

Eco-Digital Citizenship and Solarpunk Imagination: Educating Systemic Responsibility in Children

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Abstract: This paper reflects on how citizenship education can be rethought by integrating ecological awareness and digital competence as interconnected dimensions of contemporary democratic participation, characterized by the intertwining of ecological crisis, digital transformation, and geopolitical tension. Drawing on experiences with Philosophy for Children (P4C), facilitation of classroom philosophical inquiry communities, and work as a children's book author, it proposes an integrated vision of *ecological-digital citizenship* as a systemic and relational competence. In dialogue with thinkers such as Morin, Bateson, Latour, Lipman, Sharp, and Nussbaum, the paper outlines an educational model intertwining critical thinking, an ethics of care, and ecological awareness. It argues that slowness, wonder, and reflexivity constitute the foundations of a citizenship capable of inhabiting the complexity of the contemporary world, also drawing on the principles of Public History. The article outlines theoretical and methodological orientations to foster in children a sense of responsibility toward both the natural and the digital world, understood as interconnected dimensions of democratic participation and shared care. Educational practices aimed at fostering systemic responsibility, critical thinking, empathy, and imaginative capacity, within a Solarpunk framework, oriented toward sustainable and optimistic futures..

Keywords: eco-digital citizenship; Solarpunk; Philosophy for Children (P4C); systemic responsibility; Public History.



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1. Educating within Complexity: a Time of Fragile Interconnections

Citizenship education, traditionally focused on knowledge of civic norms and socially appropriate behavior, requires a systemic redefinition.

The contemporary world confronts us with multiple, interwoven crises: environmental, social, digital, and democratic.

These cannot be understood in isolation, since they belong to the same systemic dynamic that links human actions, technologies, and living ecosystems.

As Edgar Morin (1999) reminds us, “teaching how to connect is the most urgent task of our time”, not merely to distinguish.

Citizenship education, therefore, should move beyond the transmission of rules or civic duties, toward nurturing the ability to *think in relationships*—to perceive the web of interdependence in which every gesture, however small, participates.

In this perspective, educating today's citizens entails developing the ability to recognize interconnections between natural, social, and technological phenomena and to assume responsibility for one's actions.

In an era marked by conflict, ecological collapse and misinformation, citizenship education must aim at cultivating systemic responsibility: an awareness that caring for the Earth and for the digital world are aspects of the same ethics of inhabiting.

A sort of laboratory of democratic resilience.

2. Eco-Digital Citizenship: An Integrated Perspective for a Pedagogical Horizon

The concept of ecological-digital citizenship emerges from the need to integrate two educational dimensions often treated separately: ecological awareness and digital competence.

It can be defined as the ability to participate in collective life by recognizing the interconnection among:

- the natural environment, understood as a living and shared network;
- the digital environment, as a symbolic and relational space of interaction and participation;
- human communities, which inhabit and co-construct both environments.

In *Down to Earth*, Bruno Latour (2017) argues that the contemporary challenge is no longer to choose between global and local, but to recognize the networks of relations we belong to and the effects our actions generate.

This act is both political and pedagogical: to take a stand in the world is to acknowledge our systemic embeddedness.

Ecological-digital citizenship thus represents a situated form of consciousness, where education fosters critical thinking, empathy, and responsibility toward both material and digital realities.

Within a Solarpunk perspective, ecology is not only protection of the environment but also active design of sustainable systems, while digital technology becomes a creative tool serving community care and environmental stewardship (Hopkins & Wark, 2021).

3. Primary School as a Space for Systemic Learning and a Laboratory of Interdependence

Primary education offers a privileged context for developing ecological-digital citizenship.

Children naturally perceive the connectedness of the world and, through play and storytelling, understand that every action produces effects.

Integrated learning projects can help them grasp the interdependence between ecological and digital spheres. For example:

- Digital image ecology workshops, in which pupils explore the ethical and environmental implications of creating and sharing digital content, cultivating critical awareness of the digital self. A digital footprint diary: pupils track their online activities—searches, images, messages—and reflect on the traces they leave behind and the notion of digital responsibility.

- Connected school gardens, documented through blogs or podcasts, linking care for the Earth with digital communication and cooperation: a project combining ecological care and digital documentation, where children observe plant growth while reflecting on time, attention, and sustainability.
- Picturebook readings on ecological and social themes—such as *The Great Word Factory* (De Lestrade & Docampo, 2007) or Shel Silverstein's *The Giving Tree* (1964)—as starting points for reflection on language, relationship, and responsibility. Stories of care: collective narratives arising from philosophical questions (“Can you love a river?”) that become digital stories or podcasts exploring empathy toward the natural world.

In these practices, technology functions not as an end in itself but as a tool for reflection, narration, and connection—an ally of ecological consciousness.

Through such experiences, the school becomes a laboratory for what Gregory Bateson (1972) called an ecology of mind, where knowledge grows through observation of relationships, consequences, and interconnections among systems.

4. Educating for Systemic Responsibility

To educate for ecological-digital citizenship means to cultivate a sense of responsibility grounded in relational awareness.

Three educational dimensions are particularly significant:

a) Awareness

Understanding that every action—online or offline—has ecological, social, and emotional impacts.

From energy consumption to the circulation of information and affect, every digital gesture participates in a living system.

b) Relationship

Learning how to engage empathetically and dialogically with others.

Digital environments, if used consciously, can amplify opportunities for encounter, collaboration, and intercultural understanding.

c) Responsibility

Assuming care for the world as part of one's civic identity, Martha Nussbaum (2011) argues that democratic education must foster the capacity to imagine oneself from another's point of view, grounding citizenship in a pedagogy of care..

5. Educating in Times of Conflict: The Transformative Power of Narrative

In today's world, marked by armed conflicts and social divisions, education for citizenship must address the political dimension of empathy.

Children are constantly exposed to digital narratives that may foster fear, distance, or dehumanization.

Schools must therefore provide tools for understanding and transforming such narratives.

Digital storytelling and participatory media can serve as pedagogical tools for constructing narratives of care and peace, allowing children to explore complex realities critically and creatively.

To tell the world, in this sense, becomes a way of *dwelling in the world*.

6. Methodological Directions

Several pedagogical approaches can support integrated educational practices:

- Project-based and service-learning activities, where ecological care initiatives are designed, documented, and shared through digital tools.
- Media and information literacy, to develop critical interpretation of online content and awareness of the environmental footprint of technology.
- Pedagogies of slowness, countering digital acceleration by promoting reflection, emotional awareness, and attentive presence.
- Cooperative learning and communities of practice, to experience citizenship as co-belonging and shared responsibility.

7. Philosophy for Children and Classroom Inquiry Communities: a Space of Democracy and Responsibility

Experience in *Philosophy for Children* (Lipman, 2003) and in facilitating *communities of philosophical inquiry* (Sharp, 2007) provides a concrete model for education for democratic citizenship:

- Reflective dialogue: children explore philosophical questions regarding the environment, technology, and coexistence;
- Critical and systemic thinking: they analyze causes, consequences, and interrelations among complex phenomena;
- Empathy and shared responsibility: they learn to listen to diverse perspectives and assume collective responsibility.

The community of inquiry is not merely a methodological device but a form of educational life in which:

- every participant is recognized as a subject of voice and thought;
- diversity of perspectives is seen as a resource rather than an obstacle;
- truth is sought collaboratively, not competitively.

In this context, philosophical inquiry becomes a laboratory of citizenship, where active participation is central (Lipman, 2003; Common Worlds Research Collective, 2022).

Citizenship is learned as a dialogical practice: children learn to listen, to dissent respectfully, to construct meaning together.

Conflicts are not to be avoided but understood; truth is relational; and that knowledge emerges through diversity.

Philosophical inquiry thus intersects with peace education, nurturing the capacity to coexist and to imagine alternative futures.

In this sense, philosophical dialogue becomes a space where thinking itself is a form of ethical resistance.

As Sharp (2007) notes, the community of inquiry represents “an ethical practice of care for the world,” as it teaches us to think with and for others, cultivating empathy and co-responsibility.

Through this practice, children experience the connection between individual freedom and collective well-being - the essence of systemic responsibility..

8. Public History and Citizenship: The Past as a Critical Resource for Systemic Responsibility

In the contemporary context - marked by global ecological crises, armed conflicts, and pervasive digital transformations - the relationship between the past and citizenship has become a central issue.

Public History, understood as a set of practices that bring history beyond academic boundaries into the public sphere, cannot be regarded merely as a form of popularization.

Rather, it should be seen as a civic practice, one that actively shapes democratic citizenship.

Ecological-digital citizenship requires individuals capable of understanding the historical dimension of the complex systems in which they are embedded: environmental, technological, political, and cultural systems.

From this perspective, Public History contributes to the formation of citizens who can interpret the present as the outcome of historical stratifications, memory conflicts, and collective decisions accumulated over time.

9. Public History: Definitions and Perspectives

According to a now widely accepted definition, Public History refers to “the ensemble of practices through which historical knowledge is produced, shared, and debated in the public sphere, often outside traditional academic institutions” (Noiret, 2015).

It includes museums, digital archives, commemorations, documentaries, podcasts, social media initiatives, participatory practices, and local history projects.

What distinguishes Public History from simple dissemination is its dialogical and participatory character: the public is not a passive audience but an active co-producer of historical narratives.

This participatory dimension has profound implications for citizenship, as it:

- makes visible the power relations embedded in the construction of memory;
- challenges dominant narratives;
- legitimizes a plurality of voices, including marginalized ones.

In an era of widespread digital communication, Public History becomes a crucial arena for negotiating the relationship between expert knowledge, collective memory, and media-driven information.

10. Digital Media, Memory, and Conflict: The Past as a Symbolic Battleground

Contemporary conflicts clearly demonstrate how the past is increasingly used as a symbolic weapon.

Wars, geopolitical crises, and identity-based tensions are accompanied by intense processes of historical re-narration through digital platforms, social media, interactive maps, and selective archives.

Digital technologies amplify the circulation of historical narratives while simultaneously increasing their fragmentation and polarization.

Fake news, deepfakes, decontextualized images, and simplified rhetoric make it increasingly difficult to distinguish between historical reconstruction, memory, and propaganda.

In this context, Public History plays a fundamental educational role: it provides critical tools for interrogating sources, recognizing narrative devices, and understanding the relationship between history, power, and technology.

Educating for ecological-digital citizenship therefore also means fostering historical-digital literacy the ability to understand the past as a constructed and contested field, rather than as a neutral repository of facts.

11. Public History, Ecology, and Long-Term Temporalities

Another key contribution of Public History to ecological-digital citizenship concerns the temporal dimension.

Environmental crises require the ability to think in the long term, to grasp continuities and discontinuities between past, present, and future.

Environmental history and public environmental history reveal how landscapes, resources, and infrastructures are the result of historical decisions that often remain invisible in everyday perception.

Making the history of territories, industrial transformations, agricultural practices, and digital infrastructures publicly accessible allows us to:

- dismantle the illusion of technological neutrality;
- highlight historical responsibilities for current ecological crises;
- strengthen a critical sense of belonging to places.

In this sense, Public History fosters a form of citizenship that is not confined to the present but recognizes itself as both heir and custodian of a shared material and immaterial heritage.

12. The Educational Dimension: From Participation to Responsibility

From an educational standpoint, Public History offers an alternative model for citizenship education, grounded in experience, participation, and narration.

Participatory history projects, community archives, and digital memory laboratories enable students and citizens to:

- exercise critical thinking;
- engage with interpretive conflicts;
- take responsibility for the narratives they produce and circulate.

In particular, involving younger generations in Public History practices supports the development of systemic responsibility: the awareness that narrating the past has consequences for the present and the future, and that historical narratives can include or exclude, legitimize or marginalize.

This awareness is crucial for democratic citizenship in contexts characterized by polarization and declining trust in institutions.

13. The Past as a Critical Resource for the Future

Within the framework of ecological-digital citizenship, Public History should not be understood merely as a tool of cultural mediation, but as a critical device capable of shaping citizens who are aware of the interdependencies between history, environment, technology, and power.

In a world marked by conflicts and systemic crises, the past does not provide ready-made solutions; rather, it offers interpretive categories, orientation tools, and spaces for democratic dialogue.

Educating through Public History thus means fostering a form of citizenship capable of inhabiting complexity, recognizing the plurality of memories, and assuming responsibility for the narratives through which the common world is constructed.

14. Slowness as an Ethical and Cognitive Practice

In an age of acceleration and constant stimulation, the community of inquiry fosters an ecology of time.

Its dialogical rhythm - listening, pausing, waiting - cultivates an ethics of attentiveness.

As Rachel Carson (1965) observed, “a sense of wonder is our greatest defense against indifference.”

Philosophical dialogue nurtures precisely this wonder and transforms it into care.

Educating for ecological-digital citizenship therefore also means educating for slowness, enabling learners to resist the superficiality of digital immediacy and to recover the contemplative dimension of thought.

Slowness becomes both an ecological and a cognitive virtue: a way of honoring the tempo of understanding.

15. Ecology of Mind and the Education of Complexity

Philosophy for Children can also be understood as a pedagogy of mental ecology.

Gregory Bateson (1972) famously stated that “the pattern that connects is the pattern that sustains life.”

Thinking ecologically, therefore, means thinking relationally.

The community of inquiry can be viewed as a shared cognitive habitat, where students learn to sustain the ecology of their own and others’ thinking.

Philosophical questions such as “What does it mean to take care?”, “Can words hurt?”, or “Is the digital world real?” help children explore the connections among ethics, environment, and technology.

Each dialogue session becomes a small ecosystem of meaning, where thought grows through reciprocity and attentiveness.

In this sense, the community of inquiry embodies a sustainable ecology of thinking.

16. Storytelling and Children's Literature

Experience as a children's book author complements philosophical education through narrative practices:

- Stories illustrate sustainable future scenarios, where cooperation, green technology, and creativity transform reality;
- Narrative serves as a tool for ethical reflection, allowing children to discuss characters' choices and consequences;
- In the Solarpunk and Public History visions, storytelling fosters hope and critical imagination, essential for eco-digital citizenship.

Activities such as collaborative Solarpunk story writing, digital documentation, and online sharing allow children to integrate creativity, digital competence, and ecological responsibility.

17. Education as a Political and Poetic Act

Educating for ecological-digital citizenship is both a necessity and an opportunity.

It invites schools to become spaces of *reconnection*, where knowledge is relational and care becomes a democratic practice.

Teaching children to think in terms of interdependence lays the foundation for a more conscious, empathetic, and resilient form of citizenship.

Rachel Carson (1965) reminds us that to preserve a child's sense of wonder, adults must *share* that wonder rather than explain it away.

In this sense, ecological-digital education is both political and poetic: an invitation to safeguard the world's complexity and to transform wonder into shared responsibility.

As Nussbaum (2011) reminds us, "democracies depend on imagination and empathy."

In this sense, *Philosophy for Children* and ecological-digital education converge toward the same horizon: an education that unites reason and wonder, reflection and responsibility, slowness and action.

It redefines the role of the teacher as a *mediator of interconnections* - between nature and culture, technology and ethics, knowledge and care.

Such an approach aligns with the emerging educational discourse on the ecology of learning, which emphasizes the dynamic relationship between human action and the systems it inhabits.

Developing ecological-digital citizenship in primary education contributes to:

1. strengthening children's agency as active participants in local and global communities;
2. promoting critical digital literacy grounded in ethical awareness;
3. nurturing a sense of planetary belonging that connects empathy, justice, and sustainability.

Ultimately, systemic responsibility is not a disciplinary objective but a *way of being in the world*, a form of literacy that integrates knowledge, sensitivity, and ethical imagination.

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