

A young child with light-colored hair is shown from the chest up, looking down at a small, dark insect held in their open palm. The child is wearing a light-colored, short-sleeved shirt. The background is a textured, light blue surface. The entire image has a strong blue tint.

# A New Approach to Ecological Education

*Engaging Students' Imaginations in Their World*

A green logo consisting of a stylized, nested 'D' shape with a white border.

Gillian Judson

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# A New Approach *to* Ecological Education

*Engaging Students' Imaginations in Their World*



PETER LANG

New York • Washington, D.C./Baltimore • Bern  
Frankfurt • Berlin • Brussels • Vienna • Oxford

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*Ella Adelle and Chloë Jai ~*  
*May you never lose your sense of wonder.*

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# Introduction

## Re-imagining Ecological Education

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Ecological Education is gaining increasing popularity, its teachings about the interconnectedness of the world being acknowledged as vitally important to dealing with the pressing ecological issues we now face. The development of what some call *ecological understanding* is often cited as the aim of Ecological Education. To understand ecologically is to make sense of the human world as part of, not apart from, nature; it is to understand humankind's "implicatedness in life" (Orr, 2005b, p. 105). The problem, however, is that Ecological Education is ill-equipped to achieve this aim.

Understanding ecologically has an emotional core. One's knowledge about ecological processes and principles is made meaningful and personal by an emotional attachment to the natural world. One of the implications of this attachment is a sense of care or stewardship towards the Earth. We rarely acknowledge, however, that ecological understanding requires imagination, that it has, indeed, an emotional and imaginative core. Examination of the theory and practice of Ecological Education reveals this to be the case. Theorists in the field of Ecological Education are currently overlooking the importance of imagination for the development of ecological understanding. Bringing imagination to the core of Ecological Education theory and practice is what this book is all about.

The pedagogy offered in this book offers Ecological Education a resolution to the difficult situation in which it currently finds itself. On one hand Ecological Education programs strive to fulfill a mandated curriculum and on the other to fulfill the overarching goal of emotionally and imaginatively engaging students with their world. Despite what may, on the surface, seem like suitable pedagogical practices, current approaches to Ecological Education are ineffective when it comes to achieving this larger

goal. Why? Because current Ecological Education pedagogy—at both theoretical and practical levels—pays little attention to the distinctive features of students’ emotional and imaginative lives. In true superhero fashion, I propose a pedagogy that can support both of these objectives; Imaginative Ecological Education offers a way to both teach the curriculum in meaningful ways and support ecological understanding.

### **A Sneak Peek**

Come with me into an Imaginative Ecological Education classroom. Grade 8 students are emotionally and imaginatively engaged in a powerful story about a tiny creature: the hummingbird. The elegance, fearlessness and truly remarkable powers of flight of the first “Hummer” make for a really engaging story. (Who said bigger was necessarily better?). Did you know that hummingbirds’ wings beat between 70 and 80 times per second resulting in a flight speed of up to 48 kilometers per hour? These incredible fliers are the only birds that can hover, fly upside down, forwards, backwards, sideways, or up and down like an elevator. Several hummingbird species migrate from the tropics and Central America to the United States or Canada each year in non-stop flights of about 800 to 1000 kilometers. What fuels these fearless hummingbirds (who, I might add, fulfill their pollinating duties rain or shine when most insects lay low)? Well, in short, *a lot* of food. Hummingbirds require about two times their body weight in insects and nectar per day to make their flight possible. In human terms, that would mean that in order to meet the caloric needs of a metabolic rate like that of a hummingbird one would need to consume 155,000 calories a day (Bailey, 2004, p. 35). Supersize it!

Students learn about hummingbirds in ways that engage their bodies in meaningful ways. They are encouraged to employ their senses in observing the rhythms of the hummingbird, the great speed of its wings, the sound a bird’s wing movement creates, the directionality of its flight. They are given opportunities to become hummingbirds. They express in various ways, from this new perspective, what the world looks and feels like. They attempt the often unpredictable but entirely elegant dance of the hummingbirds they have studied, up then down, in, then up, down, out, then up and so on and on. They explore the musicality of the birds, playing with ways to recreate the music created by the rapidity of hummingbird wings in motion. Students are enlisted as hummingbird watchers in their local neighborhoods, backyards,

or on school grounds. They may even become detectives; which super student sleuth will discover the first hummingbird? Once they notice a bird they may “adopt” it, researching more about this species. What makes this species unique? The hummingbird is a fearless flier—what makes a robin, blue jay, or crow unique? What is a hummingbird’s nest like? Students might create their own nests. They build their own hummingbird feeders and, through some research, figure out ways to make the school ground a more hospitable habitat for birds of various kinds. They become hummingbird experts, collecting as much information as they can about these magical fliers.

In learning about these amazing birds, the natural interdisciplinarity of the curriculum emerges. Students branch off and investigate the migration patterns of other birds they observe in their communities. This natural context connects to their studies of migration in the social studies curriculum. Their studies support learning in science about movement and, of course, flight. They learn about the unique beak of the hummingbird and about its suitability for pollination. From here they learn about the notion of adaptation and the relationship between form and function in nature. Pollination is used as an integrative theme for studying the ecological notion of interdependence and the various roles and responsibilities of members of the natural community. They study their bird species (directly and indirectly through internet and other resources) and use the information as a basis for work in the English curriculum. How have birds been incorporated into daily language? What does it mean when something is “for the birds” or if someone is said to have a “bird brain”? “Birds of a feather stick together” right?

### **Emotional and Imaginative Considerations**

Blenkinsop (2005) comments that educational programs aimed at developing students’ relationships with nature “often bemoan what they perceive as limited change in those relationships by pointing to limited change in the students’ behavior” (p. 286). It is becoming increasingly clear that knowledge of ecological crises alone has not changed human behavior in any significant way. My own encounters with young people have clearly suggested that they seem disillusioned as to how ecological crises have anything to do with them (*why bother recycling, Ms. J?*). Students seem to

be expressing a sense of disconnection with their environment despite increased ecological knowledge.

Why might this be the case? This book considers various possibilities. One possibility is that children's experiences of nature are often vicarious. Rather than through direct experience, children in an increasingly urban/suburban world come to know nature through television, videos, books etc. So, while students are gaining a basic comprehension of what is going on (and going wrong) in the world, they may not be developing an emotional attachment to what they are learning and commonly have no commitment to do anything about it. We are also dealing with a marginalization of imagination in learning. Imagination has too often been understood crudely as something trivial or a frill of education rather than one of the great workhorses of learning required to develop an adequate Ecological Education program. Without imagination we cannot develop ecological understanding, and we will remain ill-equipped to envision alternative possibilities for human-world relationships and resolutions to ecological problems.

Insight into how to improve the practice of Ecological Education can be found in Imaginative Education, a theory developed over the last three decades by Kieran Egan. Imaginative Education is a theory concerned with the centrality of emotion and imagination in effective learning. Egan (1992), drawing on White (1990), describes imagination as the "capacity to think of the possible rather than just the actual" (p. 4). Imagination takes us to the new, the unusual, and the extraordinary. It enables one to encounter the world from different perspectives and to experience different interpretations. With imagination we can, as Greene (1988) describes, "look beyond things as they are,...anticipate what might be seen through a new perspective or through another's eyes" (p. 49). As we conceive of possibilities through imagination, we become emotionally engaged and connect value or significance to what we envision.

Think for a moment about how your emotions and imagination tend to work together. It is rare to experience or encounter something—an object or a process, for example—without having some emotional reaction to it. Consider the baby who falls into fits of giggles when he hears a popping sound. Consider your reaction upon seeing or hearing the baby giggling. Consider how the smell of a certain perfume or flower brings you back to a different time and place in which you have fond memories or, alternatively, negative associations. What these examples aim to show is that our emotions

seem inextricably tied into our imaginations; when we imagine, we think and feel the possible.

Of course, imagination is shaped by one's cultural contexts. In the Western industrial world, imagination is shaped by a specific understanding of nature, of the Earth, and of the rights and responsibilities of the human species. The kind of imagination that inspired the Industrial Revolution, among other great, but ecologically devastating changes, may not lead us into a sustainable era in human history. If we accept that imagination is culturally bound, and that current beliefs in the Western world about nature and about the human-nature relationship have contributed to the Earth's ecological problems, then imagination informed by an understanding of human embeddedness in nature may be required to support more sustainable human-nature interactions. We are in need of imagination shaped by notions of relationship, connectedness, and context; we need an *ecological* conception of imagination.

In this book I conceive of ecological imagination as a flexibility of mind oriented to interdependence and pattern, to the diversity and complexity that characterize natural- and human-world relationships. This type of imaginative process is inspired by one's emotional connection to the natural environment. It can support our understanding of society, culture, reality and the self in terms of relationship. Ecological imagination emerges out of students' participation with the world through activities and learning opportunities in which their bodies, emotions, and imaginations are actively engaged. It seems urgent to expand the breadth, depth, and orientation of how we make sense of the world; we limit our abilities to deal with ecological problems now and in the future if we do not consider how we may educate the ecological imagination.

### Outline

The book is divided into three parts. Part One describes what is currently going on and going wrong in Ecological Education. In Chapter One two examples of school-based Ecological Education programs are explored in some depth. These examples serve to both illustrate the nature of Ecological Education as well as reveal its main shortcomings. Chapter Two argues why Ecological Education is currently ill-suited for the task of developing ecological understanding. Part Two describes a new Ecological Education. Chapter Three describes Imaginative Education in depth, the theory around

which a new, imaginative approach to Ecological Education will be based. Imaginative Education represents a very different approach to education; its applicability to Ecological Education has never been explored. Consideration of the central tenets of Imaginative Education, including notions of “cognitive tools” and “kinds of understanding,” creates as-yet unexplored possibilities for improving Ecological Education. Chapter Four outlines the central principles of Imaginative Ecological Education; both Ecological Education and Imaginative Education are changed as they come together. I outline a framework for Imaginative Ecological Education that maintains key features of Ecological Education but takes a new educational direction. While sharing with Ecological Education an emphasis on teaching students about the Earth and its processes in ways that enhance students’ sense of relatedness within human and non-human worlds, it couples all learning with emotional and imaginative engagement. It brings the development of imagination to the core of practice. It also centralizes the body in the learning process in a way that may enhance students’ sense of embeddedness in the natural world. The imaginative ecological educator will employ “new” cognitive tools in the development of ecological understanding. I argue that cognitive tools that develop students’ sense of place or sense of closeness with the natural world (what I call place-making cognitive tools) should be included along with the cognitive tools that Egan (1997) describes for Somatic, Mythic, and Romantic understandings. Imaginative ecological educators are offered toolkits for educating the imagination that they previously did not have; imaginative educators come away with enhanced toolkits for engaging students’ emotion and imagination in learning. Is a marriage of Imaginative Education and Ecological Education doomed from the start? Chapter Five describes some significant tensions between the two fields, considering if, indeed, the differences are irreconcilable. The possibilities that emerge when the fields come together are shown to outweigh possible conflicts. Part Three is devoted to detailed examples of Imaginative Ecological Education. Chapters Six and Seven examine planning templates suitable for students in elementary through secondary school and offer examples of how one might employ these in teaching. The book concludes with a chapter containing some thoughts and suggestions on how to become an imaginative ecological educator.

## Part One

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### A Brief Overview of Current Approaches to Ecological Education

Ecological Education is rising in popularity. As increased media attention is being paid to the world's ecological problems, people are increasingly looking to schools to do something about them. Educational programs aiming to address the unsustainable nature of humankind's relationships with the world tend to fall under a broad umbrella of approaches ranging in name from Environmental Education through Education for Sustainability. Ecological Education is an educational approach that shares the common purpose of these goals and yet is distinct. It is the relationality of Ecological Education, its focus on nurturing relationships of all kinds, and specifically, students' emotional connections with place that set it apart.



