Book Review / Compte rendu

Education and Learning for Sustainable Futures: 50 Years of Learning for Environment and Change

By Thomas Macintyre, Daniella Tilbury, & Arjen Wals
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Education is often talked about as being the *opening salvo* to combat Earth's triple planetary crisis - climate, nature, and pollution, and really any systemic instability of the 21st century. Yet what kind of education is actually required, and whether any of the previous efforts have meaningfully had an impact, remains somewhat unclear. As Miseliunaite et al. (2022) argue, "education does more than react to a changing world; education transforms the world," underscoring the need to critically examine not just educational intent, but educational design and impact. In *Education and Learning for Sustainable Futures: 50 Years of Learning for Environment and Change*, Macintyre, Tilbury, and Wals offer a concise historical timeline of the evolution of environmental and sustainability education from the 1972 Stockholm Conference to the present. At the Stockholm +50 conference, their argument was framed around a stark realization: "What has become clear is the importance of education and learning in addressing what we can term a crisis of culture" (Macintyre et al., 2025, p. 6). The book will be of particular interest to scholars, teacher educators, early-career educators, administrators, and policymakers seeking a framework grounded in fifty years of historical integration to support a shift in the current paradigm of sustainability education.

We, Hearn and Vajko Siddall, each hold a Bachelor of Science degree and are currently completing our Bachelor of Education degree. As part of our program, we enrolled in the course *Interdisciplinary Education for Sustainability* taught by Dr. Chenkai Chi. Through this course, we came to understand that sustainability education extends far beyond scientific knowledge. It encompasses humanistic, social, and ecological dimensions and requires the integration of diverse perspectives and ways of knowing (Chi, 2025). As future teachers, we hope to carry these insights into our own pedagogical practices.

The authors situate this book by tracing the longstanding relationship between humans and the environment, emphasizing our historical dependence and entanglement with the natural world. The text further unpacks how key historical events shifted these ecological frameworks, often driven by concerns about resource scarcity and human survival rather than genuine environmental stewardship. Within this context, they argue that education has always played a central role, asserting that "a major goal of education and learning is to contribute to accelerating the transformations needed to reach the 17 Sustainable Development Goals" (Macintyre et al., 2025, p. 6). Yet despite this longstanding emphasis, "fifty years of policy, diplomacy, and governance have not changed much in our schools, universities and non- and informal systems of education and learning" (Macintyre et al., 2025, pp. 6–7). Rushton (2025) highlights a similar disconnect, pointing to "a persistent gulf between global youth-led advocacy for a greater focus on climate change and sustainability in education and the continued unwillingness from global leaders to reform school education" (p. 94).

Perhaps the book's crowning achievement is its clearly laid-out decade-by-decade format of evaluating emergent trends in education and the environment between the 1970s and current day. Chapters 2–7 each explore one ten-year period, organised around six trends visualised in Figure 1.3: "*Inform and Experience*" (1970s), "*Investigate and Solve*" (1980s), "*Rethink and Engage*" (1990s), "*Connect and Change*" (2000s), "*Reframe and Transform Futures*" (2010s), and "*Regenerate and Transition*" (2020s) (Macintyre et al., 2025, p. 10). These labels provide a memorable mental map of how environmental and sustainability education has changed, and allow the reader to reflect on past trends to yield new approaches in an evershifting scientometric landscape.

The 1970s chapter highlights enthusiasm for positive environmental attitudes as well as outdoor and experiential learning, and an innate love of nature. Earth Day, anti-litter campaigns, and nature studies become common, and converging at a similar

time, international frameworks such as the Belgrade Charter and the Tbilisi Declaration pushed the playing field toward broader goals with the idea that "Environmental Education constitutes a comprehensive lifelong education responsive to changes in a rapidly changing world" (Macintyre et al., 2025, p. 15). Still, the authors underscore the limits of these early efforts, particularly the assumption that awareness alone would translate into action. Jickling (2018) similarly notes that "as currently enacted, education often lacks the capacity to meet contemporary socio-ecological challenges, tending instead to reinforce existing structures and sustain the status quo" (p. 2). Without chances for translational application, learning will remain episodic, yielding students who only remember for assessment and nothing more.

Across the 1980s and 1990s, Macintyre et al. traced a shift from the outdoor learning approach of the 1970s, toward a more analytical system of thinking about sustainability and environmental education. Sponsored by the United Nations, the Brundtland report of 1987 had been highly regarded for its multifaceted analysis of world environmental issues, along with its introduction of the sustainable development concept. The Brundtland Report framed ecological and socioeconomic concerns as interconnected obstacles, challenging the traditional thought of being discrete problems of their own.

The 2000s and 2010s chapters describe the shift from analytical yet fragmented ad hoc curriculum changes toward more systemic and institutional approaches. This includes whole school and institution frameworks, the integration of the Sustainable Development Goals, and the emergence of transformative learning. They argue that this period reflects "calls for the types of education and learning that can speak to deeper layers of thinking and question ingrained assumptions about how we live, govern and organise ourselves" (Macintyre et al., 2025, p. 6). Approached at a higher level of schools and institutions, compared to individual educators, these frameworks carry greater potential for a sustained impact holistically. The institutional turn resonates with Harwood's assertion that "to think with an enlarged mentality means that one trains one's imagination to go visiting" (2010, p. 363).

The 2020s chapter is written under the blanket of worldwide distraction via global instability. The authors again foreground the "critical role of education in transitioning towards a more sustainable world" (Macintyre et al., 2025, p. 7). This decade partly parallels the 1970s with a renewed focus on environmental education, yet it is noted that this is insufficient. Both learners and educators lack the structural support and agency required to transform the desire ignited through education, into concrete action. From an educatio-

nal perspective, this assessment makes clear that continuing to rely on familiar strategies will not be adequate to meet the scale of the current triple planetary crisis. Instead, the authors' framing of the 2020s as a period of *Regenerate and Transition* signals the need for a more fundamental repositioning of education itself: a shift toward actively regenerating the social, ecological, and institutional conditions under which learning takes place.

The final chapter concludes with the authors connecting all the lessons of the previous decades and the argument that sustainability education must be a connected set of learning relationships, and not a chain of standalone episodic efforts. They propose learning landscapes as a way to connect schools with the outside world, in order to engage all towards being environmental stewards.

Macintyre et al (2025) comment on the limitations to the transmissive, classroom approach to the teaching and learning of the time, emphasizing how the model failed to recognize and equip learners with the capacities needed to confront the complex socio-ecological challenges facing future generations, driving a restructuring of educational content and instruction. This critique follows broader perspectives on education, which recognize that "changing one type of ecology requires the others to also change" (Miseliunaite et al., 2022, p. 1), reinforcing the need for learning models that consider the diverse social, environmental, and cognitive factors simultaneously. With the current 'screen time pandemic' and living in the age of overstimulation due to copious data processing, the children are yearning to have an interdisciplinary hands-on, inquiry-driven, and translational learning experience that connects knowledge to real-world contexts. We have seen this firsthand in our classes as early-educators that students who are active problem solvers become more engaged and invested in the content. Holistic educational approaches can achieve these more meaningful learning experiences by harmoniously integrating the intellectual, emotional, physical, social, aesthetic, and spiritual aspects of individual learning (Miseliunaite et al., 2022), allowing students to engage with sustainability not as isolated content, but as lived and relational knowledge. Through modeling ecocentrism, education systems can better develop the next generation of environmental stewards, viewing humanity's fate as one dependent on the health of our world, rather than above it.

The authors were upfront that the book was written in a mainly Western/Northern perspective. In Dr. Chi's class, it was emphasized as a major critique that many sustainability frameworks also ignore Indigenous and alternative knowledge systems such as Eastern and Southern perspectives and sustainability models. A major topic in class was

about the Anishinaabe Eight Fire prophecy teaching, introduced by Dr. Yishin Khoo, guest speaker in the course. “Today, many Anishinaabeg believe that we are now in the time of the seventh fire; the dominant culture [the Western world] has the opportunity to consult Indigenous peoples and to respectfully integrate our ancient knowledge systems into their own practices … If this is done, both peoples will enter the time of the eighth fire together—a time of peace and good life for all. If the disrespect and disregard for Indigenous knowledge continue in this era, we were told, then all will be lost, and all life will end” (Carter et al., 2017, p. 231). By integrating Indigenous knowledge into sustainability systems and not offering it as an add-on to the theorem, the educational sustainability paradigm can finally not be completely blanketed by the western ways of thinking.

Contemporary pedagogy not only addresses that environmental challenges are largely man-made concerns, but also aims to strengthen students’ critical and futuristic thinking when solving complex problems. As highlighted by the Ministry of Education in Ontario, “Students need to have the knowledge and skills that will enable them to understand and deal with complex issues that affect the environment now and in the future.” (Ontario Ministry of Education, 2017, p. 4). Moving toward a transformative, inquiry-based education model empowers students to develop both creative problem-solving capacities and a commitment to environmental action, forming a strong foundation for a sustainable future.

Overall, Macintyre, Tilbury, and Wals provide a concise, accessible, and thought-provoking guide to the past, present, and possible futures of sustainability education. This guide can help educators not only understand where we have been, but begin to imagine what comes next. The book leaves educators better equipped to reflect critically on how sustainability learning might contribute to more just and regenerative futures.

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