

# International Journal of Education & the Arts

## Editors

Tawnya Smith  
Boston University

Kristine Sunday  
Old Dominion University

Eeva Anttila  
University of the Arts Helsinki

Christina Gray  
Edith Cowan University

<http://www.ijea.org/>

ISSN: 1529-8094

---

Volume 22 Number 9

August 30, 2021

## **Biophilia and Visual Art Education: Two Teachers Narrate Their Own Connections**

Cynthia Morawski  
University of Ottawa, Canada

Catherine-Laura Dunnington  
University of Ottawa, Canada

Citation: Morawski, C. & Dunnington, C. (2021). Biophilia and visual art education: Two teachers narrate their own connections. *International Journal of Education & the Arts*, 22(9). Retrieved from <http://doi.org/10.26209/ijea22n9>

### **Abstract**

From the remembered moments of observing goldfish glide through water warmed by the afternoon sun, to finding inspiration from a rolling countryside dotted with sheep and lakes, both of us, two teacher educators, have come to reconfirm the integral role that nature plays in the life of our visual art teaching and practices. In this paper, we draw from selected stories of our everyday life to narrate the role that biophilia, affection for plants and other living things, plays in the connections between nature and our own visual art practice to prepare ourselves to facilitate these same connections in teacher candidates. More specifically, we address such considerations as the connections between earlier experiences and our commitment to conserving nature, the integration of the study of biophilia into our visual art

teacher education instruction, and the opportunities we present for teacher candidates to explore their own nature narratives in relation to their visual art teaching practices.

## **Introduction**

To inspire herself to paint before winter storms covered the woods with snow, Georgia O’Keefe “would row the dinghy onto the lake at sunrise when the trunk of the big old birch tree near the dock appeared bleached white and its leaves brilliantly golden” (Lisle, 1980, p. 165). Having visual arts practices and art education backgrounds, we, the authors of this paper, find inspiration for our work all around us. Whether it be a coil of wire oxidized by the air, a ridge of rocks power washed by the rain, the last rose of fall captured in winter light, or wood salvaged from the branch of a fallen maple, nature provides us with an endless supply of working material from which to paint, sculpt, felt, and photograph. Such inspiration can be found from rural to urban locations in such forms as beaches, bike trails, back yards, and a pond situated in the middle of a city park. Ryan et al. (2014) refers to this deep-seated need of humans to connect with nature as biophilia. To nurture such connections “teachers are encouraged to take students out of the classroom and into the world beyond the school to help students observe, explore, and investigate nature, and to design activities that...integrate natural materials into their creative works” (The Ontario Curriculum, Grades 1-8: The Arts, 2009, p. 49). In this paper, we, two visual art teacher educators, draw from selected stories of our journals of everyday life to narrate connections between nature and our own visual art practice to facilitate these same connections in teacher candidates. As Pulvermacher and Lefstein (2016) assert, “developing student teachers into collaborative and critically reflective professionals requires that we deliberately interrogate and inquire into the stories that emerge as they study to become teachers” (p. 265).

## **Biophilia and Narrative Inquiry**

### ***Biophilia***

First used in one of his newspaper articles in 1979, Wilson (1994) defined biophilia as “the inborn affinity human beings have for other forms of life, an affiliation evoked, according to circumstances, by pleasure, or a sense of security, or awe, or even fascination blended with revulsion” (p. 360). Grinde and Patil (2009) provide a simpler definition— “affection for plants and other living things” (p. 1). Furthermore, Hensley (2015) describes biophilia as “nature-friendliness or love of nature” (p. 2). To cultivate biophilia within higher education, Hensley draws from his experiences teaching post-secondary introductory courses on sustainability. In particular, he uses place-based and project-based education in concert with service learning to foster his students’ exploration of ecosystems within the context of their local bioregions located in Southwest Florida. According to Hensley, “education that views

the traditional classroom walls as permeable and embraces the pedagogical possibilities of place-based learning is the kind of education that can advance biophilia” (p. 10).

Focusing on the findings of follow-up focus group interviews with 68 children between the ages of 6 and 12 years of age, Kalvaitis and Monhardt (2015) discovered that the children had an emotional and intellectual appreciation for nature emanating from their specific remembered experiences in the outdoor setting. More specifically, an analysis of the contents of the interviews revealed several themes: home, freedom, exploration and learning, animals, family, work and play. For example, one child expressed that nature was a place where “I can just play and be free” (p. 8). Another child claimed that he liked “finding out about things in nature” (p. 10). Many children revealed their connection to nature in relationship to both wild and domestic animals. The authors conclude that children’s love of nature can provide a jumping off point for establishing a life-long biophilic connection to nature.

Providing opportunities for addressing biophilia in relation to such areas as public health, consumerism, and globalization has become increasingly important in our everyday lives (Moore, 2014). Such opportunities are especially critical considering the more recent increase in time that both children and adults are spending indoors (Larson et al., 2018). For example, after reviewing research from the 1970s to the present, which focused on ways that contact with nature can have on the health and well-being of children, Chawla (2015) discovered that environmental systems of nature, such as parks, green belts, and city trails, are needed for children to engage in creative and imaginative play. Research on the inclusion of plants in indoor and outdoor landscapes (see Hall, 2019; Lee et al., 2015) indicated that their presence in these environments promote connections to emotional, mental and physiological health benefits. Furthermore, Ulrich (1984) reported on the positive influence that a view of nature through a hospital room window can have on the recovery of a patient from surgery. Despite the emphasis on globalization resulting in household products being mass produced in other parts of the world with nonlocal materials, small batch businesses have persisted with the view to supporting sustainability by sourcing local materials for their designs (Walker, 2010). Unfortunately, in many parts of the world, numerous crafts, once a main part of a community’s aesthetic expression and economic security, have all but vanished as a result of mass production and younger people turning to alternative careers paths (Sarma, 2015). As Graham (2007) stated, “in contemporary life and education, the local is marginalized in favor of large-scale economies of consumption that are indifferent to ecological concerns” (p. 375).

### ***Narrative Inquiry***

According to Thomas (2012), narrative inquiry is a rich research process for studying the complex and multilayered processes of lived experiences. More specifically she states, “the focus is not on capturing facts, but rather on the articulation of meaning of experience” (p.

211). Furthermore, Rosiek and Atkinson (2007), who posit that experiential narratives appear to “sensitize the reader to new possibilities of perception and response in the classroom” (p. 513), call for distinct narrative genres such as case studies and memoirs to underscore the value of difference in narrative research representation. Moreover, Leggo (2008) has identified a myriad of possibilities for expressing and representing narrative genres such as cartoons, journals, blogs, film, poetry, and dance.

Through his research project entitled *Teaching Lives*, Bolden (2017) studied the application of a methodology—*musically enhanced narrative inquiry* (MENI) to capture two teachers’ stories of critical moments that shaped their teaching. For example, to represent a teacher’s frustration from seeing a former student being ostracized in his class, Bolden used only the sound of musical motifs differentiated by various musical elements. To articulate the joyful feeling that the same teacher felt during a science lesson with her young students, Bolden used a combination of musical motifs and spoken text in concert with musical processes. Through his research, Bolden demonstrated the immense potential that music has for exploring narratives of teaching.

As part of an action research study to improve classroom practice, five students representing the areas of nursing, counseling, arts education, and classroom teaching, accepted their professor’s invitation to complete their final assignment (a personal narrative on learning differences) using multimodal means (Morawski et al, 2014). With initial feelings and thoughts ranging from skepticism to inspiration, these five students represented the theoretical and practical aspects of their narratives via sculptures, beaded canvases, a book of collage art and an assemblage of popular culture. The five students concurred that the use of additional means of expressions and representations encouraged them to draw on various elements of personal resources, such as emotion and imagination, to reconsider difference as a multidimensional and fluid concept.

To deepen her understanding of her tenure-track experiences as a professor in the field of education, Jack-Malik (2019) returned to the land where she hiked rugged coastal trails and photographed stunning scenes of nature for subsequent working material of self-study. The nonword-like language of photographs, which Jack-Malik captioned with poignant excerpts from *Charlotte’s Web*, along with her poetry representing voices of influential people, helped her to reimagine her own narrative with alternative interpretations and possibilities for future stories “within the larger educational socialization phenomenon of tenure track” (p. 150).

In the pages that follow, we, two visual art teacher educators, come together and draw from selected stories of our life journals to narrate connections between specific biophilic encounters and our own art and teaching practices. Implications for facilitating such

connections in our students are subsequently addressed. To place ourselves in an optimal position to best process and represent our experiences, we too made use of multiple means of expressions, specifically, mixed media, poetry and prose.

### **In Sea Glass Moments: Journal Entry of Cynthia**

“I waded in and out of the dependably warm surf and scrounged for anything I could find in the drift” (Wilson, 1994, p. 8).

Growing up along Long Island Sound, I was drawn to the beach, especially when incoming waves ebbed back to reveal sediments of silica, pebbles, and a rocky shoreline. It was at these moments of low tide, when I would search for once sharp-edged fragments of bottles that the surf had tumbled into translucent mosaics of smoothed glass. One late afternoon in the middle of early summer, I spotted my first find, a wash of blue-green peeking through a furrow of sand made by the footprints of sneakered feet (see figure 1). Placing the piece in my hand, I was wonderstruck by the water’s ability to polish a discarded remnant into an object of aesthetic inspiration. Upon returning home that day, I put the glass in a special spot where I could admire its naturalized beauty.

*Glass, all upcycled by the sea, as objects moving through their own biographies.*



*Figure 1. First find*



*Figure 2. A sea glass moment*

According to Dillon and Howe (2003), objects, “offer an interpretation of the story of their existence; they give back echoes of their past” (p. 289). As a way to always recall those moments of hunting for sea glass on the beach, I gathered together my tools, a spool of wire, and selected pieces from my collection. First, I cut the wire into three graduated strands. Next, with the help of needle-nose pliers, I wrapped the strands of wire around the irregular

contours of each piece of glass. To add another element of design, I set some pieces in rectangles of miniature metal frames found at a garage sale the previous year (see figure 2).

### **Two Tall Pines: Journal Entry of Catherine**

“In their highest boughs the world rustles, their roots rest in infinity...nothing is holier, nothing is more exemplary than a beautiful, strong tree” (Hesse, 1972, n.p.).

There were two giant pine trees (giant when you are seven) smack in the centre of a paved roundabout on a raised grass island. I can only assume the surly business folk who made that housing development felt two small pines would liven the community; make it look homey. How long before the trees dwarfed the houses? My grandparents moved in before I was born, or else I don't remember their lives anywhere else, and as soon as an adult granted me leave, I would fly from the porch for the shelter of the two large pines. A stone sat at their feet. I began my game the same way each time. I pat the right side of the stone table, I pat the left side of the stone table, and then begin gathering “food” from the grass, branches, tiny flower buds and weeds around me.

Twyla Tharp (2003), the renowned choreographer writes, “when I walk into [the studio] I am alone, but I am alone with my body, ambition, ideas, passions, needs, memories, goals, prejudices, distractions, fears” (p. 37). Though I was surrounded by a city, a neighborhood and a river of pavement, I felt alone with those twin pines. Gradually, playing among them, the city faded and I was left with but the inner essence of who I was.

“Viewing scenes of nature stimulates a larger portion of the visual cortex than non-nature scenes, which triggers more pleasure receptors in our brain, leading to prolonged interest” (Browning & Ryan, 2014, p. 24).

I played a game that became foundational to my own creative impulse in life. A cross between fairyland, housekeeping, and storytelling, all of which manifest themselves in my daily life in sundry and mysterious ways. I, like Tharp, found my “studio” in nature and was alone but filled with my “ambition, ideas, passions [and] distractions” (p. 37). I grew up among those pines.

### **Our Reflections**

As we work with teacher candidates, we encourage them to return to earlier memories of encounters with nature, from spending time in an urban park and neighborhood garden to collecting Autumn leaves for an elementary school art activity. According to Pearson & Wilborn (1995), early memories reflect our current view of ourselves in relation to the world

around us. Journals, which Leigh (2012) claims have otherwise been called “notebooks, response journals, illustrated journals, books, or simply art books...visual planners, sourcebooks, and sketch diaries” (p. 539), can provide a rich source of working material to inquire into past and current experiences with nature and visual art. Prompts for uncovering this earlier working material and applying it to teaching visual art can be found in the answers to such questions as the following: Describe three recollections of experiencing nature. How have these experiences emerged in your current visual art teaching with students? Does your current teaching philosophy of art education draw from your earlier experiences with nature? Cenjiz (2020) states, “use of question prompts for journals encourage pre-service teachers in more meaningful reflection and contributes to their growth as teaching professionals” (p. 39).

### **The Owl in the Tree: Journal Entry of Cynthia**

“In the evening, when the tide is high again, and all your guests have gone, you row around to the point, feeling lonely, until an owl asks a question” (McCloskey, 1957, p. 26).

According to the *Audubon Society Field Guide to North American Birds* (Bull & Farrand, 1977), owls represent 130 species worldwide and 17 in North America. Nearly all of the species are nocturnal, except for the snowy owl which hunts in the Far North during the daytime. Marcot et al. (2003) emphasize that as residents of our local communities, owls play integral roles in the conservation of our ecosystems. Personally, I have always found owls to be mysterious and stoic birds who made their presence known with a distinct call. Although I have often heard their haunting sounds from afar, I had never actually come face to face with one until a day at the beginning of early fall.

*I had just passed the foot of our L-shaped street,  
when something made me look up at the old maple tree.  
Partially hidden by the shadow of a pointed leaf,  
stood an owl staring back, looking straight at me.  
Resembling a scholar with those round wise eyes,  
I had to prevent myself from asking for some advice.  
Later in the day, as questions saturated the crisp air  
The owl lectured us on seeing nature everywhere.*

“Just as the first faint light of morning came stealing across the Green Meadows, Hooty the Owl flew to the thickest part of the Green Forest to settle down for the day” (Burgess, 1941, p. 56).

Inwood (2008) asserts that place-based art education can create experiential and memorable connections to the continual development of ecological literacy. To capture the image of the

owl staring at me from the tree, I opened up my tool box and searched my stockpile of materials. A coil of wire caught my attention. With the usual set of pliers by my side, I shaped the wire into an outline of an owl's body. To add dimensionality and texture to the body outline, I attached and molded a piece of chicken wire to it, eventually creating a ruff of curled wires at the neck and tufts on the top of the head. I then wrapped the talons in thicker wire to accentuate their strength. For the construction of the wide and wise eyes of the owl, I selected large metal rings of graduated sizes that I wound with wire of contrasting colors and thickness. The owl then needed a perch, which I made from a jagged piece of drift wood found along the marsh on the eastern shore (see figures 3 and 4).



Figure 3. The owl and the tree.



Figure 4. Whoo are you?

*Although my owl cannot hoot to speak,  
the eyes tell me more than a sharp curvy beak.  
It brings me back to that day under the tree,  
I was reminded that nature is always near me.*

Dillon and Howe (2003) emphasize that a more complete picture of an object emerges when it is connected to a story. In my case, my wire sculpture reconnects me to the owl, whoo, on one day in early fall, chose our street as the platform of its haunting call.

#### **Empty Acorns: Journal Entry of Catherine**

“But are not all Facts Dreams as soon as we put them behind us” (Dickinson, 2016, p. 92).

Centered on the back wall was a table laden with natural elements: pinecones, dry grass, an abandoned nest, a cracked eggshell, desiccated clover buds and wilted dandelions. When I was in my final year of undergraduate studies, I was invited to observe in a nature-based kindergarten classroom. The table at the back, which I soon discovered was called “the nature table,” was most captivating to me. The children went near it with great respect, touching an item or lingering to observe another one, but never really disrupting it. When I asked the teacher about it she nodded and said simply “they always seem to understand, year after year. I never say anything.”

There are three main categories of biophilic design. The first is nature in the space. “Nature in the Space addresses the direct, physical and ephemeral presence of nature in a space or place. This includes plant life, water and animals, as well as breezes, sounds, scents and other natural elements” (Browning & Ryan, 2014, p. 28). Surely “the nature table” fulfilled this premise as it introduced elements from outside into the classroom. Even I could feel that this table was a presence.



*Figure 5. Early figure with acorn cap.*



*Figure 6. Acorn figure with knot cape.*

For years afterward, I kept a small bowl on my worktable filled with bits of natural ephemera I found on walks. Largely I was drawn to empty acorn tops. Though an entire table of natural materials would overwhelm me, and perhaps even deplete the environment around me, a small wooden bowl was modest enough to work. Over the years no other natural items were ever collected. Only acorn tops. In a poem entitled simply *Fall*, Mary Oliver (1997) writes,

“what is spring all that tender  
green stuff

compared to this  
falling of tiny oak trees  
out of the oak trees” (p.5).

...and I wonder if Oliver has said what I feel for the acorn top. Some hidden perfection in the promise of a tiny oak tree, unfulfilled: falling of tiny oak trees. I still keep a bowl of acorn caps, tiny perfect hats stripped of their lifegiving promise, and I find them inspiring. I respect their “ephemeral presence” (Browning & Ryan, 2014).

In my continued search to connect nature and storytelling I often return to the acorn cap for inspiration. In so many of my fiber art making endeavors, the acorn has appeared in my character-ed creations. While these characters do not necessarily fill a physical space in my writing process, dreaming and making them offers me a pause that leaves space for everything else in my thoughts to settle. I use them most frequently as hats, for they do seem to fit so naturally atop the head of an invented person made of wool, wood and cloth (see figures 5 and 6). For me the acorn caps, and the artistic process of reinterpreting them, symbolize both the emptiness and filling so easily found in nature.

### **Our Reflections**

Green’s (2017) case study asked young students to create ‘sustainability artefacts’ then asked them “what story does your artefact tell about sustainability?” (p. 154). When mentoring teacher candidates, we have found that stories can capture the footings of their teaching beliefs and practices (Albers et al., 2010). Using an art object that they have created in relation to nature can help teacher candidates generate the plot lines, settings, conflicts, and characters of their relationship with nature and visual art, especially with the support of such questions as: Why did you select this particular object? Which medium did you use to express and represent your piece? Did you encounter any conflicts? What was the environmental context of your object? How would you use stories of objects in your own teaching? How wonderful that Green chooses the word “story” when we too feel that both teacher and students connected with nature should be listened to for their stories.

### **The Wind in the Kites: Journal Entry for Cynthia**

“SWISH! SWISH! It was spring, and Brother Wind was back. He come high steppin’ through Ridgetop, dressed in his finest and trailing that long, silvery wind cape behind him. Swoosh! Swoosh! Swoosh!” (McKissack, 1988, p. 1).

Joye (2011) contends that the experience of biophilia can also be brought about by nonbiological natural elements such as glaciers and clouds. I would include wind as one of

those elements. For instance, it supplies energy for turning whirligigs propellers, and the movable parts of kinetic sculptures. It helps to spread the seeds of wild flowers that grow in open fields, while carrying water vapor away from clothes hanging over the backyard fence. During a hurricane, the wind can even topple the sturdiest oak tree, while moving a house off its foundation into the neighbor's back yard. One only has to look up at the weathervane perched atop a farmer's barn to know which way the wind blows.

It was in the windy month of March when diamond shaped paper kites, decorated with stripes and images, from spaceships to jolly rogers, would appear in the skies on any given day of the week or weekend. Before the kites could be launched, they needed to be assembled, which soon became second nature to us. Paper framed with a cross of thin balsa sticks rarely made it past more than two flights. Either they ripped, became tangled in a nearby tree, or nosedived into the ground because of a too short tail, usually made from strips of rags. Sometimes, a kite would even break free from its bridle and eventually disappear over the horizon. But when the conditions were right and the kite caught the wind, we experienced the joy of feeling the tug of its string as the kite reached over the baseball field, adjacent marsh lands, and inlets connecting to the Sound. Dyson and Dyson (1989) maintain that the many hours of enjoyment provided by flying kites are right at your fingertips. All you need to do is call on Brother Wind.



Figure 7. Flying kites.



Figure 8. Tangled in the wires.

“Now the wind is lessening, singing loud chords in the treetops. Lessening, it hums as you go up to bed” (McCloskey, 1957, p. 50).

Using pieces of roving and metal wire, I felted remembered scenes of kites soaring above hills and houses, sometimes catching in power lines, occasionally snagging in trees. After reaching into my bag of fiber for colors that would depict the sky, I picked up my needle and began to felt (see figures 7 and 8). Variegations of cornflower, aquamarine, cerulean, gray, white, and

blue-violet melded into a backdrop for kites to take flight against the wind. After filling in the scene with felted fibers of houses, flowers, hills, and fields, I put down my needle and picked up my pliers. Using thin strips of steel-colored wire, I added details of design and structural elements.

*Fences laden with magenta and lemon colored flowers,  
Gingerbread adorning a three-story Victorian tower.  
Window frames for the attic and blue front door,  
And the reflection of the sun warming every single floor.  
The curve of metal wire delineating distant hills to climb,  
Where winds once sailed our kites in the early spring time.*

Danko et al., (2006) comment, “narrative thought embraces context-dependent, subjective perception, and is concerned with particulars of time and place” (p. 10). It is my felted recollection of once flying kites into the wind that reconnects me back to nature in the month of early spring.

### **The Devil’s Foot and the Cocklebur: Journal Entry of Catherine**

“On examination, we found that all the leaves, bark, and other substances, were traced with written characters” (Shelley, 2017, p. 4).

Velcro®, a product so synonymous with its brand name we use the two interchangeably, is not simply a product born of polyester fibers and plastic thread. Though I have sewn with it countless times, the product never ceases to amaze me. Before I ever noticed it on my clothing, shoes, or home goods, it was nature that brought it to my attention. As a fiber artist I often wonder about the origins or the items I use. What sheep grew this wool? What hands dyed this cotton? And, in the case of Velcro®, how did nature inspire something so infinitely useful.

There was a large manmade crater near my grandfather’s ancestral home where we would go walking. “The Devil’s Foot” he called it, eerily telling us young children that it was so named because Satan himself had stepped here. I was not scared, but I was fascinated. On one such walk a cocklebur stuck to my long-braided hair and I cried bitterly as my grandfather soothingly tried to disentangle it. As I vowed never to return to my beloved “The Devil’s Foot” with him, he held up the bur and told me to take a closer look. Then my grandfather, an exceptionally mild-mannered storyteller, told me that this lowly bur was the beginning of one man’s journey to create the revolutionary product Velcro®. In 1941, an engineer in Switzerland, George de Mestral, went on a hike with his dog only to come home covered in burs. By observing the interlocking fibers, naturally occurring on the plant to move its

seedpods further afield, de Mestral was able to create a synthetic bur in his lab. It took him eight years. “Doing something unusual requires hard work” (Wilson, 2014, as cited in Powell, 2014, p. 4).



*Figures 9 & 10. Changing pad views.*

“Doing something unusual requires hard work,” and yet nature is full of the unusual and it always appears so effortless! Now I use the occasional strip of Velcro® when I sew household items. I buy the Velcro® at the thrift store and repurpose it into fastenings for cushions and coverings that need to stay put. Most recently I made a changing table cover, white with small colored polka dots, and reinforced the edges with Velcro® so it would stay attached to the table securely (see figures 9 and 10). While a changing table cover is a practical household item, the process of making and planning for it invokes my own artistic practice. As I hand stitched in the Velcro® corners I consider the gentle curves of the quilt lines I have stitched and the organic pattern of the dotted fabric, each colorful splotch asymmetric and unique. Reflecting on the core values of biophilic design Brown et al. (2014) note that “we have a visual preference for organic forms...while our brain knows that biomorphic forms and patterns are not living things, we may describe them as symbolic representations of life” (p. 38). I consider all the elements of nature wrapped into this one changing pad: the stone carved away into “The Devil’s Foot,” to cocklebur snared to my braid and the organic cotton I now sit and stitch. I sew the corners, and I try to hold the incredibly orchestrated dance required by a world that can produce anything as seemingly simple as the cocklebur, and anything as unassumingly complex as a grandfather.

### **Our Reflections**

Moving our visual art methods classes from the four walls of a classroom to the outdoors would provide teacher candidates with a plethora of possibilities to continue inquiring into their teaching narratives via biophilia. Like Inwood (2008) and the group of elementary school teachers who collaborated to develop and implement eco-art education, our teacher candidates, with their multimodal artist journals in hand, would have endless opportunities to critically explore nature in relation to visual art in such settings as parks, city trails, green belts, bird sanctuaries, and the marsh next to a local school. Creating art installations in a neighboring garden, designing and painting a nature-themed mural on the wall of an urban building, drawing imaginary animals from the cracks in the sidewalk (Sonheim, 2012) and even constructing kites out of recycled materials and flying in them in the March wind are just some possible vehicles of inspiration to be found in these places. Smith (2002) claims that such sites of learning can break down the boundary between classrooms and the world beyond, while garnering both interpersonal and personal investment in the community.

### **Fish Tales: Journal Entry of Cynthia**

“Then, hidden in the dark shade of rocks and weeds, he saw a school of little fish, just like his own” (Lionni, 1973, p. 19).

When Windhager et al. (2011) studied the biophilic effects of installing an aquarium in a shopping mall, they concluded that “even a small aquarium might make a difference and offers an opportunity to include benefits of nature where spatial and financial resources are minimal” (p. 29). Growing up, both salt water and fresh water ecosystems offered numerous opportunities to observe the movements, colors and textures of fish. For example, synchronized schools of minnows darted back and forth in perfect unison. Snapper blues, as their name implies, often showed their true colors of greenish-blue. Eels would occasionally appear propelling themselves in undulations through the water near the dock. Captivated by these sights, I decided to buy some goldfish and a glass bowl for their home. Soon realizing that the fish needed more room to move about freely, I upgraded to a tank. Adding plants, multicolored gravel, a castle, and a deep-sea diver, I watched the golden bodies glide through the water, exploring their new home. Although that tank no longer exists, my memories of studying those gold fish for hours still remain with me in the present.

“And when they had learned to swim like one giant fish, he said, ‘I’ll be the eye’” (Lionni, 1973, p. 26).

Whenever I consider creating a new piece of artwork, earlier experiences often seem to permeate my choices. Remembering the glitter of light created by the motion of the gold fish

swimming in and out of the objects and plant life in their tank, I decided to make a hanging sculpture of them. Rummaging through my boxes of found materials, I selected three brass colored lamp harps for the body of the fish. Picking up my light green knitting needles and a roll of copper wire, I used the basket stitch to depict their scales. Next, to represent the glints of light circulating in the water, I attached crystal prisms from former chandeliers to their bodies, along with pearls taken from the remnants of a flea market find. To finish the sculpture, I wired the fish together, positioning one above the other. As a final step, I placed a hook in the upper slant of the ceiling and hung the sculpture over my desk (see figures 11 and 12).

*When I open the window and a breeze stirs the air,  
the goldfish move in unison, stacked in their three tiers.  
I then begin to imagine them living in the sea,  
Together, swimming back and forth and all around me.*

Like the artist educators in Strickland’s (2020) study on their lived experiences of teaching and practicing visual art, I continue to aspire to be an “open and reflective explorer of the world through artistic expression” (p. 233). My hanging sculpture of fish is one more story to add to my recurring narrative featuring the relationship between biophilia and my visual art.

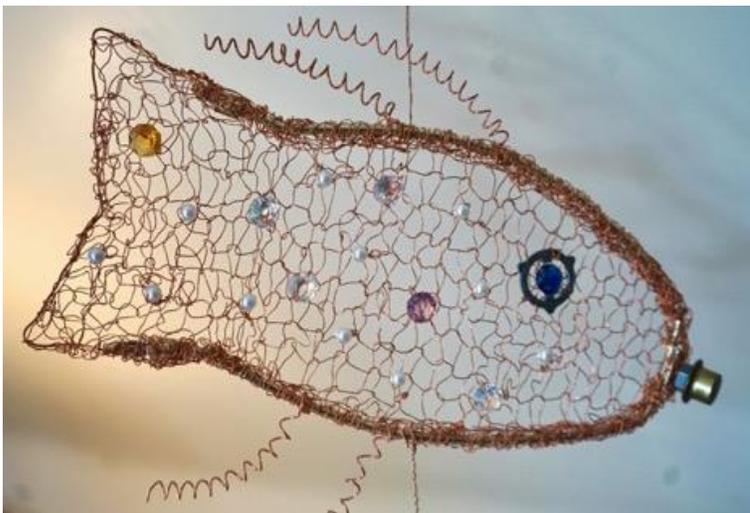


Figure 11. Fish harp.

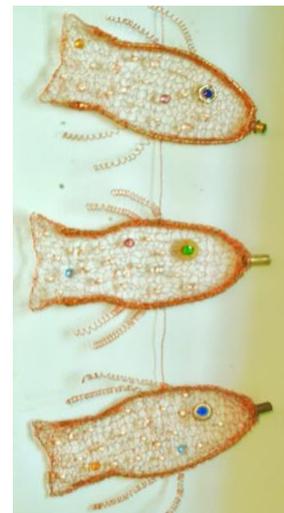


Figure 12. Fish mobile.

### **A Crown of Twigs: Journal Entry of Catherine**

“[...] and rabbits, sitting at their front door in the hedgerows, held up their fore-paws, and said, ‘O my! O my! O my!’” (Grahame, 1908, p. 34).

Pulitzer Prize winning entomology professor, and author of the book *Biophilia*, E. O. Wilson (1986) remains a remarkable advocate for nature. The book *Biophilia*, though it has many ties to larger implications of conservation and nature affinity, also describes Wilson's own boyhood narrative of finding and loving nature. These early impulses of loving nature carried him through one of the most successful and prolific careers in entomology of all time (Wilson, 1986). In an interview for the *Harvard Gazette* Wilson describes his earliest impulses as an entomologist: "I had a net, which my stepmother made for me from a coat hanger, cheesecloth, and a broom handle. So, I was off and running" (Wilson, 2014, as cited in Powell, 2014, p. 2). A simple tool, lovingly created with materials found in the home, was partially responsible for beginning the career of this most passionate and hardworking man. I remember my father helping me make a crown out of fallen twigs and snips of wire. I collected small dry branches from among the brambles near our home. Taking a purple crayon and the napkin that sat on the table I sketched for my father the shape of the crown I envisioned: open in the back with three peaked corners in the front, each sporting a desiccated wildflower. As a child I had strong aesthetic vision I found unignorable. My patient father, who surely had other things to attend to, nevertheless manned the secateurs and wire-snips deemed too dangerous for a six-year-old girl.

No memory seems to exist as to *why* I wanted a crown made of twigs, but I know that once fashioned in a hardworking afternoon, I wore and wrote it. By wrote it, I mean that the crown entered into each story I told my childhood self. It eventually disintegrated beyond repair. I insisted my friend and I bury it behind a bush in my grandmother's yard. Who knows what early impulse led to me *know* the crown was a thing of artistic life, deserving of burial. Kiewra and Veselack (2016) write that "playing with materials provided by nature has the added value of helping children learn to care about nature" (p.72). I cared so deeply about my natural made crown it took on life for me.

Today I take twigs from my own back yard to move out of the way of my lawn mower. Instead of tossing them aside I bring them in and try to recreate the crown of my childhood; I work to reignite the art project that once was so captivating it required a funeral. I use recycled twist ties from bakery bread and make a simple circlet of twigs. I chose to leave it unadorned, to help it remain a natural, yet artistic exploration, or the "ephemeral presence" of nature (Browning & Ryan, 2014). I place it in the centre of my dining room table to gaze at when I sit down to dinner.

### **Our Reflections**

In his research on place-based education, Smith (2002) refers to children's use of their school grounds as a living laboratory, where they planted vegetables, created small wetlands, replaced the lawn with native species, and added a compost pile and worm bins. Taking the

concept of living laboratory and applying it to the grounds of a university campus, teacher candidates could consider ways in which visual art can transform their surroundings. Lai and Ball (2002) refer to such a process as “exploring the places people live through art education” (p. 47). Each teacher or smaller groups of teachers could focus on a specific representation of nature found on campus, and then use it as a jumping off point to critically inquire into its possible meanings for life there. A planter filled with neglected rusting evergreen bushes, a pinecone found at the bottom of the side door, the lone tree standing across from the shuttle stop, or the recently moved grass in front of the administration building are just a sampling of possibilities for moving the representation to visual art projects in such forms from a flower garden installation on the lawn to a renewed line of planters filled with well-cared for shrubbery. As Lai and Ball (2002) state, “thus, we especially believe that, when it is feasible, educators should consider incorporating art from the places they actually inhabit in their teaching” (p. 64).

### **Flower Power: Journal Entry of Cynthia**

From April through November, in fields, meadows, and by roadsides throughout the United States and Canada blooms the sweet-scented Red Clover (Everett, 1956, p. 22).

Whether staged along a cobblestone walkway, or appearing in summer fields adjacent to marsh lands, flowers bring color, texture, and shape, as they decorate our natural and manufactured worlds. In fact, McCaffrey et al., (2010) claim that outdoor gardens can have a positive impact on an individual’s physical and psychological health, including cognitive and emotional wellness. From an early age, I noticed flowers. Fuchsia colored hollyhocks planted by the back yard retaining wall. Red clover interspersed among blades of grass on the front lawn. Queen Anne’s lace and chicory dotting the landscape of the parkway road. Climbing pink roses trailing down the trellis next to the screen door. A lone daffodil presiding over third base in the field behind the corner store.

With my guidebooks by my side and my nature journal and colored pencils in front of me, as a second grader, I would often spend time drawing different species of flowers, adding descriptive labels at the bottom of each page. In fourth grade I joined the Junior Sprouts and planted a small strip of a garden close to the back-porch railing. Using a watering can with a sprinkler spout, I would water the garden each day as the seeds turned to seedlings and then flowers. To my surprise, when I entered them into the children’s garden show, I won first place for my nasturtiums and third for my petunias arranged in a polka dot glass vase. To this day, wherever I might be, I will always take time to stop, examine, and admire the organic beauty of flowers.

“To the farmer, the Bull Thistle is a troublesome weed, but to the bees its deliciously fragrant flowers are sources of food” (Everett, 1956, p. 43).



*Figure 13.* Cosmos.



*Figure 14.* Watercolor samples.

Flowers need water to thrive. I needed water to paint flowers from the garden below my second story window. Solomon’s Seal, Cosmos, and an array of petals colored in the tints of pastels. To document the stunning facets of the flowers, I tore a sheet from my acid free pad of watercolor paper. After sketching an under-drawing, and then applying a wash of water, I began to pull and dab paint, sometimes building up layers, other times adding a single stroke of green. As I painted each part of the flower—the stem, the leaves, the blossom—I came to recognize that nature is truly a remarkable designer providing us with patterns of light, color, space, and line (see figures 13 and 14). Over the course of several centuries, botanical artists and illustrators underscored the power of observation as they depicted in minute detail the particular traits of plants. Despite recent advancements in photography, botanical portraits continue to be produced using such mediums as pen and ink, watercolor, and pencil, all aided by magnifiers, microscopes, and lighting. As Hickman et al. (2017) claim, “botanical illustration brings sharp focus and meticulous attention to detail regarding form and structure of plants” (p. 291). And plants bring sharp focus to my painting.

### **Knitting the countryside: Journal Entry of Catherine**

“When we share artistic traditions, we are not merely giving children stories and pictures to enjoy” (Gurdon, 2019, p.151).

Beatrix Potter was a childhood hero of mine. Her minute illustrations of puddle ducks and naughty bunnies filled me with admiration and longing. I was fascinated that someone was able to use watercolors, which I had always found to be a fussy and unforgiving medium, to

create detailed miniature worlds. “Consider all the ways in which storybooks conspire to help children maintain their attention” (Dickson et al., 2012, p. 6). I was paying attention to far more than Potter’s storylines; I was immersed in her version of the natural world. Her landscapes, painted in 4-inch squares, conveyed a rolling countryside dotted with sheep and lakes that I desperately wanted to visit.



*Figure 15.* A cottage in Potter’s country.



*Figure 16.* Herdwick sheep at a distance.

It was only in my early thirties that I did finally visit those minute landscapes, blown up to life size vistas. Touring the Lakes District of England on foot with my new husband, I soaked in the world she painted, and I had dreamed of, for years (see figures 15 and 16). There were her sheep! There were her lakes! There were also countless ivy hedges, dandelion tops, carrot varieties and lazy ducks that while Potter might have seen every day were, to me, a new world to integrate right alongside my old dream one.

I never mastered watercolor. I did however learn to knit using chunky wool from the sheep of the English countryside. Cable sweaters, striped socks and delicate lace shawls: once I threw myself into knitting, I was determined to master as many techniques as possible. No doubt Potter, who was also an avid sheep breeder and agriculture advocate knew a thing or two about knitting needles, though I like to imagine she preferred sturdy hardworking knits to flimsy lace or shell-button cardigans. When I returned from my trip into her world, I needed an outlet, an artistic space, in which to reinterpret Beatrix Potter’s world. I turned to knitting. Unlike her watercolors it was an abstract, yet utilitarian, medium in which to recreate her world. Yet, Grant (2016) reminds us that “art does not merely reproduce the appearance of things; rather, it reveals something humanly significant in and through those appearances” (p.161). I set out to knit a sweater for myself that would envelop me in the colors, textures and sturdiness of the landscape I had fallen in love with. What emerged was a simple moss green

turtleneck sweater knit with thin but sturdy wool. Whenever I wear this functional art, I am reminded of her masterpiece works and beloved landscape.

### **Our Reflections**

When Davis (2018) conducted a case study on an arts-based project created for elementary school children to learn about trees in their local environment, she found that the creation of visual art work furnished a motive and setting for the students to engage with the natural environment. That is, photographing nature, drawing at the beach, and making charcoal drawings of selected trees, all contributed to their growing awareness of nature as an integral part of their lives. Appreciation for nature can emerge in many forms, from taking the time to observe a red-headed woodpecker searching for bugs in a tree, admiring the field flowers along the parkway, or knitting the scene of the country into a sweater. Teacher candidates need to realize that they can play integral roles of moving our world of nature from the background into the foreground of our lives. More specifically, Inwood (2008) asserts that visual art teachers can play integral roles in encouraging others to gain a greater sense of awareness and responsibility toward the environment

### **Concluding Comments**

Graham (2007) posits that art education creates opportunities for students to engage in thinking and art making that considers vital questions about nature and ecology. In our journal entries and subsequent reflections, we referred to research that featured projects intended to help students become more appreciative and responsible for their natural surroundings. For example, Davis (2018) reported on arts-based activities that motivated elementary students to learn about the nature in their local community by studying trees. Inwood (2008) worked with a group of elementary teachers to develop eco-art activities that allowed them to feel better prepared to incorporate visual arts into nature studies, while having gained a greater sense of responsibility toward the environment. After carrying out an 18-week instructional unit that focused on creating eco art to study three local artist, Bertling (2015) found that her middle school students were more aware and empathetic of their natural surroundings. A key theme that emerged throughout these and other studies is the notion of self-awareness regarding nature and its conservation—a critical building block for incorporating the study of nature into the implementation of a visual art curriculum.

By reaching into past experiences regarding biophilia and relating them to our current art and teaching practices, we created opportunities to strengthen our commitment to conserve nature, and, in turn, prepare ourselves better to help visual art teacher candidates do the same for themselves. Making use of multiple modes of expression and representations, from photography to sculpting, provided us with a variety of ways to consider our subject matter.

Short et al. (2000) advocate the use of multiple means of communication because there is more potential to create new ideas and understandings, rather than simply transferring the same meaning via the same sign system.

Fascinated by the outdoors from the time she was a child, Jan Thornhill wrote about numerous elements of the natural world in the pages of her exquisitely illustrated picture books (<http://www.janthornhill.com/home.html>). Intrigued by their remarkable beauty, Wilson Bentley photographed hundreds of ice crystals to “show these lovely things to people who never would have seen them without [his] help” (Martin, 1998, p. 30). Drawing inspiration from naturalists such as Thornhill and Bentley, we have come together in this paper to narrate our experiences with nature in relation to our art practices and teaching to prepare us to do the same in our own students—future teachers of visual arts.

From the remembered experiences of harnessing the energy of the wind on a weekend morning to finding inspiration from a rolling countryside dotted with sheep and lakes, both of us have come to reconfirm the integral role that nature plays in the life of our visual art. As the summer season draws to a close, and autumn begins to bring another palette of light, color, and texture to our natural world, we will be looking forward to providing our students with opportunities to incorporate the study of nature into their own teaching of visual arts for their students. As Inwood (2008) states, “art education offers a dynamic way to increase the power and relevancy of learning about the environment by providing an alternative means of furthering learners’ ecological literacy” (p. 30).

### References

- Albers, P., Holbrook, T., & Harste, J. (2010). Talking trade: Literacy researchers as practicing artists. *Journal of Adolescent and Adult Literacy*, 54(3), 164-171.
- Morawski, C., Hayden, K., Nutt, A., Pasic, N., Rogers, A., & Zawada, V. (2014). A gallery of multimodal possibilities in a graduate course on learning differences in education. *International Journal of Education and the Arts*, 15, 1-31.
- Bertling, J. (2015). The art of empathy: A mixed methods case study of a critical placed-based art education program. *International Journal of Education and the Arts*, 16(3), 1-26.
- Browning, W.D., Ryan, C.O., Clancy, J.O. (2014). *14 patterns of biophilic design*. New York, NY: Terrapin Bright Green LLC.
- Bull, J., & Farrand, H. (1977). *The Audubon Society Field Guide to North American Birds*. New York: Alfred A. Knopf.
- Burgess, T. (1941). *Mother West Wind's Neighbors*. New York: Grossett and Dunlap.

- Bolden, B. (2017). Music as method: Musically enhanced narrative inquiry. *International Journal of Education and the Arts*, 18(9), 1-19.
- Cengiz, C. (2020). The effects of structured journal on reflective levels: With or without question prompts. *Australian Journal of Teacher Education*, 45(2), 22-43.
- Chawla, L. (2015). Benefits of nature contact for children. *Journal of Planning Literature*, 30(4), 433-452.
- Danko, S., Meneely, J., & Portillo, M. (2006). Humanizing design through narrative inquiry. *Journal of Interior Design*, 31(2), 10-28.
- Davis, S. (2018). The engagement tree: Arts-based pedagogies for environmental learning. *International Journal of Education and the Arts*, 19(8), 1-24.
- Dickinson, E. (2016). *Envelope poems*. (C. Burgin, Ed.) New Directions Books.
- Dickinson, D., Griffith, J., Golinkoff, R., & Hirsh-Pasek, K. (2012). How reading books foster language development around the world. *Child Development Research*. p.1-15.  
doi:10.1155/2012/602807
- Dillon, P., & Howe, T. (2003). Design as narrative: Objects, stories and negotiated meaning. *Journal of Art and Design Education*, 22(3), 289-296.
- Dyson, J., & Dyson, K. (1989). *Fun with kites: 10 exciting designs with easy instruction*. London: Angus and Robertson.
- Everett, T. (1956). *Fields flowers*. Racine, WI: Whitman Publishing Company.
- Graham, M. (2007). Art, ecology and art education: Locating art education in a critical place-based pedagogy. *Studies in Art Education*, 48(4), 375-391.
- Grahame, K. (1908). *The wind in the willows*. London: Methuen Books.
- Grant, P. (2016). *Reading Vincent van Gogh: A Thematic Guide to the Letters*. Edmonton, AB: AU Press.
- Green, M. (2017). 'If there's no sustainability our future will get wrecked': Exploring children's perspectives of sustainability. *Childhood*, 24(2), 151-167.
- Grinde, B., & Patil, G. (2009). Biophilia: Does visual contact with nature impact on health and well-being? *International Journal of Environment Research and Public Health*, 6, 2332-2343.
- Gurdon, M. (2019). *The Enchanted Hour*. New York, NY: HarperCollins Publishers.
- Hall, C., & Knuth, M. (2019). An update of the literature supporting the well-being benefits of plants: A review of the emotional and mental health benefits of plants. *Journal of Environmental Horticulture*, 37(1), 30-38.

- Hensley, N. (2015). Cultivating biophilia: Utilizing direct experience to promote environmental sustainability. *Journal of Sustainability Education*, 9, 1-17.
- Hesse, H. (1972). *Wandering: Notes and sketches*. (J. Wright, Trans.) Farrar, Stauss & Giroux (Original work published 1920).
- Hickman, E., Yates, C., & Hopper, S. (2017). Botanical illustration and photography. *Australian Systematic Botany*, 30(4), 291-325. doi.org/10.1071/SB16059
- Inwood, H. (2008). At the crossroads: Situating place-based art education. *Canadian Journal of Environmental Education*, 13(1), 86-97.
- Jack-Malik, S. (2018). Understanding tension-filled tenure track stories: Curere, autobiographical scholarship, and photography. *LEARNING Landscapes*, 12, 139-153.
- Joye, Y. (2011). Biophilia design aesthetics in art and design education. *The Journal of Aesthetic Education*, 45(2), 17-35.
- Kalvaitis, D., & Monhardt, R. (2015). Children voice biophilia: The phenomenology of being in love with nature. *Journal of Sustainability Education*, 9, 1-21.
- Kiewra, C., Veselack, R. (2016). Playing with nature: Supporting preschoolers' creativity in natural outdoor classrooms. *The International Journal of Early Childhood Environmental Education*. 4(1), p. 70-95.
- Lai, A., & Ball, E. (2002). Home is where the art is: Exploring the places people live through art education. *Studies in Art Education*, 44(1), 47-66.
- Larson, L., Szczytko, R., Bowers, E., Stephens L., Stevenson, K., Floyd, M. (2018). Outdoor time, screen time, and connection to nature: Troubling trends among rural youth? *Environment and Behavior*, 51(8), 966-991.
- Lee, M., Lee, J., Park, B., & Miyazaki, Y. (2015). Interaction with indoor plants may reduce psychological and physiological by suppressing autonomic nervous system activity in young adults: A randomized crossover study. *Journal of Physiological Anthropology*, 34(2), 1-6.
- Leggo, C. (2008). Narrative inquiry: Attending to the art of discourse. *Language & Literacy*, 10(1), 1-21.
- Lionni, L. (1973). *Swimmy*. Toronto, ON: Pinwheel Books.
- Lisle, 1980). *Portrait of an artist*. New York: Seaview Books.
- Marcot, B. G., and D. H. Johnson. 2003. Owls in mythology and culture. pp. 88-105 in: J. R. Duncan. *Owls of the World: Their Lives, Behavior and Survival*, Toronto, Canada: Key Porter Books.

- Martin, J. (1998). *Snowflake Bentley*. Boston, MA: Houghton Mifflin.
- McCaffrey, R., Hanson, C., & McCaffrey, W. (2010). Garden walking for depression: A research report. *Holistic Nursing Practice*, 24(5), 252-259.
- McCloskey, R. (1957). *Time of Wonder*. New York: Viking Press.
- McKissack, P. (1988). *Mirandy and Brother Wind*. New York: Dragonfly Books.
- Moore, P. (2014). *Confessions of a Greenpeace dropout: The making of a sensible environmentalist*. Vancouver, BC: Beatty Street Publishing.
- Oliver, M. (1997). *West wind*. New York, NY: Houghton Mifflin Company.
- Pearson, M., & Wilborn, B. (1995). *Ann Richards: An Adlerian Psychobiography*. *Individual Psychology*, 51, 266-281.
- Powell, A. (2014, April 15). Search until you find a passion and go all out to excel in its expression. *The Harvard Gazette*, 1-13. Retrieved from <https://news.harvard.edu/gazette/story/2014/04/search-until-you-find-a-passion-and-go-all-out-to-excel-in-its-expression/>
- Rosiek, J., & Atkinson, B. (2007). The inevitability and importance of genres in narrative research and teaching practice. *Qualitative Inquiry*, 13(4), 499-521.
- Ryan, C., Browning, W., Clancy, J., Andrews, S., & Kallianpurkar, N. (2014). Biophilic design patterns: Emerging nature-based parameters for the health and well-being in the built environment. *International Journal of Architectural Research*, 8(2), 62-76.
- Sarma, R. (2015). Effects of globalization on traditional cane and bamboo household objects: A case study of the Nyishi group of Arunachal Pradesh. *Craft Research*, 6(1), 83-98.
- Sebba, R. (1991). The landscapes of childhood: The reflection of childhood's environment in adult memories and children's attitudes. *Environment and Behavior*, 23(4), 395-422.
- Shelley, M. (2017). *The last man*. (Original work dated 1896). CreateSpace Independent Publishing.
- Short, K., Kauffman, G., & Kahn, L. (2000). I just need to draw: Responding to literature across multiple sign systems. *Reading Teacher*, 54 (2), 160-71.
- Smith, G. (2002). Place-based education: Learning to be where we are. *Phi Delta Kappa*, 83(8), 584-594.
- Sonheim, C. (2012). *Drawing and painting imaginary animals*. Beverly, MA: Quarry Books.
- Strickland, C. (2020). The Way of the Artist paradigm: Fusing artistic studio practice and teaching pedagogy. *International Journal of Education through Art*, 16(2), 227-244. doi.org/10.1386/eta\_00028\_1

- Tharp, T. (2003). *The creative habit*. New York, NY: Simon & Schuster Paperbacks.
- Thornhill, J. (n.d.) Jan Thornhill: Author, Illustrator, Designer.  
<http://www.janthornhill.com/home.html>
- Thomas, S. (2014). Narrative inquiry: Embracing the possibilities. *Qualitative Research Journal*, 12(2), 206-221.
- Ulrich, R. (1984). View through a window may influence recovery from surgery. *Science*, 2245 (4647, 420-421).
- Walker, S. (2010). Temporal objects—Design, change and sustainability. *Sustainability*, 2(3), 812-832.
- Wilson, E. (1986). *Biophilia*. Cambridge, MA: Harvard University Press.
- Wilson, E. (1994). *Naturalist*. Washington, D.C.: Island Press.
- Windhager, S., Atzwanger, K., Booksteing, F., & Schaefer, K. (2011). Fish in a mall aquarium: An ecological investigation of biophilia. *Landscape and Urban Planning*, 99(1), 23-30.

### **About the Authors**

Cynthia Morawski, Professor Emeritus in the Faculty of Education, University of Ottawa, received her doctorate from Columbia University Teachers College. Her research interests include teaching narratives, adolescent literacies, multimodal learning, learning differences, and poetics of memory work. She is also completing here graduate degree in the School of Industrial Design at Carleton University where she specializes in accessibility, sustainability, and the arts. She was recently a trainee in The Research and Education in Accessibility, Design and Innovation Program sponsored by Carleton University, University of Ottawa, and Queen's University. She is also a visual artist specializing in mixed media and upcycling.

Catherine-Laura Dunnington (formerly Tremblay-Dion) is a doctoral candidate at the University of Ottawa in the Faculty of Education. Her M.Ed. was obtained at the University of Montana where she subsequently taught preschool for several years. Her work focuses on literacy, early childhood education, and arts-based learning. She has been published in the *International Journal of Education and the Arts*, *Bookbird: An International Journal of Children's Literature*, *The Bank Street College of Education Occasional Paper Series*, *Education Review*, and *Root & Star Magazine*.

# International Journal of Education & the Arts

<http://IJEa.org>

ISSN: 1529-8094

## Editor

Tawnya Smith  
Boston University

## Co-Editors

Kristine Sunday  
Old Dominion University

Eeva Anttila  
University of the Arts Helsinki

Christina Gray  
Edith Cowan University

## Media Review Editor

Jeremy Blair  
Tennessee Tech University

## Managing Editors

Christine Liao  
University of North Carolina Wilmington

Yenju Lin  
Pennsylvania State University

## Associate Editors

Shana Cinquemani  
Rhode Island School of Design

Heather Kaplan  
University of Texas El Paso

Christina Hanawalt  
University of Georgia

Hayon Park  
University of Arkansas

David Johnson  
Lund University

Tim Smith  
Aalto University

Alexis Kallio  
Griffith University

Deborah (Blair) VanderLinde  
Oakland University

## Advisory Board

Full List: <http://www.ijea.org/editors.html>