

Review of Ecoliterate: How Educators are Cultivating Emotional, Social, and Ecological Intelligence

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Abstract: Daniel Goleman, Lisa Bennett, and Zenobia Barlow, in their book *Ecoliterate: How Educators are Cultivating Emotional, Social, and Ecological Intelligence*, share the stories of a new generation of educators and activists that are displaying the five practices of socially and emotionally engaged ecoliteracy: developing empathy for all forms of life; embracing sustainability as a community practice; making the invisible visible; anticipating unintended consequences; and understanding how nature sustains life. This book provides useful examples and serves as a guide for educators interested in developing a sustainability-focused learning environment for their students through the framework of ecoliteracy. The purpose of the following review is to first present the purpose, argument, and organization of *Ecoliterate*, and to then evaluate the claims and implications it presents for practitioners of sustainability education.

Keywords: ecoliteracy; ecology; ecological intelligence; sustainability education; systems thinking

In the book *Ecoliterate: How Educators are Cultivating Emotional, Social, and Ecological Intelligence*, authors Daniel Goleman, Lisa Bennett, and Zenobia Barlow share stories of a new generation of educators and activists that are displaying the five practices of socially and emotionally engaged ecoliteracy:

- Developing empathy for all forms of life
- Embracing sustainability as a community practice
- Making the invisible visible
- Anticipating unintended consequences
- Understanding how nature sustains life

These stories are of teachers inspiring students into civic responsibility to address the problem of mountaintop coal mining in the Appalachian ecosystem; students taking ownership over their own communities by pushing for oil-free schools in post-Katrina New Orleans; educators moving students from empathy to action by restoring a local watershed in Northern California; and a Superintendent challenging the unequal food accessibility of students in Oakland, CA. This book provides useful examples and serves as a guide for educators interested in developing a sustainability-focused learning environment for their students through the framework of ecoliteracy. The purpose of the following review is to first present the purpose, argument, and organization of *Ecoliterate*, and to then evaluate the claims and implications it presents for educators interested in sustainability education.

Purpose

The purpose of *Ecoliterate* is to explore the framework of ecoliteracy through a series of case studies. These case studies are the stories of people tackling four crucial issues: coal mining, oil drilling, food usage, and water usage. The authors state that “our goal is simply to illustrate, through these four issues, how socially and emotionally engaged ecoliteracy leads to deeply meaningful, inspiring, and effective education” (p. 2) and that schooling contexts are “ideally situated” to tackle these issues (p. 3). Though the case studies and teacher guide in *Ecoliterate* assumes an ecoliteracy-minded audience, they frame ecoliteracy as essential for the kind of learning that meets the most crucial needs of the twenty-first century. Educators unfamiliar with the topic of ecoliteracy find in this book a model of learning that integrates student experience, reflection and action. The final section draws from these stories a collection of professional development strategies for educators to begin infusing curriculum with a sustainability perspective. These strategies empower educators with the ideas and tools needed for transforming their schooling and teaching contexts into ecoliterate communities.

The central problem the authors are addressing in *Ecoliterate* is that we “do not truly grasp how our everyday actions—our engagement in the systems of energy, agriculture, industry, commerce, and transportation on which we rely—can threaten the health and wellbeing of the Earth” (p. 4). They discuss a recent study that articulates nine life-support systems and thresholds on earth that are essential for human survival: climate change; rate of biodiversity loss; interference with the nitrogen and phosphorus cycles; stratospheric ozone depletion; ocean acidification; global freshwater use; change in land use; chemical pollution; and atmospheric

aerosol loading (Rockström et al, 2009). This study describes a “safe zone” for each of these thresholds and that two of these—biodiversity and the nitrogen cycle—are currently beyond the acceptable boundary level needed for long-term sustainable living. Additionally, several more systems are expected to cross the acceptable threshold by mid-century. The authors argue that ecoliteracy is necessary for effectively addressing this problem. They note the challenge of awakening a “young person’s knowledge and empathy” towards the ecological impacts that humanity is making and how this challenge “can be met through the cultivation of socially and emotionally engaged ecoliteracy” (p. 5).

The authors define ecoliteracy as the integration of “emotional, social, and ecological intelligence” (p. 10). This builds on the previous work of Howard Gardner’s theory of multiple intelligences; Daniel Goleman’s social, emotional, and ecological intelligences; and the experiences of the Center for Ecoliteracy—a foundation out of Berkeley, CA dedicated to integrating sustainability into K-12 curricula. Ecoliteracy focuses on creating and sustaining “healthier relationships with other people and the planet” (p. 12).

Organization

Ecoliterate is organized into two main sections. In the first section, *Stories from the Field*, the authors present a series of case studies demonstrating how the five practices of ecoliteracy are being used to address the issues of coal mining, oil drilling, food usage, and water usage.

The authors first present the story of activists fighting against destructive mountaintop coal mining practices in the Appalachian Mountain ecosystem (Ch. 1). Several educators, writers and ex-coal miners demonstrate ecological leadership by occupying the Kentucky governor’s office to bring attention to the harmful practices coal mining has on local communities. Through this experience, one protester, Teri Blanton, reflects on several lessons she learned about ecological leadership: don’t communicate from a place of anger; reach people on the human level through stories; foster dialogue instead of debate; speak from the heart; and make ecological connections clear to others. It is through the second lesson—reaching people on the human level through stories—that *Ecoliterate* challenges its readers to reflect and act in the classroom.

The issue of mountaintop mining is explored again as a history teacher in South Carolina takes students on field trips to explore these practices firsthand (Ch. 2). Students see the before and after ecological impacts of mountaintop coal mining and are challenged to reflect on their experience. This challenges the students to action that spreads the message they have learned. Through these stories, the authors demonstrate the ecoliteracy practices of embracing sustainability as a community practice and of making the invisible visible.

The authors then explore the issue of oil drilling in the Coastal Plain of Alaska and the efforts of students in New Orleans to make their schools oil-free by 2015 (Chs. 3 & 4). The Gwich’in natives develop empathy for all forms of life as well as understand how nature sustains life in their fight to protect the Porcupine caribou that have been a crucial part of their way of life for millennia. However, oil drilling is an issue that has hit much closer to home—figuratively and literally. The Deepwater Horizon oil spill in 2010 spurred students in New Orleans to challenge

their school's dependence on oil. This is a story of a group of students who call themselves the "Rethinkers" and are fighting to make their school oil-free by 2015. They fight through news conferences, student surveys, and presenting recommendations for improving school conditions. These students take humanity's unintended consequences and model ecological literacy by creating strategies to help other schools achieve this goal as well, including measuring waste production, forming student groups to reduce waste, eliminating incandescent light bulbs, and recycling.

Next, the authors challenge the reader to rethink the "universal human connections to local bodies of water" (p. 75) and share the story of a Northern California teacher moving students from "empathy into action" (p. 77) as they restore a local watershed (Chs. 5 & 6). A simple student question, "what can we do to help endangered species?" transformed into a class project that resulted in the restoration of a local creek. In this project, students planted trees along the creek and met with local ranchers. As stated earlier, developing empathy for other forms of life challenges the false dichotomy between humans and all other forms of life. This is exactly what Oregon State professor Aaron Wolf is practicing as he raises global awareness of the "problems that arise from the need of a growing number of people to share a limited supply of water" (p. 72).

In the final set of stories, the authors demonstrate how inequities in children's access to food significantly impact their education, health, and life expectancy (Chs. 7 & 8). Students and educators are challenging these inequities through the practice of ecoliteracy. A group of young adults in Anthony, New Mexico embrace sustainability as a community practice by creating the La Semilla Food Center in their efforts to bring "food justice and economic opportunity" (p. 90) to the local community. This center offers education programs on healthy food indigenous to the local community, and established a youth farm for teaching sustainable farming, permaculture, nutrition, culinary skills, and entrepreneurship.

Nutritional inequity is a critical issue for the growing population of the twenty-first century, which is why Tony Smith, a Superintendent in Oakland, CA, is challenging his local community to "support healthy, local foods in ways that nurture families, communities, and the environment for all students" (p. 108). This is part of his agenda to create the opportunities and resources for schools to provide for the students and families of their local communities.

In the second section, *Professional Development Strategies* (Chs. 9 & 10), the authors discuss ways for educators and their colleagues to transform curriculum to address the threat humanity's everyday actions pose to a sustainable future. The first strategy is to form a learning circle that connects like-minded colleagues into a "learning community." Teaching about sustainable community practice must be a community practice itself. Schools are uniquely situated contexts where this can happen. This learning circle focuses on *personal reflections* for unearthing and articulating personal values on the very issues being discussed with students; *structured conversations* for exploring and questioning these themes; *collaborative lesson design* for educators to think interdisciplinary, as well as across grade levels; and *teaching rounds* for reflecting and improving pedagogy. In addition to learning circles, the authors identify and discuss several other strategies for developing effective learning communities, including leadership, meeting times, establishing agendas, designing physical space, nourishment, etc.

They present a clear framework for developing and implementing learning communities of any size amongst colleagues.

Implications

The central claim of *Ecoliterate* is that the five practices of socially and emotionally engaged ecoliteracy awaken young peoples' "knowledge and empathy" toward humanity's hazardous ecological impacts. As the stories presented throughout demonstrate, ecoliteracy means taking this awakening and acting upon it. This theme of action is central to Fritjof Capra's definition of ecological literacy: "understanding the basic principles of ecology and being able to embody them in daily life" (1999, p. 2). For example, students in Chapter Two, after seeing destructive mountaintop mining practices and reflecting on this experience in class, published a paper about it in a local newspaper, while others cofounded an environmental club. The framework of *experience-reflection-action* is embedded throughout these stories.

In *Section Two: Professional Development Strategies*, the authors suggest structured conversation between those in the learning circles, collaboration on lesson design, and modeling teaching with colleagues for further reflection and improvement of pedagogy. However, if educators read this book with the intention of finding ready-made curricular materials and strategies, they will be disappointed. The authors do not argue for a one-size-fits-all model of pedagogy for administrators to force down upon educators, but rather places the development of curriculum into the hands of those in contact with the students themselves. Though they do acknowledge the "overwhelming pressure on educators to cover a myriad of topics with limited time and resources" (p. 113), they do not discuss in great detail the barriers teachers face in attempting to integrate a sustainability perspective into school curriculum, nor how to overcome them. *Ecoliterate* would benefit from a more sustained discussion of how to transform and infuse existing curricula with a sustainability perspective, and of the barriers to implementing such curricula.

With the surge of research on the role of education and schooling in response to global ecological issues over the past 20 years, educators are now in need of guides and examples for putting these conceptual frameworks into practice. *Ecoliterate* is situated in the broader conversation being held by educators and activists on the role of education in meeting the ecological problems of the twenty-first century. Scholars and educators such as David Orr, C.A. Bowers, Michael Stone, Rebecca Martusewicz, and many others are looking at how the problem of humanity's "unsustainable actions" that *Ecoliterate* discusses are a conflict of values—values of economic and technological salvation rather than of ecological responsibility. Through the framework of ecoliteracy, students in these stories are learning to value all forms of life—human and non-human—and that all this life is interconnected across multiple levels.

It is for this purpose of building a like-minded community of colleagues that *Ecoliterate* deserves to sit in a prominent place on the desk of educators. The reader is provided not only with many clear examples of just how this understanding is manifested in the lives of educators, activists, and students, but also with examples and tools to begin building and shaping their own learning and teaching communities. It is not just another handbook on curriculum development, but a

message of hope to educators who endeavor to transform their pedagogical influence to meet the critical needs of today.

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