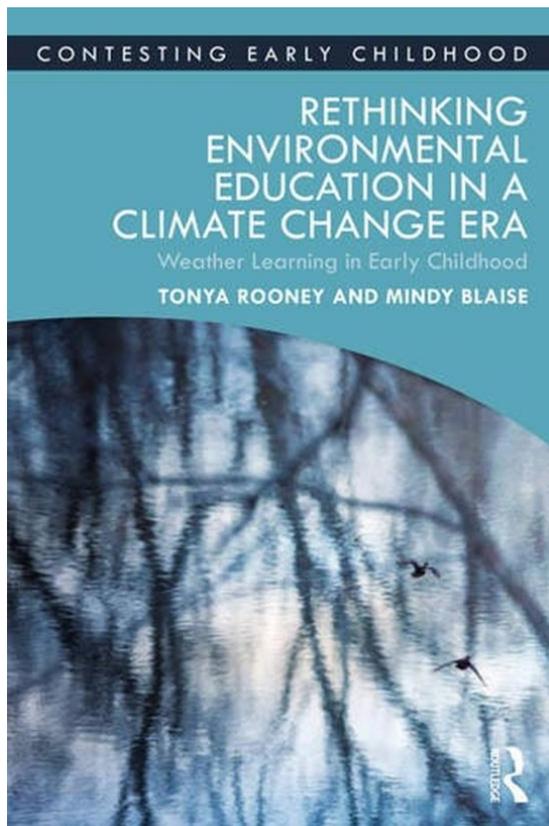


BOOK REVIEW

Peter Oluwaseyi Oyewole
Ayoola Bukola Oyewole
Kent State University, USA

Rooney, T., & Blaise, M. (2022). *Rethinking Environmental Education in a Climate Change Era: Weather Learning in Early Childhood* (ISBN 978-0-367-71344-7, 168 pages, Routledge)



The emergence of the climate crisis has been a significant concern across different branches of knowledge. The book, *Rethinking Environmental Education in a Climate Change Era: Weather Learning in Early Childhood*, addresses the need to reimagine environmental education in early childhood education. The reality of climate change, according to Rooney and Blaise, requires a rethinking and a critical approach to the discourse. The authors noted the escalating unjust damage of lands, forests, waterways, lives, and habitats of other species in the environment, which requires humans to rethink our impacts on the environment and acknowledge our interconnectedness to the Earth.

To rethink environmental education in early childhood education, Rooney and Blaise suggest alternative ways of engaging children in environmental education against the anthropogenic climate change approach, which is believed to be too complex to understand and difficult to include in everyday children's activities. The authors contend that engaging children in weather learning through outdoor exploration "opens-up potential for understanding our everyday human connections to wider climatic patterns and concerns" (Rooney & Blaise, 2022, p. 3).

We agree with the authors' position that engaging children in weather exploration can help foster their curiosity to explore more ecological issues. However, we argue that learning about the weather alone cannot completely achieve this goal. Instead, we need a reconceptualization in early childhood education that reimagines the curriculum across all subjects, which is dominantly human-centric. To reconceptualize, we argue that it requires integrating environmental ethics across the early year's curriculum that ensures sustainable practices, including developing a healthy attitude toward the earth and other species.

Research Approach

Several questions were raised by the authors, which guided the findings in the book. They include: "How can we live well together with more-than-human others in the climate worlds we inhabit together, and what responsibilities does this entail? How might we envisage learning that is ethically responsive and open to ways of living with others, including multi-species ecologies and ecosystems? How might learning with weather help to foster learning that is deeply connected and responsive to the climate challenges of our time? How might strategies such as listening to weather offer ways of thinking differently about human-weather relations?" (Rooney & Blaise, 2022, p. 9).

To answer these questions, Rooney and Blaise conducted an ethnographic study on the child-weather relationship with place and other species. Notably, the authors acknowledged the Indigenous custodians of the lands, the air, and the waterways where the research was conducted. The authors reflect on the cultures, histories, and weather embedded in the land and time in seeking out new possibilities in interacting with the place. This is noteworthy, as having the consciousness of understanding the long history from time immemorial of the land and place has been recognized by scholars as a commitment to the act of justice to the truth and rights of Indigenous people (Woods, Rene & Fitzsimons, 2022; Marsh & Green, 2020).

Data collection involved regular walks on the acres of grassy, lightly treed, urban lakeshore land around the university preschool. Children, teachers, and researchers engage in environmental exploration by walking alongside one another. The author proposed that walking methods exploration can be used to assess the impact on children's science literacy in how children come to understand species, life cycles, and children's physical agility as they scramble over rocks and climb branches of trees. Through the walking method, children and researchers were able to forge deeper connections with the climate and weather via walking, sensing, seeking out, and experimentation. Findings from the fieldwork were shared via photos and stories as told by the adults and the children. Giving voices to both the children and the adults emphasizes the pedagogy in thinking about how children live and learn with weather worlds.

Theoretical and Conceptual Frameworks

The authors use a post-development framework for rethinking early childhood environmental education in a changing climate. They argue that this approach emphasizes the complexities, multiplicities, subjectivities, contexts, provisionality, and uncertainties around climate change.

Rooney and Blaise contend that adopting this approach can potentially lead to the development of fresh pedagogical ideas that diverge from conventional ones. While post-developmentalism can draw from various perspectives, including poststructuralism, postcolonialism, Indigenous studies, Black studies, queer theory, feminisms, new materialisms, posthumanism, and more, as identified by the authors, we see it as most important in understanding that children can be agents of change in the climate change crisis.

The feminist theoretical lens was employed by the authors to rethink human relationships with the more-than-human world, drawing on conceptual insights from feminism and environmental humanities. Through the feminist lens, the authors critique and dismantle binary structures that perpetuate inequitable power dynamics (such as between man and woman, adult and child, and human/nature) and challenge basic assumptions of knowledge, truth, and power that underpin modern worldviews. The authors note that we humans are not hyper-separated from the biosphere; rather, we are an integral part of it. The belief that we have complete mastery and control over the environment is an illusion, according to Rooney and Blaise. While environmental degradation and exploitation of natural resources are human actions, we are also vulnerable to its effects, such as flooding and the rise in temperature.

Beyond feminist perspectives, the authors reflect on the work and influences of the poststructuralist, new materialist, and post-humanist theorists. The authors also draw from the perspectives of the Indigenous people, who are believed to have a knowledge system that has existed for millennia in managing climate. Rooney and Blaise argue that there is much to learn from Indigenous knowledge that looks beyond the boundary of Western science on the climate change crisis. To see through this lens in education, the authors contend that significant changes are needed in education if teachers are to develop pedagogies that move beyond the artificial binaries of nature-culture and human weather.

The authors' reliance on multiple perspectives is commendable. However, it is important to critically evaluate the extent to which these perspectives can be integrated into education to address the climate change crisis. While it is true that Indigenous knowledge systems have existed for millennia and provide valuable insights into the relationship between humans and nature, it is essential to recognize the diversity of Indigenous knowledge systems and not view them as a homogenous entity.

Significant Findings in the Book

The book contains insights and methods, approaches, and critical perspectives on human-weather relations and how this might help to position climate change in environmental education. Firstly, education needs to be reimaged to meet the environmental challenges of our time. Here, the authors argue that "education is suffering from "failure to imagine alternatives" (Rooney & Blaise, 2022, p. 4). This implies that environmental education should be grounded in environmental literacy, using multiple perspectives and looking beyond human-centric to understand the interconnections between natural systems and human activities, leading children to develop a sense of ecological citizenship.

Secondly, the authors propose a new approach to environmental education, which involves children learning alongside weather. Engaging children in this way encourages them to use their senses and establish connections to the climate world around them. The authors highlight that weather can invite children to participate actively in creating new weather worlds.

Thirdly, the authors contend that walking as a method of learning or doing research suggests an active strategy of doing, walking, writing, producing, and becoming with the weather as a paradigm for environmental education, going beyond just offering new ways of thinking. Another important component of this is that spending time in outdoor spaces can positively impact children's physical health, as they have more opportunities for physical activity and risky play. Additionally, outdoor areas with open-ended materials can stimulate children's curiosity and imagination, resulting in free play. Notably, outdoor learning can foster appreciation and respect for the natural world as an essential aspect of environmental education.

Another key idea from the book is that it is insufficient to rely only on science and technology to solve our environmental problems. Rather, an environmental culture that acknowledges the value of the natural world and our dependency on it is required to make sustainable decisions. Additionally, the authors suggest exploring and integrating interdisciplinary perspectives, such as Indigenous wisdom, into education to add to the body of knowledge in addressing the climate change crisis. Indigenous peoples are believed to have co-evolved with the land and have established healthy relationships with the environment and weather. Their perspective, the authors argued, can provide insight into implementing sustainable environmental practices.

Book Evaluation and Conclusions

In summary, the book is a valuable resource for educators, researchers, and parents interested in engaging young children in environmental learning. We strongly believe it achieved its purpose. Most of the author's arguments speak to the study. The authors advocate for a shift in environmental education that develops individual agencies for healthy human interaction with the natural world as a sustainable way to address the problem of climate change.

The study findings and research framework are robust and can be applied to further studies in environmental education in the climate change era. One of the strengths of the book is its focus on early childhood education, which is often overlooked in discussions about environmental education. The authors argue that early childhood is a critical period for learning and development. Engaging young children in weather-related activities can help them better understand environmental issues and their impact on the planet. Another strength of the book is its emphasis on making environmental education relevant and engaging to young children.

One limitation of the book is that it focuses primarily on weather-related activities, which may not be sufficient to engage young children in environmental learning fully. While weather learning is an essential aspect of the environment, many other factors, such as human behavior,

energy consumption, and resource depletion, contribute to climate change, which also requires a rethinking.

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