

The Role of Art Education in Teaching Environmental Justice

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EDUC 571, Research Paradigms in Education

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December 2020

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Introduction

Beginning in the 1980s, a number of art educators noted a lack of engagement with real-world issues among practitioners in their field. They envisioned a transformative art pedagogy which could move students beyond traditional science lessons to engage creatively in environmental issues. (Jagodinsky, 2008; Lankford, 1997). This practice, known as *eco-art education*, drew on *the eco-art movement* of the 1960s and 1970s, in which artists addressed issues related to environmental degradation through drawing, painting, sculpture, installation and performance art (Blandy, Congdon and Krug, 1998). The eco-art educators believed that the hands-on, sensory and subjective nature of art education, which lends itself easily to interdisciplinarity and is capable of fostering open ended, creative thinking, could bring students into a socially active and responsible relationship with the natural world.

Despite these calls to action, there continues to be a perceived practical disconnect between art teaching and the eco-art movement (Inwood, 2008), which has deprived students of a valuable artistic discourse on issues of social and ecological justice (Graham, 2007). Additionally, research into the methodology, creation and implementation of such a curriculum is lacking (Inwood, 2008) and primarily anecdotal (Bertling, 2015). This literature review looks at a relatively recent group of empirical studies, which begin to address this deficit and to speak to the question of what role art education can play in teaching environmental issues, particularly those of environmental justice. Through a variety of methods and approaches, this

group of researchers has examined the implications of designing art curricula which bring students into direct contact with environmental issues.

Eco Art Education and Place Based Education

For the purposes of this literature review, I will refer to *eco-art education* as a combination of art education and environmental education, which develops awareness of and interaction with environmental concepts and issues such as conservation, preservation, restoration and sustainability (Inwood, 2008). Eco art education also speaks to the “greening” of art education (Inwood), the need to consider waste in art making (Lankford) and the environmental effects of toxic art materials (Slivka, 2012.)

A common thread through many of these studies is *place-based education*, an interdisciplinary learning experience which roots students to their local environment through active engagement and outdoor learning. (Blandy and Hoffman, 1993). Because art education can emphasize the activist possibilities of art making and affirm the need for students to be involved in learning outside the school, place-based art education is seen as a good medium for exploring issues specific to their local community. (Gruenewald, 2003, Graham, 2007). *Critical place-based art education* represents a philosophical shift to reconnect art making with the issues and concerns of local communities.

Environmental Justice

As I consider the ways in which art education can address the idea of *environmental justice*, I will base my discussion on the definition used by the US Environmental Protection Agency which states that environmental justice is

the fair treatment and meaningful involvement of all people regardless of race, color, national origin or income, with respect to the development, implementation and enforcement of environmental laws, regulations and policies. This goal will be achieved when everyone enjoys the same degree of protection from environmental and health hazards and equal access to the decision-making process to have a healthy environment in which to live, learn and work. ((US EPA, OA, 2018)

Although there is quite a bit of literature concerning the role of environmental justice in environmental education, (Kruidenier and Morrison 2013; Hauza -DeLay, 2013; Nussbaum, 2013) I will limit this review to consider the role environmental justice plays specifically in fine art programs for elementary and secondary students.

Synthesis of Research

Based on the following research, I have identified what I believe to be the three primary areas where art education provides a unique and powerful lens through which to view issues related to environmental justice: empathy with the environment, environmental racism and redesign and restoration. These three themes also serve as a possible roadmap for future development and implementation of an environmental justice-oriented art pedagogy.

Empathy for the natural world

Sobel's (1997) idea that children must develop a caring, even loving relationship with their local natural places before they can be expected to protect or save them is fundamental to the idea of environmental justice and is the basis of many of the studies I examined. Empathy with the local environment results in a sense of responsibility (Bertling, 2015) which is deepened through an emotional, imaginative and creative connection through the arts (Grey and Birell, 2015). This connection develops into a capacity for social activism as students begin

to see themselves as part of an interdependent system (Creel, 2001). Bertling examines the ways in which middle school students demonstrate empathy with the environment through a place-based art education program and demonstrates how students develop an ecological paradigm shift in feelings of responsibility toward the environment. Similarly, Gray and Birrell (2015) investigate how an arts-based outdoor learning program can amplify a personal relationship with the environment based on a reciprocal relationship between creativity and care for the landscape.

To evaluate the degree of student's empathy toward the environment, Bertling (2015) employed a mixed methods approach. A qualitative-dominant design with case-study methodology using drawing exercises, interviews, focus groups, observations and visual/verbal journals reviews allowed her to assess the students' demonstrations of empathy with the environment. She also collected quantitative data by administering the New Ecological Paradigm (NEP) scale for children pre and post program. By keeping sets of qualitative and quantitative data separate Bertling was able to uphold traditional procedures for each. Bertling used the constant comparative method from the grounded theory tradition, with a variety of coding strategies to sort the data. She also used focused and axial coding to compare themes and explore relationships among categories.

Gray and Birrell (2015) also used a mixed-methods research design to evaluate their place-based eco art curriculum for high school students, with data obtained through interviews, quantitative instruments, photo elicitation, student generated material such as drawings, dances, poetry, videos, photographs and field observation. They used the Nature Relatedness Scale to assess students' connection to the environment pre and post program and found evidence

of positive affective relationships through interviews at the end of the yearlong program at an arts and environmental education center in a local nature preserve. Students met with local artists, participated in restoration activities, and created music, art, dance and poetry related to the natural environment. Grey and Birrell concluded that through multi-modal arts experiences such as dance, poetry, painting and video, students demonstrated a deep connection with the environment or “an intimacy of place,” (p.344).

In her investigation of an eco-art curriculum, focusing on students’ empathy for endangered species, Creel (2001), used a participatory action research approach and found that her role as teacher allowed her to be both a participant and an observer in the study. The yearlong curriculum Creel implemented at a low-income elementary school incorporated improvement of school grounds through gardening and large-scale sculptural installations with a study of endangered species. The curriculum allowed teacher and students to co-create meaning that connected them to their school and community. In all three of these studies local artists and their work provided a powerful point of affective connection between students and their local places, particularly the use of art as a form activism which inspired conservation and restoration.

The authors of these studies conclude that programs emphasizing empathy for the environment through the arts can transform the students’ capacity and desire to enact change. In Bertling’s middle school eco art curriculum, a trip to the local landfill as well as a sculpture project using recycled objects led students to express a heightened level of engagement with issues of recycling and waste reduction. Gray and Birrell’s high schoolers expressed a strong desire to participate in the conservation and restoration of the riparian landscape where their

curriculum was taught. Creel found that in studying local endangered species, students developed a context to understand their own struggles and challenges. In all three studies, a creative and imaginative connection which rooted students to place resulted in empathy toward the natural world which can be seen as an important component of the development of environmental justice.

Environmental Racism

The issue of racism is central to environmental justice and should be included in an eco-art pedagogy that addresses current local issues of power and equity (Graham, 2007) but this is rarely the case. In her survey of Georgia public school art teachers Milbrandt (2002) found that only 11% viewed current or real-world events as an important reason for teaching social issues and racism ranked fifth in importance out of eight possible topics. The teachers surveyed cited the fear of parental and administrative disapproval as the top two reasons (Milbrandt, 2002) for their reluctance to introduce difficult topics such as racism and environmental justice, which have, in some cases, led the firing of teachers (Hauza-DeLay, 2013). Such concerns would apply to today's political climate where President Trump recently denounced public school lessons about racism as "toxic propaganda" and "a twisted web of lies" (Wise, 2020). Needless to say, current attitudes and the fact that very little literature on the pedagogy of environmental racism exists, speak to the importance of reviewing the following studies.

Davis and Schaeffer (2019) introduced elementary students to the deeply politicized history of water in order to investigate, through a critical ethnographic approach, how students construct meaning around a local water crisis in a town near Flint, MI. The authors describe "the tendency to disassociate curricular content from lived experience as a troubling

shortcoming in elementary science education, especially in situations where environmental issues pose a direct threat to racially minoritized students (p.367).” While this interdisciplinary, place-based study was conducted by science teachers, they used student artwork as an important part of their data which also included field notes and structured interviews as well as artifacts such as handouts and photos. Using an iterative process of data reduction and analysis, they looked for possible shifts in student understandings of their guiding question, “How does water support life?” A coding scheme as well as a chronological analysis was used to analyze the content of classroom discussions, interviews and children’s artworks in the form of informational posters. The data reflected developing ethical concerns and understandings of lead poisoning’s effects on the body as well as students deepening ability to conceptualize and process pressing issues of water safety in their own community.

Similarly, Somerville (2013) analyzed the artwork of elementary school students in a place -based program in an Australian Aboriginal community dealing with the effects of climate change and pollution from coal fired electricity plants. Her participatory action study asked, “How can places teach us about water” and” How can we incorporate their pedagogical possibilities into educational systems in order to ensure the protection of people and their places. (p. 409)?” Like the studies on empathy cited above, Sommerville used the work of a local artist to engage the students in the “storyline” of how to live in the land (p. 409). She then analyzed the children’s artworks from a visit to a drought affected local wetland, which included images and text. The images became an embodiment of the students’ process of learning about the land and their place in it.

While Somerville's study doesn't overtly probe the issue of racism, possibly due to the young age of the students, her work addresses the possibility of challenging the student's perception of the of the land and their place in it. The aboriginal integration of nature and culture reflected in the local artist's work is apparent in the analysis of the children's artworks and demonstrates a rethinking of the nature/culture divide inherent in Western society's management of the land and treatment of indigenous people.

Both of these studies reflect a deepening of traditional science content with art playing an important role in the expression, understanding and communication of complex issues related to local issues of environmental racism. As with all of the studies mentioned in this lit review the authors make the point that more research is needed in the implementation of curricula around environmental justice.

Redesign and Restoration

Encouraging students to take action is a crucial element of a place based eco-art pedagogy (Graham, 2007). The work of the eco-artists was deeply rooted in creative solutions to environmental problems, with many choosing the restoration of natural places as foundational work. (Inwood, 2008; Anderson, 2000; Santleman et al 2011). Allowing students to reimagine and restore systems and places is a precondition of social justice (Tsevrini, 2014) which empowers students to be problem solvers. Participating in the planning and creation of a sculpture garden on school grounds gives students a sense of ownership and pride in their school (Creel, 2001). Clearing invasive plant species from a riparian landscape is a simple action students can take toward being responsible stewards of the land (Gray and Birrell, 2015). An

arts-based eco-literacy program, focused on developing a land ethic through the restoration of a neglected city park reconnects students and community members to their local green space and allows them to become agents of change (Celedonia and Rosenthal, 2011).

Tsevreni (2014) found that art can be a powerful tool of empowerment by inspiring students to reimagine and redesign their degraded urban environment through reflection, collaboration and action (p.140). Her participatory action study engaged elementary students through poetry and observation of artworks. Data from writing and discussion was coded by theme as students reflected on various types of degradation; environmental, social, political, and economic. Envisioning solutions through drawings and collages was a powerful pedagogical tool to empower children's self-confidence and action- competence (Tsevreni, 2014).

The restoration of a wetland provides an "alternative story line" (Somerville, 2014) to the all-too-common tale of destruction natural places. Somerville sees children's artworks as embodying the experience of making new meaning in defiance of the usual nature/culture divide. Repairing the damage that results from the perceived separation of people and their environment lies at the heart of environmental justice. Celedonia and Rosenthal (2011) see art making as a way to broaden the concept of self and "cultivate an expanded self that includes non-human others and living systems" (p.249). The development of a land ethic is critical to healing the relationship between humans and nature (Celedonia and Rosenthal).

Studies involving restoration come to the same conclusion, that art allows children to imagine and create solutions to environmental problems. By offering a path toward action and

thus activism, redesign and restoration through the arts is a powerful tool in the teaching of environmental justice.

Conclusion/Contribution

As Lankford (1997) noted, the “environmental crisis” scientists warned of has had little effect on the populace who, “untouched by the immediacy of ecological consequences, have learned to view such crises as just another news story affecting someone else...” (p.47). In 2020, the scientific warnings of previous decades have become reality and there are far fewer who are able to claim indifference mega-storms, droughts, wildfires and pandemics, all considered to be effects of climate change. (“Coronavirus and Climate Change,” 2020). For all of these reasons, I have concluded that it is essential to create curricula that will engage students in a reflective relationship with the natural world. As an art educator, I believe that art pedagogies, seeking creative and imaginative solutions to environmental problems, must be held up as an example. As I have found, the literature shows not only that the arts are a powerful way to engage students with issues of environmental justice, but more critical eco art pedagogies are needed.

As the theorists of the 80s and 90s found, the social relevance of art education can be greatly enhanced by an eco-art focus. The studies cited in this literature review have been essential to my work developing an art based eco literacy curriculum. Empathy for the environment, understanding environmental racism and reimagining and restoring natural systems are fundamental areas for inquiry, exploration and construction of knowledge within my curriculum design. That the arts allow for a creative and imaginative connection to

landscapes, leading to an “intimacy of place” (Gray and Birell, 2015), crucial for the development of responsibility toward the environment is a key element of my curriculum, as is the role of local artists in facilitating this relationship. As Davis and Schaffer (2019) found, connecting curricular content to the local lived experience of students is also an important pedagogical element which offers students a profound opportunity for understanding, discourse and eventually activism.

Because the arts can provide new ways of contextualizing their place in the land (Sommerville, 2013), they encourage students to envision solutions for the future (Tsevrini,2014). Repairing the relationship between people and the environment is among the most important functions of curricula which bring students into direct contact with environmental issues. As the research has shown, art based eco pedagogy is a fundamental way to bring environmental awareness to school curricula.

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