

Young Children Claiming Their Connection with Nonhuman Nature in Their Schoolground

Irida Tsevreni

Anna Tigka

*Department of Early Childhood Education
University of Thessaly
Volos, Greece*

Citation: Tsevreni, I., & Tigka, A. (2018). Young children claiming their connection with nonhuman nature in their schoolground. *Children, Youth and Environments*, 28(1), 119-127. Retrieved from <http://www.jstor.org/action/showPublication?journalCode=chilyoutenvi>

Abstract

This field report examines whether connection with nature was a priority for the young children attending an environmental education program in a Greek day nursery and the ways these children were involved in the "naturalization" of their schoolground. The report presents recommendations and pedagogical guidelines for a place-based approach to environmental education programs that includes young children's connection with nonhuman nature in their immediate environment. It is argued that children's connection with nonhuman nature in their schoolgrounds will not be established through official channels or conventional educational structures, but claimed by the children and their educational communities.

Keywords: environmental education, young children, schoolgrounds, place-based education, Greece

Place-Based Environmental Education That Connects Children with Nonhuman Nature

In this field report, we explore the potential for the participatory design of schoolgrounds to serve as a pedagogical empowerment tool that can contribute to children's connection with nonhuman nature. We also attempt to identify some essential pedagogical principles and methods for environmental education programs focused on place-based teaching and learning.

The children-nature relationship is not a new concept in pedagogy. Nature played a major role in Rousseau's pedagogical ideas and in the work of great pedagogues such as Fröbel and Steiner (Knight, 2013). Current trends in early childhood education, such as nature preschools and forest kindergartens, underline nonhuman nature as an important factor for young children's holistic development and the empowerment of their environmental consciousness (Sobel, 2016). Today, children who grow up in the urban centers of developed countries are often alienated from nonhuman nature and are less likely to enjoy the benefits of children-nature bonds, including development of their body, mind and spirit, improvement of their physical and mental health, reduction of stress and empowerment of environmental consciousness (Elliott, 2010; Wilson 2008).

In this analysis, we approach the children-nature relationship under the lens of place-based environmental education. The "children in nature movement" has emphasized the need for children's return to nature (Louv, 2005). However, it has been recently criticized from a posthuman stance regarding its romantic, anthropocentric and class dimensions (Dickinson, 2013; Malone, Truong & Gray, 2017). Responding to the challenges of the Anthropocene, new pedagogical trends based on posthumanism have recently revealed the need to overcome the animal/human and nature/culture dichotomies and our hyper-separation from the nonhuman nature (Malone, 2016). They also reposition children "within the heterogeneous and interdependent multi-species common world in which we all live" (Taylor & Pacini-Ketchabaw, 2015, p. 507) and focus on the kinds of learning and coexistence when children meet with their nonhuman others in their everyday multispecies environment.

Contemporary school systems tend to take little notice of place's pedagogical potential (Gruenewald, 2003a; Orr, 2013). However, a school's place is pedagogical as it is a means of experience that teaches us about the world and how our lives fit into the spaces we occupy (Gruenewald, 2003a). In the current research, we were inspired by a critical environmental education approach that uses place and space as an educational tool for critical inquiry, participation, collaboration, empowerment and change (Gruenewald, 2003b; Tsevreni, 2011; Tsevreni & Bentevidi, 2013).

Today, due to the limited environmental experiences of urban children, schoolgrounds are increasingly one of the few sites where children can engage in environmental learning, providing a basis for real-life environmental experiences and activating their natural curiosity (Malone & Tranter, 2003a). In recent years, schoolgrounds research has grown and some studies reveal schoolgrounds as pedagogical tools to enrich children's real-life natural experiences and promote their

environmental learning and cognition, along with their contact with nature (Dyment, 2005; Malone & Tranter, 2003b; Rickinson & Sanders, 2005). Schoolgrounds are empowering and can contribute to child-to-child activity and learning, as well as children's engagement with the "extraordinary restorative power of nature" (Moore & Wong, 1997, p. 199). The schoolground can be a place that encourages children's participation, reinforces the development of the "whole child," creates a collaborative and self-learning environment, cultivates cooperation and solidarity, and reconnects children with nature (Moore & Wong, 1997).

Children's interactions with their environment can support experiential learning as well, as children participate in knowledge co-construction (Vygotsky, 1980) and improvement of their environment. It can also develop children's environmental consciousness and the need to care for the planet (Hart, 1997). Through highly vegetated green schoolgrounds children can engage with many environmental subjects such as biodiversity, food production and renewable energy (Danks, 2010).

We investigate here whether young children that attended a day nursery environmental education program had an authentic need for connection with nonhuman nature. We also claim that the "naturalization" of children's everyday environments will most likely not be established through official channels, urban planners and the formal educational system. On the contrary, we demonstrate it will be implemented by children and educational communities, and the pedagogical process itself will educate the participants in democratic processes.

Research Methodology

The environmental education program was conducted by the educator/researcher and her class of 15 children aged 4 years old, at a day nursery in Volos, Greece, during the 2015-2016 school year. The aim of the program was to connect children to the outdoor environment, to involve them in the design process and to research the potential of young children to participate in the improvement of their immediate environment. The implementation of the program was based on action research as it connects education with emancipatory ideals and promotes change (Kemmis, 2006). Furthermore, it is an ideal method in environmental education through which children can be involved in critical inquiry, participation and action for environmental improvement and develop a social and political consciousness (Hart, 1997).

Various participatory planning methods were used to interpret young children's ideas and encourage their participation (Cele, 2006; Hart, 1997), including brainstorming, photography, walks in the schoolground, discussions and collaborative drawings, modelling and creation of a scale model presenting the children's schoolground vision (Tigka, 2017). The environmental education program evolved in three action research cycles: a) detection of children's needs and ideas and development of a collaborative vision; b) creation of a scale model, presentation of children's ideas in the school community, and discussion with adults; and c) action for and participation in changes.

The children participated in every stage of the research process, expressing and communicating their ideas, creating a common vision and working together with adults to improve it. Children benefited in various ways from their participation in the educational program, including the development of critical thought, communication skills, and empowerment (Tigka, 2017). We investigated whether children's connection with nonhuman nature was a priority for them in their everyday school environment by implementing a secondary analysis of some primary research data (Heaton, 2004), based on the following research question: "Was the connection with nonhuman nature an authentic need of children for their everyday school environment?"

The selected data analyzed included interviews with children and educators, children's creations regarding their vision, and the educator/researcher research diary. Since we had not indicated to the children in the study that they should include nonhuman nature (plants, animals, natural elements, green spaces, etc.) in any phase of the participatory design, we thought that it would be very interesting to return to our research data and to investigate whether young children desired a relationship with nonhuman nature without any adult/educator instructions. If so, in what ways did they claim that connection?

Findings and Discussion

In the following pages we examine children's desired and claimed connection with nonhuman nature and offer recommendations and pedagogical guidelines for place-based environmental education.

Children's Desired and Claimed Connection with Nonhuman Nature in Their Schoolground

As compared to other elements of their surroundings, the children emphasized their need for contact with nonhuman nature. In particular, they asked for plants, animals and natural elements in their schoolground (Tigka, 2017). As indicated in Table 1, the majority of children's ideas reflected their desire to connect with nonhuman nature.

Table 1. Children's ideas for their schoolground

Nonhuman nature	Natural elements (water, soil)
	Nonhuman beings (trees, flowers, dogs, birds, snails, fish, ants)
Colors	A colorful rainbow painted on the wall
	Colorful railings at the schoolground
Outdoor reading	An outdoor library

The young children's expression and communication of their ideas led to the creation of a common vision that empowered them to negotiate with adults, and encouraged them to take action and make changes in the schoolground

collaboratively with the teachers and the school staff. The children planted flowers in the garden and took care of the existing plants. They also experienced water through a water trough placed in the schoolground, where they could explore water's relaxing and sensory properties. Finally, they constructed bird feeders and placed outside vessels with water and food for animals (Figure 1) (Tigka, 2017).

Figure 1. The young children planted flowers and attracted birds



Children and adults collaboratively planned and created a schoolground, where nonhuman nature was not only the main element, but also an educative tool for creative play, environmental learning, collaboration and development of empathy for the natural world. Together, the children and adults planted flowers, played with water and cared for animals. By designing and changing their schoolground, the young children's environmental awareness was promoted, and they were encouraged to develop an outdoor classroom where they could coexist with nonhuman nature.

Place became an educational tool that promoted children's bonding with their immediate environment and active contribution towards improvement. The children claimed and were successful in "naturalizing" their schoolground, not through ambitious schoolground plans or spectacular and expensive changes, but with collective, collaborative, handmade solutions that transformed their everyday environment into a creative and valuable green place. They were participants in democratic dialogues, decisions and planning, undertook collaborative action and claimed environmental experiences and learning.

Recommendations and Pedagogical Guidelines for Place-Based Environmental Education That Emphasizes Children's Connection with Nonhuman Nature

We suggest the main challenge in designing a participatory project with young children is finding ways to facilitate their free expression and communication of ideas, experiences and feelings and to empower their self-confidence and ability to connect with and manage their immediate environment. Indeed, children can participate as equal partners if participatory models of collaboration are encouraged.

This story of an environmental education program founded in a participatory approach that supported young children's engagement in creation of their outdoor classroom suggests some pedagogical and methodological recommendations:

Inquiry into and Observation of Children's Need to Connect with Nonhuman Nature

The "naturalization" of children's everyday environment should not be imposed on children by fixed, pre-existing plans. In the program presented here, contact with nonhuman nature emerged as a need for children through their participation in the improvement of their schoolground. This detail is extremely important if we are concerned with contributing to the development of young citizens, who identify and claim their needs. It is the first and vital step of an educational path towards children's empowerment.

Reinforcement of Children's Coexistence with Nonhuman Nature

The participatory design of a schoolground can include adults' trust in children's need for interaction with nonhuman nature. In our study, the children showed instinctive interest and experienced strong feelings for plants and animals, as well as for natural elements. The schoolgrounds themselves can serve as pedagogical tools, where educators empower children's bond with nonhuman nature and work against the separateness from the nonhuman natural world that more formal educational systems force (Malone, 2016). Ideally, this could be achieved by providing children with both the opportunity and responsibility to create circumstances for connection with nonhuman nature. Through the environmental educational program, the children claimed their bond with nonhuman nature, expressed their needs, and acted to care for plants and animals, and played with elements such as soil and water.

The Use of Appropriate Pedagogical Methodology

The combination of action research with participatory planning methods was an ideal methodology for young children's empowerment and participation. Through action research, children and adults worked through a cyclical process of planning, action and reflection, and became emboldened to make changes in their educational praxis while transforming their schoolground. The children reacted positively to the selected participatory methods; for example, they were excited with methods that included drawing, photography, play dough and the development of a scale model. The use of multiple methods ensured the participation of each child, according to his/her abilities and preferences. However, it is worthwhile

noting the challenges for children working with methods such as group discussion and decisions. Difficulties in expressing and negotiating their needs were sometimes apparent. This was a new approach that they had never experienced before as equal partners. Nonetheless, as researchers we understand the use of participatory methods with children in action research to be invaluable for the creation of more democratic and more inclusive/child-centered educational programs.

Empowerment through Collaboration

The environmental education projects were child-centered, but implemented in collaboration with adults (teachers, schoolmasters, school staff and parents). We argue that taking an intergenerational, place-based educational approach contributed to improved appreciation of the schoolground as well as intergenerational solidarity (Mannion, Adey, & Lynch, 2010). The children became empowered and the teachers evaluated the need for a more democratic pedagogy that invited children to participate as researchers and equal partners in the authentic issues of their immediate environment.

Concluding Remarks

Within more formal educational systems that preclude multiple avenues for connection with nonhuman nature, the "naturalization" of children's everyday environment may be difficult to establish through official routes. We argue that it can be more readily established through an educational approach based on children's empowerment and the educational community's democratic self-organization.

As a community of environmental educators and researchers, we should find ways to enable children's participation in their immediate environment and to support the vital role they can play in their everyday communities. This may be achieved if we broaden our perspectives, take into account the potential for incorporating children's immediate environment within the teaching and learning process, and include children in place-based environmental programs aimed at empowerment and change.

Acknowledgements

We would like to thank the children, the teachers and the headmistress of the nursery school "Ariadne" in Volos for their participation and support of the research.

Irida Tsevreni is an Assistant Professor at the Department of Early Childhood Education, University of Thessaly, Greece. Her research interests include environmental education, critical pedagogy, children's participation and the human-nature relationship.

Anna Tigka is a preschool teacher in a nursery school in Volos, Greece. She holds a diploma in early childhood education and a master's degree from the Department of Early Childhood Education of the University of Thessaly on Pedagogical Play and Educational Material.

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