



Visual Stories as Educational Tools: Multimodal Discourse Analysis of Children's Picturebooks on Environmental Awareness

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Abstract

This study explores the efficacy of children's picturebooks in communicating complex environmental issues to young audiences, focusing on *We Are Water Protectors* and *Autumn Peltier, Water Warrior*. These books utilize the approach of Multimodal Discourse Analysis, to explore how pictures engage and educate about water protection. Through a detailed examination of interactions within these books and with readers, this article highlights how visual narratives can effectively evoke emotional responses and foster environmental awareness among young readers. The findings suggest that such visual narratives not only enhance understanding of sustainability challenges but also serve as powerful tools for social change, inspiring activism, and cultural engagement.

Keywords

multimodal discourse analysis, water protection, picturebooks, education for sustainable development

The pressing sustainability challenges we face today, including climate change, air pollution, and water pollution, are caused by complex interactions between humans and the environment. These issues have captured the concern of global communities, highlighting the urgent need for shifts in public perceptions, values, attitudes, and behaviors (Scoones et al., 2018). In response, UNESCO initiated the Climate Change Education for Sustainable Development (CCESD) program, advocating for Education for Sustainable Development (ESD) across all educational levels, from preschool through high education, as articulated in the 2030 Agenda for Sustainable Development (Cebrián, Junyent, & Mulà, 2020). This means teachers play a critical role in meeting these challenges as they educate and guide students about necessary actions (Ferguson, Rooft, & Cook, 2021). However, introducing such complex issues to young learners is a significant challenge in itself (Goller, & Rieckmann, 2022; Glavič, 2020). For this latter challenge, an increasing number of children's picturebooks have emerged, focusing on themes of sustainable development. These books utilize visual storytelling as an effective tool in ESD, aiding teachers throughout the educational process (Cebrián, Junyent, & Mulà, 2020). While educators continue to employ diverse learning strategies, including problem-based learning, project-oriented learning, experiential learning, simulation games, and case studies (Cebrián, Junyent, & Mulà, 2020; Boulianne et al., 2020; Bascopé, Perasso, & Reiss, 2019), this study concentrates on picturebooks related to water protection. It aims to analyze how these books present complex sustainability concepts to young learners and explore how authors and illustrators effectively engage their audience.

Methods

This study examines two children's picturebooks, *We Are Water Protectors* and *Autumn Peltier, Water Warrior*, which were selected for their thematic focus on water protection. Given the nature of picturebooks that narratively integrate visuals and text, I utilized multimodal discourse analysis (MDA) as an investigative framework. MDA is an approach that delves into communication across multiple expressive modes—not only language but also visual, auditory, and spatial components. This analytical method acknowledges that meaning is constructed and deciphered through semiotic resources

including text, images, layout, gestures, and spoken language (Kress & van Leeuwen, 2020). This study specifically explores the interaction between images and readers, investigating how the illustrator communicates through visual elements.

Analysis

The focus of both *We Are Water Protectors* and *Autumn Peltier, Water Warrior* is on water protection. According to the Next Generation Science Standards (NGSS, 2013) the concept of water is integrated into curricula at all grade levels, tailored to the cognitive and developmental stages of students. For Pre-K and Kindergarten, the curriculum introduces water through sensory experiences and basic concepts such as simple water play, learning about different water sources (i.e. rivers, lakes, rain), and fundamental conservation practices like turning off taps. Students in grades 1-3 delve deeper into understanding the water cycle and the vital role of water in sustaining life. Picturebooks, which offer a multimodal experience combining text and images, are particularly effective in these lower-grade settings, facilitating accessible learning for younger students.

Interaction within the pictures

Characters, settings, and objects were depicted within the illustrations that serve as subjects of the visual narrative. Within these picturebooks, the interaction between characters, subjects, and readers plays a critical role in conveying messages. For instance, physical closeness is a way to indicate relationships (Kress, & Van Leeuwen, 2020; Painter, Martin, & Unsworth, 2013). Characters shown in physical contact often suggest strong bonds or intimate relationships (ibid). In Figures 1 and 2, people, the community members, put their hands into the river,



Figure 1: *We Are Water Protectors* (Lindstrom, 2020)



Figure 2: *Autumn Peltier, Water Warrior* (Lindstrom, 2021)

representing the close relationship between humans and water. In classrooms with young readers, teachers encourage students to observe details and make connections between what happens in the text and similar experiences they might have. This helps students connect with the visuals and begin forming their interpretations. Teachers may ask guiding questions such as: What are the characters doing in this picture? Have you done something like that before? What did you feel when you were doing that? Look

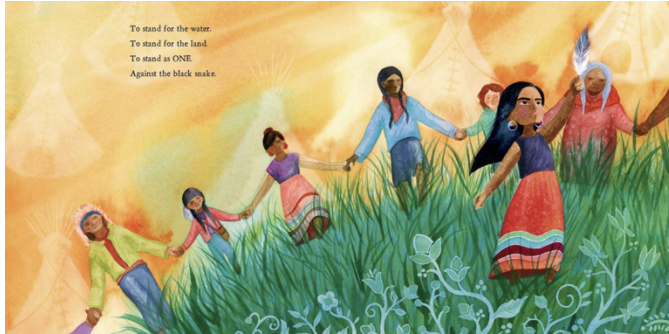


Figure 3: We Are Water Protectors (Lindstrom, 2020)



Figure 4: Autumn Peltier, Water Warrior (Lindstrom, 2021)

at the characters' faces and bodies. How do you think they are feeling? How do you know?

In Figures 3 and 4, depictions of community members with their hands joined together suggest unity and a shared commitment to the cause.

Images of activists linking arms or physically supporting one another during confrontations with authorities showcase the physical and metaphorical support within the community. These pictures show groups in discussion or action, emphasizing collective effort rather than individual reactions. After reading these pages, teachers may guide students to reflect on their personal reactions and emotions

related to the characters' actions. The guiding questions might be: Do you hold hands with your family members sometimes? What about with your friends? What do you feel when holding hands with others? Can you think of a time when you felt like one of the characters? What happened? Such questions help build empathy and help students relate to the themes of environmental protection on a personal level.

Interaction with readers

The illustrators leverage visual elements to evoke emotional and cognitive responses, aiming to inspire reader engagement and action. For example, the cover of *We Are Water Protectors* (Figure 5) features a close-up of the protagonist whose direct gaze



Figure 3: *We Are Water Protectors* (Lindstrom, 2020)

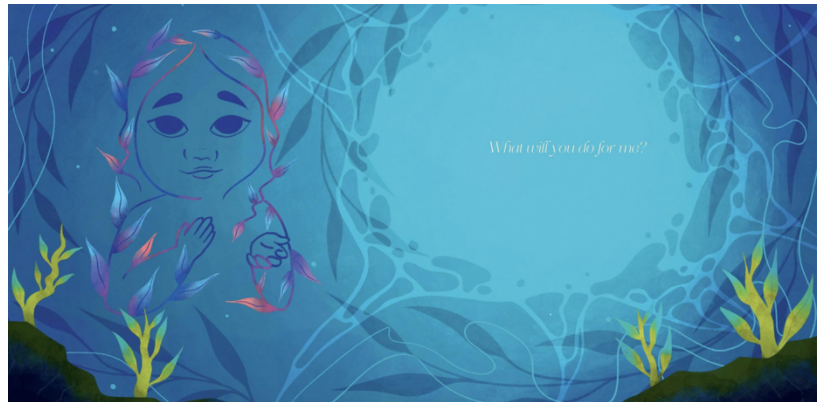


Figure 6: Autumn Peltier, *Water Warrior* (Lindstrom, 2021)

challenges the viewer, setting a serious tone and immediately drawing the reader into the narrative (Kress, & Van Leeuwen, 2020; Painter, Martin, & Unsworth, 2013). This use of direct gaze—a visual tool where characters look out at the reader, also appears in *Autumn Peltier, Water Warrior*, where the protagonist’s direct gaze on the final page accompanies the text “What will you do for me?” (Figure 6) effectively making a visual “call to action”. Teachers could direct students to pay special attention to characters’ facial expressions, including gaze explaining that illustrators communicate certain things to viewers this way. Follow up with questions like: What do you think the character wants the viewer to do? How does the way the character is gazing at you, the viewer, make you feel? What do those feelings make you want to do?

These visual strategies demonstrate how *We Are Water Protectors* and *Autumn Peltier, Water Warrior* not only tell a story but also engage readers in a dialogue about environmental and cultural issues. Both books use the power of visual design to create impactful and meaningful interactions, with *We Are Water Protectors* highlighting a spiritual connection to the environment and *Autumn Peltier, Water Warrior* focusing on active and physical resistance. Teachers can use these visual strategies to help students

empathize more deeply with the characters and better comprehend the important messages in these books. These activities not only make the lessons on environmental protection more engaging, but they also empower students to consider their own potential for impact.

Discussion and Implications

The analysis of *We Are Water Protectors* and *Autumn Peltier, Water Warrior* underscores the potent role of visual narratives in advocacy for environmental education. The illustrations within these picturebooks elicit strong emotional responses, significantly enhancing the impact of their environmental messages. These books demonstrate the educational value of utilizing multimodal resources, combining text, visuals, and narrative to discuss complex topics like activism, environmental policy, and social responsibility. Such resources prove particularly effective in engaging younger audiences, making complex subjects accessible and relatable. Educational institutions can leverage these strategies to deepen students' understanding of critical issues like environmental science, enhancing their engagement and comprehension, especially in early education.

Furthermore, the artistic approaches in these books highlight how art can be a formidable tool for social change. By integrating visual art with narrative, these books not only communicate messages but also inspire action, serving as examples for other campaigns and movements seeking to influence public opinion and behavior. Ultimately, *We Are Water Protectors* and *Autumn Peltier, Water Warrior* exemplify how children's literature can be strategically used to shape societal values and actions. These books engage readers not merely as observers but as participants emotionally connected to the narrative, illustrating the importance of visual elements in enriching the story and theme. For young readers, teachers could focus on the characters' actions and expressions. Older readers can dive deeper into details, such as hue, lines, art forms, etc. This study reveals that thoughtfully crafted picturebooks are more than educational tools; they are catalysts for cultural engagement and change, with the potential to significantly influence future generations.

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