

# The Role of Mental Imagery in Imaginative and Ecological Teaching

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## Abstract

This article explores how mental imagery evoked from words might enhance the learning of cross-curricular content and how it may help cultivate students' *ecological understanding*: that deep sense of connection to a living world and the care and concern to live differently within it. With reference to Elliott Eisner's and Kieran Egan's works, I offer a rationale for attending more fully to mental imagery in teaching. The article concludes with a discussion of pedagogical implications for more meaningful and engaging school experiences based on students' and teachers' imaginative engagement with curricular content.

*Keywords:* mental imagery, emotional engagement, imagination, ecological understanding, knowledge acquisition

## Résumé

Cet article étudie comment l'imagerie mentale évoquée à partir de mots peut améliorer l'apprentissage d'un contenu inter-programmes et comment cela peut aider à cultiver la

*compréhension écologique* des étudiants : ce sens profond de la connexion à un monde vivant ainsi que l'attention et le souci de vivre différemment dans ce dernier. En faisant référence aux travaux d'Elliott Eisner et de Kieran Egan, je propose un raisonnement pour porter davantage attention à l'imagerie mentale dans l'enseignement. Cet article se termine par une discussion des implications pédagogiques pour des expériences plus engageantes et plus significatives en milieu scolaire, basées sur l'engagement imaginatif des élèves et des enseignants vis-à-vis du contenu du programme.

*Mots-clés* : imagerie mentale, engagement émotionnel, imagination, compréhension écologique, acquisition de connaissances

## Introduction

I am sitting under a sycamore by Tinker Creek. It is early spring...

I have come to the creek—to the backyard stretch of the creek—in the middle of the day, to feel the delicate gathering of heat, real sun's heat, in the air, and to watch new water come down the creek. (Dillard, 1990, p. 87)

I am rereading Annie Dillard's (1990) *Pilgrim at Tinker Creek* and, like the first time I encountered this text, I am stunned at how often I am transported, imaginatively, into her experience. The vivid mental images she creates evoke very strong emotional and sensory responses within me. As I read the text, I am nowhere near Tinker Creek or the great sycamore tree against which she leans for support, but I can *feel* its bark against my back *through* her words. I can *feel* the physical sensations she describes in vivid detail. I sense the world in which I am immersed. I *feel*, moreover, a strange mix of emotions intermingling—humility? awe? confusion? pleasure? concern?—as I am suddenly struck by the abundance of life she brings dramatically into focus through her words.

Annie Dillard is one of many skilled writers whose work I enjoy reading and one who is masterful at evoking mental imagery. She is an artist who uses words to paint powerful, sensual, and emotionally charged canvases in her readers' minds. Her images leave a lasting impression on me—their meaning resonates within me long after I have put down her book—and I am struck by the potency of the mental imagery for evoking my imagination and my sense of wonder.

This sycamore is old; its lower bark is always dusty from years of floodwaters lapping up its trunk. Like many sycamores, too, it is quirky, given to flights and excursions. Its trunk lists over the creek at a dizzying angle, and from the trunk extends a long, skinny limb that spurts high over the opposite bank without branching. The creek reflects the speckled surface of this limb, pale even against the highest clouds, and that image pales whiter and thins as it crosses the creek, shatters in the ripples and melds together, quivering and mottled, like some enormous primeval reptile under the water. (Dillard, 1990, p. 88)

## **Beginning: My Vision of an Imaginative and Ecological Pedagogy**

This article represents the beginning of what I hope will be a larger investigation into the role of mental imagery in imaginative and ecological teaching. I want to explore how mental imagery evoked from words might enhance the learning of cross-curricular content and how it may help cultivate students' *ecological understanding*: that deep sense of connection to a living world and the care and concern to live differently within it. I begin by providing a rationale for attending more fully to mental imagery in teaching. Both Elliot Eisner (2011) and Kieran Egan (1979, 1997, 2005) attest to the potency of mental imagery and its immense value for learning. Both also acknowledge its absence from most classrooms.

I aim to indicate what is possible for teaching if we take seriously Eisner's (2011) notion that the image is the core of education. What I offer at the end of the article is an outline of pedagogical implications and a sketch of the kind of pedagogy required to situate the image at the core of education. An image-focused pedagogy doesn't fit comfortably into the kinds of objectives-based models of education most teachers are taught to use, so I will try to evoke a new image: through the haze cast by our current ways of teaching curricula shines a new possibility for more meaningful and engaging school experiences based on students' and teachers' imaginative engagement with curricular content. While the detailed outline of an image-focused pedagogy is the topic of another article, the sketch I offer here will indicate what is required to support student learning through use of images and how we might cultivate in students, from a young age, the kind of emotional and mental alertness required to experience and evocatively describe the wonder in the world around them.

Throughout the article I offer a sampling of the evocative and inspiring words of Annie Dillard. My hope is that by including her voice alongside my own—and, thus, creating a somewhat atypical format for the article—I can offer you the opportunity to experience the power of imagery for engaging the body and evoking the sense of wonder. I encourage you to linger on her words, allowing the images to arise in your mind.

## **Why Mental Imagery Matters: Insights from Elliot Eisner and Kieran Egan**

Elliot Eisner (2011) places images at the very core of education. He argues that students simply can not learn unless images are tied to the content we teach: “If you want to ensure meaningless verbal learning in your classroom, make sure kids don’t have images for what you’re trying to get them to understand” (p. 31). He notes how images can be employed to represent very complex ideas and, through their unique features, can evoke meanings that transcend language. Images, for teachers, are the means through which we can capture meanings that our words alone cannot express.

Great teachers have long known this: images evoke complex meaning and can enrich that meaning by calling out that which is inexpressible in words. Eisner gives an example of how Socrates tried to evoke the meaning of the nature of knowledge in *The Republic* with the analogy of a line depicting differences in the clarity of knowledge, from conjecture and belief through to understanding. Based on his assessment of Glaucon’s understanding, Socrates realized that he hadn’t been very successful in teaching this concept, so next he evoked the meaning through an image. You are likely familiar with Plato’s image of the cave in Book 7 of *The Republic* (Ferrari, 2000). For most people—and for Glaucon—the image of the cave evokes more meaning than the line analogy does. The image of the cave engages us somatically—we “see,” somehow, the shadows dancing; we feel, suddenly, the sense of uncertainty at what we are seeing; we might have an urge to turn around and, in our imagination, feel our inability to do so, restricted by the chains that hold us. So images evoke our senses and, importantly, our emotions; they evoke meaning that transcends words (Eisner, 2011).

Kieran Egan, like Eisner, acknowledges the pedagogical force of imagery (1979, 1997, 2005). Egan identifies mental imagery evoked from words as one of the most powerful learning tools—or what he calls “cognitive tools”—human beings have for mediating and making meaning of their experiences. However small, the mental images created in our minds carry an affective component; they evoke the human imagination. A powerful image interweaves curricular content with human emotion and, possibly, a physical or somatic experience. As oral bards knew well, evoking mental images with words was an effective way to make the content of stories meaningful for the listeners.

Since human beings began to speak fluently—and had to deal with the challenge of maintaining cohesion within larger social groups—the vivid mental image has been of immense value as a “socializing” and learning tool. It embeds knowledge in a memorable form; it ties up emotional responses with its content. Egan (1997) notes how vivid imagery evoked from words is one of the first thinking tools we develop when we learn to speak an oral language but also one which remains with us throughout our lives.

So, for children or adults, from 2,500 years ago to the present, words can be artfully employed to call forth powerful, memorable images in the mind. Unfortunately, we tend to ignore the pedagogical value of the mental image in our teaching and rarely, if at all, learn about its potency for learning in teachers’ college.

I am sitting under a sycamore tree: I am soft-shelled and peeled to the least puff of wind or smack of grit. The present of our life looks different under trees. Trees have dominion... Trees do not accumulate life, but deadwood, like a thickening coat of mail. Their odds actually improve as they age. (Dillard, 1990, p. 93)

## **Mental Imagery: Some Pedagogical Features**

Eisner (2011) points to the features of images that support their value in the classroom. These include (a) their multi-sensory nature, (b) their connection to human emotion and imagination, (c) their ability to evoke multiple kinds of relationships, and (d) their different forms (what he calls the *recalled* image and the *imaginative* image).

### **Images Are Multi-Sensory**

Eisner (2011) describes mental imagery as multimodal or multi-sensory; images can evoke all the body’s senses:

Images can be formed in any sensory modality. We tend to think about images as being visual, but images can also be auditory. They can be tactile. They can be olfactory. In fact, images can take shape in any sensory modality that operates in an individual. (pp. 30–31)

As Eisner suggests, the language we use to talk about imagery tends to lead us to think of them as visual. His point is that their educational power is tied to the ways in which the entire body can be engaged in an evocative image created in the mind. Have you ever experienced that sudden shift in time and space when a particular smell or sound transported you imaginatively to a different place and time? A powerful image can bring multiple bodily senses into the process of learning. We can learn, through imagery, in ways that use the body's learning tools and contribute to the meaning of the knowledge for students.

### **Images Evoke Emotion and Imagination**

Eisner (2011) also observed that images often go hand in hand with other tools of the imagination. So, for example, curricular content shaped in ways that evoke emotion and imagination (e.g., the story form) also tends to evoke images in the mind. The image, the story form, and other tools of the imagination are powerful tools for cultural cohesion and identity; they are “a form of social currency” that make knowledge meaningful and help convey cultural knowledge (p. 30). Egan agrees. His theory of Imaginative Education<sup>1</sup> (IE) provides a theoretical framework and practical guide for employing a multitude of tools of the imagination. Through the employment of imagery and other learning or “cognitive tools”—tools like the story form, associations with heroes, and a sense of wonder—we tie up content knowledge with emotion and imagination. The content becomes memorable for students; the meaning lasts long after class is over.

### **Images Evoke Relationships**

Eisner (2011) notes that images are *diachronic* and *synchronic*. This is, in Eisner's words, “simply a fancy way of saying that images like the flag offer an immediate presentation of a meaningful configuration” (p. 32). If you are part of the culture in which that “image” has meaning then you can “get it” at once” when you see an image (p. 32). Images are *diachronic* because they express meaning over time. They evoke meaning that is dynamic, developing over time and through experience; they can be recalled, shaped

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1 Visit <http://www.ierg.net> for more information about Imaginative Education.

by new knowledge and emotion. Images are also *synchronic*, as they can evoke multiple relationships simultaneously, often clarifying epistemological relationships that aren't so easily captured through other means (Eisner, 2011). Eisner (2011) suggests that the power of an image to "capture" multiple relationships and meanings simultaneously makes the "concept map" a favourite teaching tool for many educators.

### **Images Are Recalled and Created**

Finally, Eisner (2011) notes at least two kinds of images: *recalled* images and *imaginative* images. The former are those we evoke from memory (e.g., an airplane), and the latter are those that we create by combining knowledge (e.g., a new form of transportation altogether: What might it look like? What would fuel it? How big would it be?). We want our students to be able to recall a vivid image we provide to teach a concept (e.g., the blossoming flower), but we also want students to be able to easily and effectively create their own images that combine their own understandings in new and generative ways.

I am sitting under a sycamore by Tinker Creek. I am really here, alive on the intricate earth under trees. But under me, directly under the weight of my body on the grass, are other creatures, just as real, for whom also this moment, this tree, is "it." Take just the top inch of soil, the world squirming right under my palms. In the top inch of forest soil, biologists found "an average of 1,356 living creatures present in each square foot, including 865 mites, 265 springtails, 22 millipedes, 19 adult beetles and various numbers of 12 other forms. Had an estimate also been made of the microscopic population, it might have ranged up to two billion bacteria and many millions of fungi, protozoa and algae—in a mere teaspoon of soil." (Dillard, 1990, p. 95)

### **The Ecological Dimension: Images Support Understanding of *Otherness* and Interconnectedness**

In this section I hope to illuminate the value of imagery for ecological understanding. To do so, I will begin by elaborating a little on the features of imagery that support learning in general. The multi-sensory nature of imagery, for example, is something that can



support richer, more varied meaning in all curriculum areas for students. But evocation of the body is particularly powerful for realizing and feeling one's somatic involvement in the world. Images that evoke the senses help us to encounter the world more holistically; we can become more alert to how our bodies are connected with our surroundings and we are more likely to feel a sense of immersion or embeddedness in the world.

Images also evoke, as Eisner (2011) notes above, emotion and imagination. It is this imaginative dimension that can support a sense of otherness. Egan (1997) indicates, for example, how mental imagery can allow students to imaginatively experience another perspective:

Images allow us in a limited but very real sense to extend our grasp on the world. Affective images do not need to reduce the content being taught; rather, they provide a means for the child to "incorporate" it. This helps them to see that mathematics, history, and science are not made up of alien knowledge, something out there apart from them. By imaginatively grasping knowledge, children make it, reciprocally, become a part of them. So children discover that they are mathematical, historical, and scientific beings. (p. 62)

Egan's (1997) example of the flower illustrates how mental imagery may support students' imaginative and emotional engagement with the natural world:

When teaching about flowers, one could imagine emerging from the cold ground, pushing toward the light, bursting with a kind of ecstasy in the warmer air, turning with passion toward the sun, feeling the rush of sap, then experiencing the horror of the returning cold, and shrivelling back underground. (pp. 61–62)

Through dramatic embodiment of the content, students can take on, in a symbolic sense, another perspective. They may identify with some aspect of the natural world, as they symbolically "become" it. Deep ecologists (see, for example, Drengson & Inoue, 1995; Fox, 1990; Naess, 1988) describe "identification" as a process in which one experiences a sense of commonality with another entity (Fox, 1990, p. 249). It is my sense that mental imagery (in combination with experiential educational opportunities and sensory development) may support the process of "identification" described in deep ecology literature. By using images we not only tie up knowledge with a vivid mental image evoked from

words and therefore make it more memorable by enhancing its emotional significance, but we facilitate students' ability to attend to and experience *otherness*.

The chrysalids of butterflies linger here too, folded, rigid, and dreamless. I might as well include these creatures in this moment as best I can. My ignoring them won't strip them of their reality, and admitting them, one by one, into my consciousness might heighten mine, might add their dim awareness to my human consciousness, such as it is, and set up a buzz, a vibration like the beating ripples a submerged muskrat makes on the water, from this particular moment, this tree. (Dillard, 1990, p. 95)

Eisner's (2011) point that images evoke relationships over time and space is an important one. From an ecological perspective, we see how vivid mental imagery can support students' sense of relation. That is, images can support students in thinking and feeling multiple relationships at once, including their own involvement in the world. Imagery can capture in time and space multiple levels of relationship between the student and the topic, the topic and the place, the student and the place. Through imagery we can dig deeply into individual relationships, experiencing them as vividly and somatically as possible, but we can also step back to "observe" how we are engaged in a larger web of relationships.

## **Mental Imagery at the Core: Pedagogical Implications**

Situating imagery at the core of teaching has at least four pedagogical implications. First, image-focused teaching and learning will be more holistic. Given the multi-sensory nature of imagery, their use in classrooms will lead to more frequent engagement of the body in learning. We will need to acknowledge that human beings are imaginative beings who perceive, feel, and think simultaneously; we are, as David Kresch terms it, "perfinkers" as opposed to simply thinkers (as cited in Egan, 2005, p. 8). Our bodies and minds always work together in our meaning making. With imagery as a tool, we can create learning experiences for students that acknowledge this important dimension of human understanding.

Second, a pedagogical approach that is going to support a rich use of imagery will work in tandem with other tools of the imagination. An image-focused pedagogy is, thus, an imagination-focused pedagogy. Curricular topics become sources of teachers' emotional engagement. They become the targets of our image evocation and our image creation. Imaginative teaching requires an emotional connection between a teacher and a topic. In order to know how to imaginatively engage their students with a topic, teachers must be imaginatively engaged themselves. This puts a spin on the idea of creating "a sense of wonder" in the classroom. Indeed, what it suggests is that teachers begin planning their teaching by finding what it is in a topic that evokes their own sense of wonder. This is the emotional connection that will then inform all subsequent planning for teaching. This is often the source of the central image the teacher will want to evoke on a topic; it is the emotional and imaginative insight that will inspire the way teachers shape their teaching.

From here, in an image-focused classroom, teachers teach in ways that continue to emotionally and imaginatively engage students in learning. The image, as we know, goes hand in hand with other tools of the imagination and is enriched by—and enriches—those other tools. So the classroom teaching will frequently engage the tools of oral language—those tools that oral bards used long ago, and those that our students come into the classroom already using today to make sense of the world around them. These include the story form, abstract and affective oppositions, humour, rhythm and pattern, and the sense of mystery. A first requirement, for image-focused teaching, then, is that the teacher feels something for the topic. Without this, however cleverly objectives are identified and shape teaching, the crucial connection between teacher, student, and topic that can give the topic some emotional life is absent, and the likely result is lack of student engagement, boredom, and unclear meaning.

Under my spine, the sycamore roots suck water salts. Root tips thrust and squirm between particles of soil, probing minutely, from their roving, burgeoning tissues spring infinitesimal root hairs, transparent and hollow, which affix themselves to specks of grit and sip. These runnels run silent and deep; the whole earth trembles, rent and fissured, hurled and drained. I wonder what happens to root systems when trees die. Do those spread blind networks starve, starve in the midst of plenty, and desiccate, clawing at specks? (Dillard, 1990, p. 96)

Third, the relational nature of images will require a rethinking of the nature of knowledge and understanding. We are reminded through the diachronic nature of imagery that understanding—learning and meaning—are dynamic. If we think of knowledge as “static” in the mind—like a kind of file slotted into so many compartments—then we ignore its reliance on human emotion and experience. If we think about meaning through the image, we see that the mind contains meaning only when it is tied up with emotion, and that meaning lingers, changes, and evolves with new experience and within the context of human emotion. Our images change and shift, becoming meaningful in different ways through time and experience. In this way, images are closely connected to the evocation of human emotion or what Egan (1997) calls the “humanization of meaning.” Egan (1997) argues that knowledge is meaningful—that is, its importance can be understood by us—only within the context of human emotion. That is the plane where it can come alive in our minds. In teaching, then, the mental images we evoke to express the emotional meaning of what we teach will include the human dimension—the hopes, fears, and passions of those involved in the topic.

Fourth and finally, Eisner noted that we both *recreate* and *create* images. An immediate implication of this aspect of imagery is that students need to know a lot in order to recall and create their own images; in order to be more imaginative, students need to know more about the world. Egan (1997) has often argued that education that supports the imagination must be rich with content—we can imagine only with the knowledge we have. Like Egan, Eisner (2011) argues that we need knowledge to recall images and create our own. He also suggests that the role of education is to traffic in images: “Education can be considered, at least in part, as a process of expanding our *imagic* store, and helping students make connections among its contents” (p. 32). Eisner cautions that he isn’t suggesting feeding students streams of static images or that singular images could ever capture all the richness of meaning that is possible with curricular topics, but he does suggest that there are pedagogical advantages to having a rich stock of images to choose from for meaning-making. Our images reflect meanings tied up with human emotion; they are meaningful and can express a wide array of ideas. Eisner also notes, however, that teachers must have the skills to make mental images *public* if they are to employ them in teaching:

The public expression or representation of an image is influenced by the degree to which we are able to observe and by what we are able to represent. The emphasis I want to leave you with respect to that idea is that the articulation of an image—in some public medium—requires certain skills. The better the development of those skills—the more refined they are, the more sophisticated they are—the greater the likelihood that images will be able to be represented in a public way. (p. 31)

Eisner's (2011) point is crucial; the images teachers wish to evoke in teaching to express the meaning of curricular topics will be evocative for students *only* if they can bring them to life, if they can use the kind of language that draws out the wonder in experience. This is the rich kind of language that we see with the "greats" like Annie Dillard. I am not suggesting that only a few gifted writers can use imagery in teaching but, rather, that teachers need to work on evoking those images in terms that are likely much more vivid and detailed than the ones they would typically use to describe the world around them. They need to learn to evoke images in ways that call on the body's senses. Also, to be effective in the ways Dillard is, they should try to add a sense of the unusual, so that something ordinary hints at the extraordinary.

Dillard's evocative images also demonstrate her affiliation with a certain place; she expresses a profound connection with nature that she has developed over time and experience. Teachers and students alike can connect with the natural world through schooling. We can afford students opportunities through all grades to somatically experience the natural world around them and, thus, support their development of emotional connections and knowledge of their local natural contexts (Judson, 2010, 2014 ). Teachers can usefully do the same.

Earthworms in staggering processions lurch through the grit underfoot, gobbling downed leaves and spewing forth castings by the ton. Moles mine intricate tunnels in networks; there are often so many of these mole tunnels here by the creek that when I walk, every step is a letdown. (Dillard, 1990, pp. 95–96)

So, in an image-focused pedagogy, students and teachers alike will develop rich vocabularies around all the topics they are learning about. They may have "collections" (in journals perhaps) of exotic language, favourite words, synonyms, and antonyms.

Teachers will build their “store” of images—whether alone or collaboratively with other teachers and their students. Students will have opportunities for creating and expressing their own mental images tied to curricular topics. To support ecological understanding at the same time, students will have opportunities for somatic engagement—body-based engagement—in the world around them. They will be encouraged to express through evocative language just how they experience the world through their bodies. They can be encouraged to do so by visiting and revisiting particular places in the natural world around them, whether somewhere in the playground or in a local park. Opportunities for somatic engagement and creative expression will be routine aspects of all curricular areas if we acknowledge the image at the core of education.

I do not think teachers can or should do this work alone. Through collaboration with peers they can get support in evoking those ideas verbally. Through collaboration they can also build collections of images—expanding the “imagic store,” as Eisner (2011) suggests. Teachers can collaboratively develop and store prose that evokes images tied to different curricular topics. Our teaching resources contain exercises, project ideas, and many other strategies; I am not aware of any reservoirs of mental imagery.

In addition to developing their own skills, teachers will work with students. If images are to become the core of classrooms, then we want students to be able to express—to make public—their own images. If teachers give proper attention to developing students’ vocabularies, providing them with nuanced and rich lexicons, and devoting time and attention to providing them with opportunities for creative expression, students can indeed make their images public. It is then that we can explore the value of the image not only for learning but also for student assessment and evaluation of curricular content.

Under the world’s conifers—under the creekside cedar behind where I sit—a mantle of fungus wraps the soil in a weft, shooting out blind thread after frail thread of palest dissolved white. From root tip to root tip, root hair to root hair, these filaments loop and wind... (Dillard, 1990, p. 96)

In summary, we see that taking images seriously as a pedagogical tool requires teachers and students alike to learn particular skills. Eisner (2011) argues that there are many words and meanings we try to evoke that have no images. Similarly, there are many curricular topics we teach that may not have an immediate image we can evoke and there are many concepts we might ask students to learn about—and remember—that they don’t

have an image for. He suggests ways we can increase the “imagic store” students have and ways we can help students to make connections among its contents (p. 32). We can teach in ways that encourage students to (a) recall images, (b) create their own images, and importantly, (c) develop the skills to externalize or make the images public.

The insects and earthworms, moles, muskrats, roots and fungal strands are not all. An even frailer, dimmer movement, a pavane, is being performed deep under me now. The nymphs of cicadas are alive. You see their split skins, an inch long, brown, and translucent, curved and segmented like shrimp, stuck arching on the trunks of trees. And you see the adults occasionally, large and sturdy, with glittering black and green bodies, veined transparent wings folded over their backs, and artificial-looking, bright red eyes. But you never see the living nymphs. They are underground, clasping roots and sucking the sweet sap of trees. (Dillard, 1990, p. 97)

## **Concluding Thoughts**

Images can simultaneously draw us into the tiniest of spaces and throw open our consciousness. Images can draw out the particularities of place, bringing into our consciousness the uniqueness of our involvement in the world. Images can evoke students’ sensory engagement, enriching the experience further still by drawing on the body’s sensory participation in the experience. Images in the imaginative and ecological classroom help students to think; they help students to make and express their understandings of diverse curricular topics.

In the image-focused classroom, as part of a broad and rich imaginative pedagogy, we afford students the opportunity for creative expression of their world. The image is thus a tool that contributes to the kind of transformational pedagogy the cultivation of ecological understanding requires. Through the spoken word, students can evoke their sense of being in a relational world; they are speakers, readers, and writers of meaning. Their words evoke and create their worlds and are thus intricately woven into how they understand the world and its possibilities. Their images are dynamic; they reveal a world they are always and forever rereading, rewriting and renewing as they experience it.

Dillard works very hard to “see” the world differently. She carefully and deliberately lives with heightened alertness and documents her experiences with intricate details. Through her words we share her immersive experience. Her words transport us into a different space-time and experience in which we can feel—in some small, but memorable way—the immensity of the universe that she is experiencing. It is possible that by attending to imagery within an imagination-focused pedagogy we may develop this kind of alertness—what Dillard describes as a different way of “seeing”—within our students. By cultivating students’ emotional and somatic alertness we provide rich experience for their own mental images. Paired with learning opportunities that provide them with a sophisticated and sensuous vocabulary, our students can become rhapsodes. That is, they become storytellers as their words about place and their immersion within it evoke vivid mental images. Their words can resonate with meaning long after the class is over.

And under the cicadas, deeper down than the longest taproot, between and beneath the rounded black rocks and slanting slabs of sandstone in the earth, ground water is creeping. Ground water seeps and slides, across and down, across and down, leaking from here to there minutely, at the rate of a mile a year. What a tug of waters goes on! There are flings and pulls in every direction at every moment. The world is a wild wrestle under the grass: earth shall be moved. (Dillard, 1990, pp. 97–98)



## References

- Dillard, A. (1990). Pilgrim at Tinker Creek. In Dillard, A., *Three by Annie Dillard: Pilgrim at Tinker Creek, An American childhood, The writing life* (pp. 1–260). New York, NY: Harper Perennial.
- Drengson, A. R., & Inoue, Y. (1995). *The deep ecology movement: An introductory anthology*. Berkeley, CA: North Atlantic Books.
- Egan, K. (1979). *Educational development*. New York, NY: Oxford University Press.
- Egan, K. (1997). *Educated mind: How cognitive tools shape our understanding*. Chicago, IL: University of Chicago Press.
- Egan, K. (2005). *An imaginative approach to teaching*. San Francisco, CA: Jossey-Bass.
- Eisner, E. (2011). Images at the core of education. *The Journal of the Imagination in Language Learning*, 9, 30–34.
- Ferrari, G. R. F. (Ed.). (2000). *Plato. The republic*. T. Griffith (Trans.). Cambridge, England: Cambridge University Press.
- Fox, W. (1990). *Toward a transpersonal ecology: Developing new foundations for environmentalism*. Boston, MA: Shambhala Publications.
- Judson, G. (2010). *A new approach to ecological education: Engaging students' imaginations in their world*. New York, NY: Peter Lang.
- Judson, G. (2014). *Engaging imagination in ecological education: Practical strategies for teaching*. Vancouver, BC: Pacific Educational Press.
- Naess, A. (1988). Deep ecology and ultimate premises. *Ecologist*, 18(4–5), 128–131.