teachers of the participating schools further explored the evolution of the relationship the participants had with the space.

The following description summarises one of the five interventions/outputs from the participating schools:

1. Signage boards for the living gallery (integration, training, and education program class; EB Darque/Monte da Ola Schools Cluster).

In the wood workshop discipline, students built two signage boards where the name of the space was engraved: Minante–Living Gallery, which aimed to resignify this space by providing it with a name and identifying possible locations for placing the signage boards (Figure 3).

Another description of one of the five interventions/outputs from the participating schools is as follows:

2. Treehouse (Class B of the 8th Year, from António Rodrigues Sampaio Basic School).

The students from Class B of the 8th year from António Rodrigues Sampaio Basic School, identified and intervened on one riverbank tree, with ecological paints that highlight the living ecosystem inhabiting the tree. They also illustrated small logs with images of local species, and placed them hanging in the tree, aiming to raise awareness about the importance of preserving native species that harbour many other living beings; and develop an artistic approach by exploring painting and drawing techniques that are not harmful to the environment (natural pigments and raw materials collected in nature, like invasive plant species).

A further description of one of the five interventions/outputs from the participating schools is outlined below:

3. Fictionalising Minante (12th Grade Class E Scientific-Humanities Course in Visual Arts, at Henrique Medina Secondary School)

This intervention stems from a field trip that sparked a creative analogue and digital reinterpretation, in a process of seeking, discovering, and constructing fictionalised memories of the place. The aim was to promote photographic and video documentation, drawing of local flora, and emotional connections with the Minante space. To this end, the students applied drawing techniques, experimented with digital



Figure 3. Signage boards for the living gallery. Source: Roberti (2023).

transformation of photographic images, and created printed records of these experiences on acetate, on watercolour paper using the cyanotype technique, as well as a fanzine (Figure 4).



Figure 4. Fictionalising Minante. Source: Roberti (2023).

Other interventions/outputs from the participating school include the following:

4. Trash with Style! (class 6ME at António Rodrigues Sampaio Schools Group)

A compact and removable structure was created as part of an installation generated by a set of ideas, designed to highlight the trash bin at the Minante location. The aim was to engage with the community, acknowledging the role of arts in social changes, and utilising various materials and mediums in its creation, employing visual techniques of drawing and painting.

The last intervention/output from one of the participating schools was:

5. Exploring the riparian area: an experience of connectivity with the landscape (12th-grade visual arts students, under the guidance of Multimedia and Drawing teachers, at Santa Maria Maior Schools Group).

This last intervention aimed to explore the area with photography, video, sound, and drawing in the vicinity of the Minante watermill, resulting in transmedia content essays for the landscape experience. The results include 20 sound journeys and a video, aiming to foster relationships between art, science, technology, and nature from the experience of the place (Figure 5).



Figure 5. Exploring the riparian area: an experience of connectivity with the landscape. Source: (Roberti) 2023.

Beyond the ephemeral or immaterial dimension of the interventions and the direct learning outcomes arising from these experiences, namely from an artistic and natural point of view as described further ahead, there is another relevant reflection to highlight. It is about recognizing that the process of executing these interventions by the students is, to a large extent, a reflection of their perspective on how to enrich Minante's public space. This reflects the autonomy and authorship freedom the students were given to imprint their own interpretation of this area. The interventions were therefore a means to an end, as they were designed to assist the process of reflecting on how to act and enrich a common and natural space connected with the local cultures of water.

This feature was also especially consistent with the interventions' objective of engaging local youth through their schools—encouraging them to familiarise themselves with the territory they inhabit, while recognising the Neiva River and the Minante site as both a border between two municipalities and a place that remains distant to most of them in their daily lives. It then also served the purpose of providing a space for this younger generation's social and cultural appropriation of what is a significant heritage site for an older generation. In such a perspective, the engagement of these students was also a way to meet the aspirations and expectations of the area's ageing population.

Further reflections arise from the direct contact with the teachers. In the interviews, all five teachers highlighted the positive impact they felt the Minante interventions had for themselves and the involved students. Whether they knew the space personally prior to the interventions or not, a very positive connection to the location emerged from the interventions. One of the teachers highlighted especially how surprised she was that several of her (around 13-year-old) students at first reacted with fear of nature upon arrival on the space—they did not want to sit on the grass for fear of bugs, for example—but this did not last long, and once they lost this fear, they could create a much closer relationship with the place. This showed

the teacher also the lack of a role for nature in the students' lives—despite living in a relatively rural area—and how much such school outings can mean. Another teacher works a lot with children who frequently miss class and have a difficult relationship with the local culture (including, but not limited to, migrant students), but felt that especially for these students it can be key to have these moments of not only coming to spaces of important local culture and nature but also to be allowed and even invited to make a visible contribution to it.

In terms of the process, all teachers mentioned the importance of the weather for the impact the space had on the students. The ones who experienced sunny weather were marvelling immediately at the space; the ones who experienced rainy weather could go less frequently than they had hoped, and some students were disappointed. A few of the students also preferred to go by rain rather than not at all, and the rainy weather also seemed to have its own charm in the space (Figure 6).

Comments were made about the difficulty of aligning the very tight small schedules of projects such as Minante with the schedules of schools, which often have to plan everything with lots of time in advance, and have added pressure of planning the next activities already as they are carrying out the current ones. Transportation logistics were another challenge noted, as well as, of course, a limited budget limiting the capacity to use certain materials, etc. One teacher noted:

It was very different and much more attractive (although not easier) compared to most works carried out in an “internal” context [of the school]. The idea of starting a project in the context of Minante immediately brought added value in the planning and reorganisation of the work: the context of the natural environment as the focus of the approach to creative activities, on top of the surprising and positive way in which the students felt the place, enhanced a more interesting motivating energy for



Figure 6. Rain at the Minante during a field trip. Source: Roberti (2023).

carrying out various activities starting from collections and records. (Translation from Portuguese by the authors; applies to all subsequent quotes from the project)

Two school groups decided to think of non-physical or very small interventions that would emphasise the human as part of a wider ecosystem and one that should not be destroyed, but should be seen as part of the self and cared for. They emphasised the sustainability aspect the project could teach the students. A similar thought process inspired the students with more visually invasive proposals, where the idea was to call the special attention of passers-by to the importance of nature and protecting it (see Figures 5 and 7). For most of the teachers, this was not the first time working with various other actors and in relation to projects, but it was the first or one of the rare occasions during which they were compelled to take the students outside the classroom for activities involving nature and a connection to the outside world. The teachers all highlighted this as a positive aspect and one they considered to have been very valuable for their students. As one teacher put it emphatically: “The best school is one that is lived, experienced in practice, outside the classroom, in a real context.”

The survey revealed that many of the students were inclined to value the way the place looks currently, not wanting to make too many physical changes to them, or only relatively small ones (Figure 7). Furthermore, nearly all the students and teachers indeed reported a change in their perception of the space during their participation (Figure 8). For the youngest group, their own intervention was what impressed them most—they noticed some trash lying around during their first visit, and their intervention was of an artistically-shaped trash bin that was meant to resolve this—these students’ answers in the survey very much highlighted their sense of pride and focus on this theme. Other students frequently highlighted noticing nature, varieties of plants, etc. One student wrote: “It allowed me to better understand the environmental heritage and the importance of the space in the context of the community, and the high historical and sentimental value in collective memory.” Another wrote that they now realized that trees have many more roots than they previously thought, and yet another wrote:

Because I did not anticipate that the Minante project would be realized in this way, I thought it would be just painting, and we did do that, but beyond that, there was much play, joy, and much merriment. At the start, I thought it would be a bit boring to spend all afternoon painting, but I was wrong, I loved this project, and hope to have more during my life.

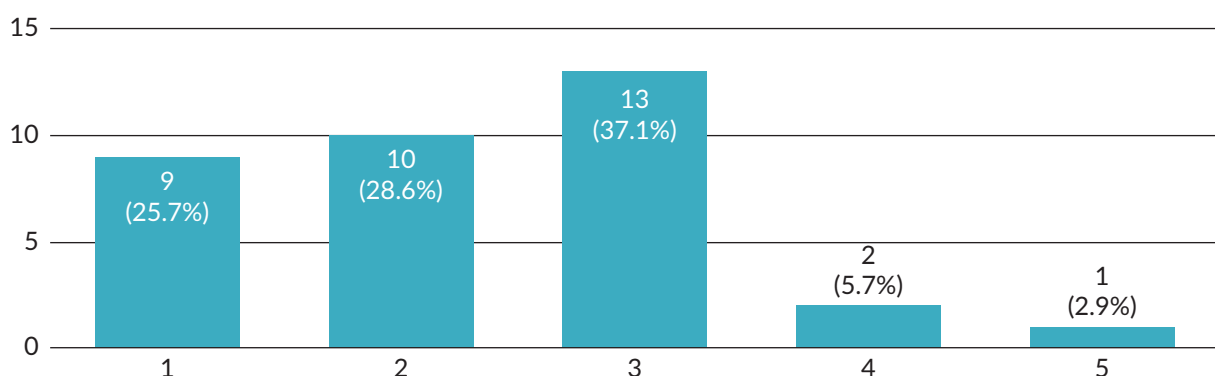


Figure 7. Graph indicating survey responses to the question “Should the future of the Minante [area] look different from what it looks like now? (independently of what the school did).” Note: 1 = *is not at all* and 5 = *is a lot*.

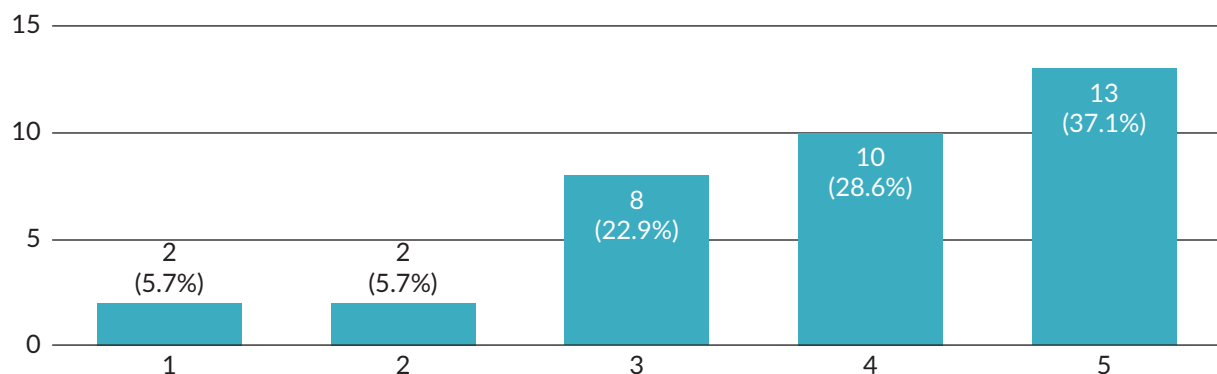


Figure 8. Graph indicating survey responses to the question “Did the participation in the Minante project change your perception of the public space of the Minante [area]?” Note: 1 = *is not at all* and 5 = *is a lot*.

4.2. Lab.CA Workshop Education and Territory: The Future of Heritage Flows Towards the Ocean

The workshop results were structured based on the themes that emerged during discussions between the researchers, the project team, and, above all, the school teachers (see Figure 9, for an example of some of the post-its shared). The emerging themes are discussed in detail below. The aim was to reflect on the Minante project and use this to establish a series of good practices and hopes for future projects, particularly involving the region’s coastline.

The first theme corresponds to adequate and timely preparation—involving different partners and territorial agents before starting the implementation phase of a project. The teachers considered it fundamental to actively involve the entire school community in the preparation and planning of the project; to start planning projects early enough to ensure proper implementation; to keep in mind the schools’ calendars and the complexity of the students’ calendars; to consider the time needed to deepen knowledge and promote the satisfaction of both students and teachers; and to plan the continuity of the project from its preparation, taking into account the role of various actors to this end, after the funding period.

Still, within the preparation theme, teachers highlighted the *preparation* directly related to the execution of the project, taking into account the outdoor fieldwork, outside the school premises. Here, the indications were to anticipate potential challenges, such as weather conditions and transport logistics, and plan with openness to rethink and readjust the methodologies and final results compatible with the experience and ensure the active participation of the students and their immersion in the experience, taking into account the individual characteristics of each class and each student.

The second theme discussed the need for various collaborations and partnerships, where it was emphasised that it is essential, within schools, to promote collaborative projects between different classes, age groups, and schools to enrich the experience and strengthen community ties. Beyond schools, it highlighted the need to establish partnerships with local institutions and other stakeholders to ensure the continuity and visibility of the project and greater valorisation of the initiatives in a larger context, for sustainable development on a large scale. To that end, organising events and activities that involve the whole community, promotes intergenerational interaction and a sense of belonging.

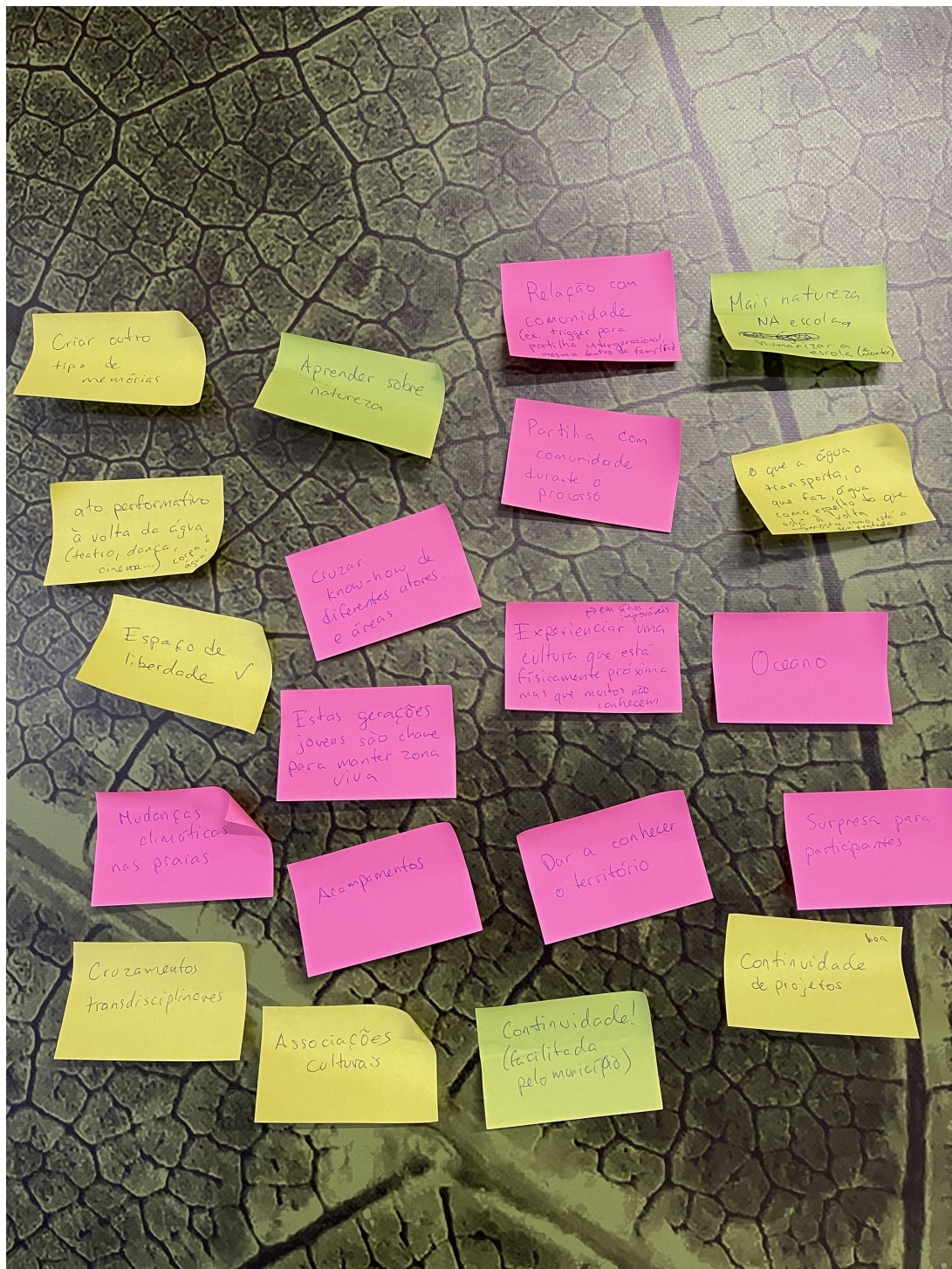


Figure 9. Some results from the Lab.CA workshop's post-it exercise. Note: Transcription and translation of the depicted themes: "Creating another kind of memories," "learning about nature," "relationship with community," "more nature in school. Humanising the school," "performative acts around water (theatre, dance, cinema, etc.)," "crossing know-how of different actors and areas," "sharing with the community during the process," "what water transports, what makes the water a mirror of its surroundings," "space of freedom," "these young generations are key to keep the place alive," "experiencing a culture that is physically close but many don't know," "ocean," "climate change on the beaches," "camping," "allowing to get to know the territory," "surprise for participants," "transdisciplinary crossing," "cultural associations," "continuity (facilitated by the municipality)," and "continuity of projects." Source: Roberti (2024).

A third theme was good sustainable practices, where the teachers emphasised the importance of exploiting resources present in nature itself or inspired by it; exploring, for example, the audiovisual experience, such as video and sound, photography, and illustration, to convey the experience of fieldwork through the creation of artistic interpretations and narratives. Prioritising the use of materials that already exist in schools, biodegradable, recycled, and reused, was also an aspect discussed to promote sustainability and environmental awareness.

The post-its written and exchanged between teachers and team throughout the Lab.CA were systematised into wordclouds so that it was possible to comprehensively visualise the most referenced themes and those with the greatest impact on the discussions. In this sense, especially in the wordcloud referring to future projects (Figures 10a and 10b), it is possible to see a strong emphasis on the words: community, water, ocean, sharing, and continuity. These words essentially portray the positive points of the previous project—the desire to continue with the theme of the oceans jointly and collaboratively.



Figure 10. Wordclouds from the terms used on post-its referring to desired future projects.

5. Conclusion

One of the terms used by one of the teachers involved in both cases presented in this article, who wishes to include arts and engagement with nature and life-long learning in school philosophies and curricula, was the idea of “humanising schools.” A key message of this article is to demonstrate that to do this, it is important to go beyond physical walls. Contact with nature—in this case more specifically along the river and the ocean—culture, and local heritage contribute to a broader and deeper sense of belonging and training not just as students, but as citizens, capable of recognising the challenges of the present and actively contributing to the future. This path can bring many benefits for education and the future of valuing the territory and the tangible and intangible heritage surrounding schools (Fauville, 2019; Gough, 2017; von Schönfeld et al., 2023). Yet, it also brings challenges. Creating projects involving different territorial agents can be an asset on this path, contributing to a collective and plural construction of education and more sustainable and inclusive local communities.

The projects presented have reinforced the local diagnosis that, although the place where the schools are located has historically had a close connection with the sea and the riverside areas, today the younger generations are more distant from these practices, from enjoying them and reflecting on the future of these ecosystems. In this sense, artistic practices appear as one (of many) possibilities for bringing the public closer to these issues and future experiences in a free but pedagogically oriented way.

This trend aligns with major public initiatives such as the New European Bauhaus, emphasising the importance of nurturing a creative and interdisciplinary movement based on the triad of sustainability, inclusion, and beauty. The UN Sustainable Development Goals are also strongly connected with these concerns and trends. Goals such as “quality education,” “sustainable cities and communities,” and “partnerships for the goals” demonstrate this alignment. Regarding the latter goal, and in line with the themes addressed in this thematic issue, it is important to highlight the transdisciplinary dialogues within and beyond artistic research, which can help emphasize research on cultures of water, promoting its relevance and social and political impact. It is in this sense, the two projects presented—Minante and the Lab.CA workshop—brought together school teachers from a semi-rural region in the north of Portugal, an environmental association, and universities. This joint effort demonstrates the urgency and importance of working together to address urgent issues of the present and future in the context of cultures of water.

The concept of cultures of water has been developed by the authors over the years as a way of exploring a comprehensive universe. It involves a diachronic study of coastal and riverside areas, based on environmental concerns and an appreciation of human relations with the oceans, seas, rivers, and their ecosystems. It is in this sense that the projects mentioned feed into these studies in a dialectical way.

For the schools involved in the Minante project to look to the future and to create projects on the seaside, based on their experience of the river banks, the teachers emphasised that having clear transdisciplinary objectives and stressing the importance of nature as a source of learning and creation is essential. We can conclude that taking this step forward means contributing to the valorisation and humanising of the school, as well as the integration of nature into the educational environment, promoting the development of meaningful memories and the knowledge and appreciation of local heritage, to establish lasting impacts that go beyond a specific initiative or project or even the school cycle.

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Conflict of Interests

The authors declare no conflict of interests.

Data Availability

Some details about all the artistic interventions mentioned in this article can be found on the project website: <https://rioneiva.com/minante>. The photographic exhibition of the Minante Project in pdf form can be found here: https://rioneiva.com/wp-content/uploads/2024/02/Minante_PhotoExhibition.pdf.

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