

Visual Literacies and Multiliteracies: An Ecology Arts-based Pedagogical Model

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Abstract

The study explores visual literacies and critical literacies students may experience utilizing photography aimed at engaging youth in thinking more deeply about their relationships to the environment and the communities they live in. This is a case study based on interviews with a total of five participants. I argue that visual literacy expands students' opportunities to build productively upon print-based literacy practices, evens the playing field to some extent for English Language Learners, and connects youth in creative ways to think about being citizens in their communities and the world.

Introduction

It was almost like a moving picture. They [the students] must have been laying on their backs, and they took a blue sky and then they had to have a student up, up somewhere...and you would see a hand and then you would see another hand in the blue sky. And then you would see a hat, and then you would see a head. When you look at these pictures quickly flicking through them, it's almost like a motion picture....they have experimented and worked that out in their own little minds. (Participant one, teacher)

The purpose of this case study was to explore the kinds of visual literacies and multiliteracies classroom teachers and community partners such as photographers, farmers, and entomologists have observed when students experience utilizing photography to read the natural world around them. Falihi and Wason-Ellam (2009) note that "...visual literacy, the ability to create, read, and respond to visual images has become an essential concept in a global society" (p. 410). Visual literacy provides the opportunity to make meaning from imagery with similar levels of complexities as in spoken language. As with any interpretation, visual literacy needs to be understood as socially constructed. Teachers' and students' perceptions are always shaped by the social, historical, political, and cultural contexts in which they are viewing, making, and interpreting visual literacies. This study uses a multiliteracies framework to examine an ecology arts-based pedagogical model.

The Ecology Arts-Based Model and a Multiliteracies Framework

In theory, the ecology arts-based pedagogical model used in this case study employs many of the principles of a *multiliteracies* theoretical framework. Multiliteracies is a term that was coined by the New London Group (1996). These theorists wanted to

expand the narrow definition of literacy beyond the ability to read and write to reflect current global and local realities. The two main premises of their arguments were (a) to consider the role in a global society of shifting and hybrid versions of linguistic and cultural diversity, which challenge the notion of a standard norm for any language, thus taking into account “our culturally and linguistically diverse and increasingly globalised societies” (p. 9); and (b) to explore the implications of technology, media, and multimodalities as part of what constitutes literacies (Cope & Kalantzis, New London Group, 2000). As Lo Bianco and Freebody (New London Group, 2000; 1996) put it,

The Multiliteracies Project aims to develop a pluralistic educational response to trends in the economic, civic and personal spheres of life which impact on meaning-making and therefore on literacy. These changes call for a new foundational literacy which imparts the ability to understand increasingly complex language and literacy codes; the ability to use the multiple modes in which those codes are transmitted and put to use; and the capacity to understand and generate the rich and more elaborate meanings they convey. (p. 92)

The New London Group argue that unlike traditional views of “formalised, monolingual, monocultural, and rule-governed forms of language” (p. 9), semiosis engages with all modes of communication. Semiosis is the “remaking of the resources in the process of their use, in action, and in interaction” (Kress, 2000, p. 156). So, for example, a student engaged in digital photography is in a dynamic process of constructing meaning. A student’s personal interests shape decisions around what will be photographed or not. And that same student’s fluid subjectivity, defined through the historical, social, and cultural markers that help form any individual’s identity – are also factors in deciding how that student will engage with this model.

The New London Group works out of a social justice paradigm, believing that literacy attainment is imperative to equity. The ecology arts-based model used in this study does not necessarily ask students explicit questions to decode how they are positioned in relation to society, nor does it ask them to go beyond their personal experiences to critique the role of larger institutional forces in shaping epistemologies and producing systemic discrimination. Nevertheless, the kinds of critical thinking students engage in and their ability to express themselves through visual literacies is creative and political in its own way. In thinking about “language as a form of social action” (Lesley, 2008, p. 177), and visual literacy as a kind of language, then the act of photographing, editing, and critiquing their own photos as well as embedding that artistry within the curriculum and larger community, can be seen as important steps in critical awareness. Graham notes,

For younger children, experiencing and becoming aware of the beauty of the natural world is an essential step toward ecological responsibility. A natural history education melded into art education develops caring relationships for places close to home,

allowing children to bond with nature. Children need to experience the natural world before they are asked to save it. (Sobel, 1996 as cited in Graham, 2007, p. 37).

By incorporating visual literacies and multiliteracies as part of the curriculum, teachers provide students with a much greater spectrum of opportunities to think through their relationships to the environment.

What do multiliteracies look like in practice in a Canadian context? This was a motivating question for pursuing this research. In practice, this ecology arts-based model designed, developed, and implemented by a social worker in consultation with teachers and community partners uses digital photography lessons and photography field trips as tools for enriching curriculum-based learning in science and technology, visual arts, mathematics, and Language Arts. The interdisciplinary potential of this ecology arts-based pedagogical model provides a creative communication venue for discussing meaningful subjects (ecology, in this case) that multiliteracies represent. Examples of interdisciplinary uses of this model are: math is used to calculate depth of field, understand fractions and figures related to shutter speed and aperture, to document/look for geometry in nature; science is used to investigate, observe, and document natural features in their local ecosystems; art is used to interpret and enhance the photography; and Language Arts is used to journal about the experiences.

By providing opportunities for hands-on inquiry beyond the classroom, this pedagogical model aims to enhance students' enthusiasm for work that spans the borders of the classroom. It gives students experiences in nature with the goal of inspiring them to learn more about local ecosystems. And this is where this ecology arts-based pedagogical model serves to explore multiliteracies in practice. For multiliteracies is more than just academic inquiry that uses multimodalities, technology, and literacy-based practices. Multiliteracies invite students to think about how academic content and skills can be used to critically inquire into diverse modes of literacy in real life situations as well as to engage in social justice issues.

Part of the authentic learning comes from the involvement of local community partners to teach students. For example, a professional photographer is brought in prior to students going on a field trip. S/he teaches the basic elements of design. Following their first field trip, the photographer returns to the class to critique and discuss the students' photos. Other community partners might include local botanists, farmers, painters, or entomologists. Thus, these community partners broaden the range of discourses and analytical lenses through which the students might consider the relation between the arts and sciences, or in this model, photography and local ecologies.

Literature Review

In response to the New London Group's Multiliteracies Project, scholars all over the world have been documenting and analyzing what the theory of multiliteracies looks like in practice. Some of these studies are similar to the ecology arts-based pedagogical model discussed in this paper. For example, Tsevreni (2011) focuses on environmental education that teaches about students' social engagement with the environment. She argues, "The dominant perception of environmental education has been widely criticized,

because of its emphasis on scientific knowledge, the absence of critical thought and the failure to identify the social and political dimensions of the ecological crisis” (p. 54). Tsevreni uses drama, storytelling, and photography to incite children to action (students creating their own books or plays): “The core of this proposition is placing children’s ideas in the centre of interest” (2011, p. 64). Other studies (Eames et al., 2006; Rivet & Schneider, 2004; Wilhelm & Schneider, 2005) examine pedagogical approaches that use digital cameras as a tool in developing environmental education. Savva, Trimis and Zachariou (2004) argue that “art should be culturally and environmentally integrated, that is to say to develop work in and with the environment so as to ensure that people have a sense of ownership and become visually aware and environmentally concerned with the world in which they live” (p. 254). Place-based pedagogy acknowledges the socially constructed relation between ecology and culture:

Critical place-based pedagogy is significant because of its blending of the local and ecological with cultural awareness and social critique. A critical ecological perspective illuminates important relationships between cultural systems and ecological systems and affirms that social justice and eco-justice are closely related. (Graham, 2007, p. 377)

Dobrin (2010) makes the point that children’s perceptions of the natural world are inundated and mediated constantly through digital representations of the natural environment, which in turn shapes their imaginations and constitutes their sense of self.

Within multiliteracies, there are also researchers who examine the influence of visual literacies on learning. For instance, Gaudelli (2009) notes that as students come to the realization that their own socially constructed identities play a role in mediating how they view texts, students then acquire the critical media skills that can expand how they navigate other curriculum areas and even their own lives. Or, as Seglem and Witte (2009) comment: “Helping students to understand the diversity of print and nonprint texts as well as the visual connections that can be made between them is a practical way to connect the concrete and abstract thinking of students who struggle to make meaning from text” (p. 217). Visual literacy and multimodalities give all students a wider breadth of means and of content to develop their own skill sets.

The New London Group observes that multiliteracies are to some extent a response to the sweeping changes in societies, and may provide a theoretical framework that embraces linguistic, cultural, multimodal and technological diversity while at the same time valuing a social justice ethos. Drawing upon multiliteracies, and to hone the focus of this research, the following overarching questions guided the study:

- How do teachers/community partners describe student engagement with visual literacies?
- Are multiliteracies evident?
- Do teachers/community partners perceive that English Language Learners in particular benefit from an ecology arts-based pedagogy that embraces visual literacy and multiliteracies?

- Do teachers/community partners observe visual literacy deepens students' engagement with their environments?

Methodology

Site

This ecology arts-based model was implemented in a local public school board located in a small city within South Western Ontario, Canada. The Low-Income Cut Off (LICO) for children age 18 and under is 9.6% in this community (Statistics Canada 2006/2007; United Way, 2010), which suggests that a number of the students in the study come from low-income families.

Participants

There were five participants in this case study. Two were classroom elementary/middle school teachers who had taught from grade one through to grade eight at various points in their careers. One teacher taught in an urban school with students who came primarily from low socio-economic status backgrounds, many of whom had English as their third or fourth language. The other teacher's students were mostly native English speakers, white, middle-class students in a program for gifted children. Another partner was an organic farmer who had offered to let schools use her farm for field trips. Also interviewed was a professional photographer who came into the classroom to give students workshops. Lastly, a social worker, the person who conceived of and implemented the pedagogical model used in this study, was interviewed. Four of the participants were women; one of the classroom teachers was a man. All the participants were middle-aged and white.

Data Collection

Initially, a literature review of multiliteracies, content area, and visual literacy articles was conducted to better inform what kinds of questions would be asked in the interviews. The one-hour one-on-one interviews took place over the space of three days in November 2009. Interviews were conducted in the schools, homes, and studios of the participants (teachers/community partners of this ecology arts-based pedagogical model). A digital recorder was used to record the interviews. Later, the interviews were transcribed. The transcripts were read several times and coded thematically. The small number of participants was due to the fact that this model was being piloted. Since the numbers of participants reflected most of the adults who were actively involved in the model at the time, the University Research Ethics Board required that the name of the model be withheld in any research publications to protect the participants' identities.

This case study is based on four pilots of the model that took place in three schools in the time frame from June 2008 to May 2009. The interviews were conducted in November 2009 but the pilots in those same classes continued on toward the end of the school year. They were all delivered over the course of about one school semester broken down into five half-day sessions, which focused on the actual photography outdoors or one of the community partners doing a workshop with the students. These sessions do not

include the additional time in the classrooms that teachers used to make further connections to incorporate the model into the curricula. The four classes used were as follows:

1. Grade 6 (approximately 24 students); school 1
2. Grade 7 (approximately 26 students); school 2
3. Grade 1/2 (approximately 25 students); school 3
4. Grade 8 (approximately 25 students); school 3

For purposes of this case study, the classroom teachers from schools 1 and 2 were interviewed. The next stage of this research will involve interviewing students who have participated in this model as it evolves.

Data Analysis

The analysis used constructivist grounded theory, which embraces a “reflexive stance” (Charmaz, 2005) by acknowledging my own positioning as a researcher in relation to the study. Grounded theory “focuses on connecting categories and emerging theory according to a set of criteria that includes fit, work, relevance, and modifiability” (Schram, 2003, p. 73). This methodology as Hatch (2002) describes it involves “constant comparison [that] engages the researcher in a give and take between inductive and deductive thinking. Potential categories of meaning are said to emerge from the data, then data are carefully read to determine if those categories are valid” (p. 26).

In reading over the transcripts several times, five themes were identified by considering key concepts from the literature review in relation to the data. After the initial transcript reading, the literature review was expanded to consider more fully what the data seemed to indicate (the prominence of participants’ discussions of visual literacy). These themes are named as follows:

1. Visual literacy and cross-curricular implications of ecology arts-based digital photography
2. Digital photography to engage writers
3. Developing a connection and appreciation for nature amongst youth
4. Connections between students and classroom learning to the larger community and multiliteracies
5. English Language Learners and visual literacy

This section of the paper draws upon the data to voice salient points and multiple perspectives that classroom teachers and community partners of this model brought to the conversations in the course of the interviews.

Themes

1. Visual Literacy and Cross-curricular Implications of Ecology Arts-Based Digital Photography

The use of photography in this ecology arts-based pedagogical model provided many opportunities for the teachers to utilize visual literacy with students. Yenawine (1997) states:

Visual literacy is the ability to find meaning in imagery. It involves a set of skills ranging from simple identification—naming what one sees—to complex interpretation on contextual, metaphoric and philosophical levels. Many aspects of cognition are called upon, such as personal association, questioning, speculating, analysing, fact-finding, and categorizing. (p. 845)

All of the participants remarked on the students' photography as a sophisticated way of observing, documenting, and expressing their views on the natural world. For example, the organic farmer stated, "I was impressed by how much they observed... And how they were able to look at something from a totally different angle, sometimes literally" (Participant four, Organic Farmer). Brill, Kim, and Branch (2007) contend that "visual messages are fundamental to complex mental processing because they provide information and opportunities for analysis that text alone cannot provide" (p. 51). The "rectangle is a canvas," the photographer observed, referring to the camera lens. She recounted her introduction to photography that she gives to students:

What I'm going to teach you today are the elements of design, and it's basically the language of design. So these seven words I'm going to teach you are a visual language. So, I say 'how many people here can speak different languages?' and, of course, there are kids in the room who have Asian backgrounds and Indian backgrounds.... 'ok, how many people do you know just speak English? Well, guess what? Today you're going to learn a different language, but the cool part is you already know the language, but you don't know how you know it technically.' I basically teach them line, shape, form, space, texture, tone, colour. (Participant three, Photographer)

In this introduction, the professional photographer makes it clear to students that visual literacy has a basis in their prior knowledge, but it is also learned. This photographer's explanation serves to parlay visual literacy into terms that even very young children can understand.

While on the field trips, the only instruction students were given was to use the elements of design to guide them in their photography. Both on the field trips and in the classroom afterward, this focus on the elements of design allowed for a great deal of flexibility in how students took up the challenges of creation and critique, but it also demanded academic rigour for them to work through how they would conceptualize, apply, and evaluate the effects of using these principles of fine art. According to the coordinator, the students "could have just snapped away and they didn't. I saw kids getting down and really thinking about 'ok, this one I'm looking at the lines'... so very deliberate thinking about it. There's definitely a focus on the design" (Participant five, Coordinator).

The elements of design provided students with a metalanguage within visual literacy. As the coordinator commented, the students learned not only about "critiquing their own work but also each other's, and always done in a positive way" (Participant five, Coordinator), thus serving to build metacognitive and social skills. Callow (2006)

affirms the importance of a metalanguage to allow students to examine their own work and that of others: “Powerfully persuasive images and multimedia need to be met with equally powerful tools for discussion, critique and analysis. One aspect of the multiliteracies concept is the use of a visual metalanguage to assist in this task” (p. 7).

The teachers shared various ways students engaged in cross-curricular exploration. Teacher two notes how an entomologist accompanied students on a field trip. His professional knowledge affected how students responded when they saw a piece of deadwood covered in bugs.

Originally the kids were like ‘ewwh, that’s disgusting!’ He [the entomologist] would say, ‘They’re an incredible system. They work together, and they carry it back to this place.’ So he was explaining it [the insects’ system], and then they [the students] were all taking pictures of it. Originally, they were grossed out by this aspect of nature, and then they were into it because they understood what it was. (Participant two, Teacher)

Teacher two used the work from this model to support her “Diversity of Living Things” science unit. She pointed out that “it’s one thing to photograph something because you think it’s pretty, right? But it’s another thing to photograph because you’re fascinated about what it is and what it’s doing and what its role is in the bigger ecosystem” (Participant two, Teacher). Thus, the teacher saw students taking on the critical perspective of the scientist accompanying them, gaining insight into how the visual of the insect colony served to discern important life systems.

All participants commented on the benefits of cross-curricular pedagogy, which this model employs. Teacher 1 used students’ photography to teach English Language Arts. For example, he asked students to write a creative piece in which they had to imagine themselves as the old bicycle they had seen on the pathway and speak in the “voice” of the bicycle, answering the question: “How did you end up in this predicament?” He also used the old farm equipment as a way into talking about local history. The photographer spoke about the potential to discuss photography’s technical side in math class: “What if we had to change the depth of field? What if we want to make that look blurry in the background?” Students were challenged to synthesize their experiences with visual literacy through photography with their learning in various disciplines.

2. Digital Photography to Engage Writers

McDougall (2007) encourages promoting visual literacies, which allows “students to express themselves through media images and in their verbal analysis of such images [which] can enhance traditional literacies. In this way, the production and interpretation of multimedia can be viewed as a vehicle for developing reading and writing skills” (p. 29). Teacher one remarked that for students, using one of their own photos acted as an important scaffold for them to start writing their narratives. It meant they were not starting with a blank page.

The organic farmer discussed how the photography gave students a way to think about narratives connected to natural environments:

Those kids are looking at art, using a creative outlet as a way to explore that connection to the natural world, and weaving it into learning about story, and looking at images as a way of telling stories in a multi-subject curriculum. I was able to share how what I do here [at the farm] is in part about connecting people to the story of where food comes from. It's not just learning about how things are done on a farm, but it's connecting to broader philosophical issues and creative outlet and expression. (Participant four, Organic farmer)

Several participants articulated that they saw a connection between story telling and the art of photography: "I think students were creating stories in their photography. Some kids were drawn to movement or drawn to things that were still" (Participant two, teacher).

Creating and analyzing photography may augment students' abilities to imagine. Falihi and Wason-Ellam (2009) posit: "Writing as the other part of literacy, is a process of construction. It includes generating visuals in the forms of texts and images, which implies exercising the power of the imagination and creativity" (p. 409). Perhaps it is fair to argue that visuals can generate writing and vice versa. By creating their own narratives of their ecological environments through photography, students offered a narrative to their communities of what they as students view and value.

3. Developing a Connection and Appreciation for Nature Amongst Youth

The Multiliteracies Project places a strong emphasis on the need for learners to have agency in the content and modalities with which they choose to innovate or to critique. The teachers felt that for the students, the freedom and independence they were given while on the field trips was an invigorating antidote to the usual constraints students often associate with formal learning. "We definitely emphasized an exploratory phase in each of our trips, where they are walking around photographing" (Participant five, Coordinator). The coordinator commented on how the only structure given to a field trip involved asking students "to all to turn out and look around, and we had one minute of silence just taking in things. So they weren't told specifically what to look for but just to be quiet" (Participant five, Coordinator). This exploratory activity based on visual literacy set the tone; it invited students to trust their own instincts and play with conventional ways of knowing their relation to the natural world. Teacher 1 noted that the strength of leaving the field trips very unstructured is that it allows the students to "be independent and it lets them realize this is something [they] can do on [their] own" (Participant one, Teacher). Teacher two also referred to the openness of this model: "I think a level of freedom was there. They [the students] were able to go wherever they wanted. There was a lot of choice in that there's the freedom to be creative in any way that you would like within this medium. ...I think in some way they felt it's adult or mature" (Participant two, Teacher).

The physicality of being in the woods, a ravine, or on a farm (as opposed to just photographing in the fields around their schools) engaged students in viewing and interpreting sensory details specific to the locale. Teacher one observed, “Some of them [the students] had never been to a farm, some had never seen draft horses, never seen the old equipment and how it would operate.” The photographer, in a follow up in-class critique challenged students to really focus on the visual details of their own photography: “What did you notice differently? What did you notice about what you noticed?” (Participant three, Photographer). As Graham would argue, “This is artmaking that is place-based in its insistence on connecting learning to the students’ local reality” (p. 379).

Back in the classroom, the photographer assessed how well students were able to demonstrate a clear understanding of the elements of design they had previously discussed, and then applied to their own photography. The photographer recalled an example of one student appraising the form and light in his photos of a rock, and many of the students engaged in peer critiques of their work. Perhaps one of the most telling comments made regarding students’ interest level comes from Teacher one who worked with many struggling students: “If I gave them an assignment 60 percent would have it done. With this [model] 100 percent of the students had their stuff together, and they were all here too. They were here for the trip, and they were ready to go” (Participant one, teacher). The teachers felt this model allowed students to emotionally and intellectually make connections through art about their local environment.

4. Connections Between Students and Classroom Learning to the Larger Community and Multiliteracies

Teacher 1 illustrated clearly how access to digital technology is an equity issue, whereby some students are hard pressed to participate: “Some of my kids definitely can’t afford it [a memory card for the camera]. Even 10 dollars, that’s a hardship,” (Participant one, Teacher). This teacher further illustrated how it is an assumption to think all students come to school with equally supported home lives:

Some of them are little adults already, unfortunately, because of the demands on their homes. I have one little girl that I know when she goes home, she’s working. She’s not going to home to watch TV and to do homework. She’s going home to prepare dinner to feed her siblings, and she’s in only grade 7. She puts her little sister and brothers to bed. Mom doesn’t have the resources to hire a babysitter. (Participant one, Teacher)

Multiliteracies help ensure that students’ personal and cultural resources, contextualized in their local, socially situated domains, gets taken into account when designing curriculum. Schools, then, do not isolate students from the context of their communities; they are intertwined to encourage authentic meaning-making and promote equity.

Partnerships with professionals in the local community are an important feature of authentic learning in this pedagogical model. Teacher two commented that the professional photographer discussed “how a photographer would have gotten that affect,

or talked about the framing of it, so she applied it to the students as photographers and the art of photography” (Participant two, Teacher). The coordinator pointed out that because the photographer “is not a teacher, she’s somebody working in the field, they [the students] could ask her questions about her career. They were inspired by the fact that this is what she does for a living” (Participant five, Coordinator). Teacher two felt the use of a professional motivated students:

This professional photographer posts some of them [students’ photographs] on her website, so that’s another kind of professional form by which their work is being honoured, and I think that’s really important for them. It validated what they were doing, and gave them more reason to be serious about it. (Participant two, Teacher)

Multiliteracies are the “multiplicity and integration of significant modes of meaning-making, where the textual is also related to the visual, the audio, the spatial, the behavioral” (p. 61). In this ecology arts-based pedagogical model, the modality is digital photography. Students have choice in what they will photograph, ample time to critique and evaluate their own work, advice from professionals in the local community, and opportunities to exhibit their photography in the larger community they live in. These dynamics work in an integrated fashion to allow students autonomy along with meaningful resources to build skill, knowledge, and relations. The organic farmer observed that students felt some real affirmation for what they were able to accomplish using the modality of digital photography:

... and you see that the spirit of that child being encouraged because of that, and that’s a different ability, a different set of skills than they might typically be able to use in a school setting. And so those kids that maybe that don’t do great at math, they’re not able to communicate verbally; they communicate visually. (Participant four, Organic farmer)

The organic farmer identifies that visual literacies offer a skill set that needs to be utilized and validated in and outside the classroom.

Multiliteracies help to critique how discourses shape our belief systems and challenge hegemony. As Falihi and Wason-Ellam (2009) contend,

The power of text and image in today’s communications media is undeniable, and a lack of critical evaluation has made it possible for capital corporations to promote a consumer culture by manipulating the content of transmissions. This gives visual literacy an ever-increasing importance. (p. 412)

Visual literacy, then, offers students a critical lens so they are less likely to take images at face value, and instead “read the world” (Freire & Macedo, 1987; 2001, p. 32). One tenet of multiliteracies is to foster building relations between schools and communities. A central component of this ecology arts-based pedagogical model is that students brought

some of their final work into the community, thus sharing their art and perspectives with a larger audience. For example, one class had an art showing in the photographer's professional studio. Teacher 1 explained, "We're having the showing. Each kid is putting in an 8 by 10 [photograph], which will be displayed. It's going to be framed...they've chosen their pictures, and I'm making a couple of DVDs of all of their pictures so they will be playing on the big screen" (Participant one, Teacher). Students were in charge of publicizing and organizing the event. "They [the parents] were pretty appreciative that we're doing this" (Participant one, Teacher). The students felt proud of their work being exhibited in the larger community: "The kids are pretty excited that their pictures are going to be on display until the end of February in the art studio" (Participant one, Teacher). Graham asserts "Art education informed by a critical place-based pedagogy emphasizes the activist, restorative possibilities of artmaking and affirms the need for students to become involved in learning outside the school" (p. 377).

5. English Language Learners and Visual Literacy

Teachers who use multiliteracies aim to tailor the curriculum to better serve English Language Learners (ELLs). Ajayi (2009) notes how students who are ELLs benefit from working with visual literacy: "In multimodal texts, knowledge is not made available in English only; rather, it is made available to ESL students in multidimensional ways, that is, through the combination and integration of language, images, graphics, and layouts" (p. 594). This point affirms what teachers of this model observed in terms of ELL students' experiences with visual literacy: "it's definitely put them on an even keel is what it did" (Participant one, Teacher). Teacher two put it another way: "It's literacy based in a different kind of sense of literacy, but it's not English language based, right? So, you don't need to have a strong command [of English] to go out and take photographs and express yourself in that way" (Participant two, Teacher). This alternative way to express oneself may help to avoid the grim statistics Grant and Wong (2003) write about: "Estimates are that 30-40% of school-age English-language learners fail to reach acceptable levels of English reading by the end of their elementary schooling" (p. 387). In Ontario Ministry of Education English Language Arts curriculum documents, viewing and representing are two of the main strands teachers are expected to teach all students. By doing so, teachers can provide some of the best supports possible to ELLs.

Several participants discussed the globalizing element of photography as visual literacy. Ajayi (2009) argues "multimodal/multiliteracies pedagogy has the potential to provide students in culturally plural classrooms with a more representative platform for meaning-making" (p. 586). As the photographer pointed out, "They [ELL students] are visually getting to communicate. We could take a book of photography across the world – we can all read that photograph – it doesn't matter if a Polish person took that photograph or an African person took that photograph. Visual language is universal" (Participant 3, Photographer). Or, from a different vantage point, Teacher two said about the use of digital photography: "It's very accessible to a broad range of people. I also think there's opportunities for children from different parts of the world... to draw comparisons between the natural environment where they come from and the natural

environment here.... I think there's also an entry point of talking about things where students are experts about the ecosystem where they come from" (Participant 2, Teacher). This teacher also saw an easy flow of connection between visual literacy and technology: "And the Internet is so great that they [ELL students] could even look up photos where they come from, and draw comparisons between this new environment and their old environment of their past location" (Participant two, Teacher). Environmental studies, information technology, and visual arts become integrated in this way of teaching students using visual literacy.

Discussion

The Creative Side of Multiliteracies

In this ecology arts-based pedagogical model, there is a focus on the youngest generations having the opportunity to articulate *their* vision of what the environment means to them. They practice critical thinking about how discourses are framed through the literal and abstract act of experimenting with and learning about how to frame their photographic shots. For example, the ecology arts-based pedagogical model is such that students move back and forth between field trips and in-class work (sessions with the photographer and cross-curricular studies that utilize their photography) over several months. The photographer emphasized that she did not evaluate students' photography. Instead, she asked questions such as "what made you want to shoot it from this angle?" or "what does it feel like to look at these photos?" As well, the photographer would model professional editing techniques, for instance, saying to students: "this is really good straight off the camera, but watch how when I darken the photos, see how the colours come out and it pops more?" Analogously, Lamonde and Rogers (2007) argue,

The *production* of media, rather than relying on media criticism alone, invites adolescents to work within a range of genres, semiotic codes and gain understanding into how media shapes public discourse...Rather than simply reproducing media, we have found in our work that both prospective teachers and adolescents often engage in playful ways to critique dominant discourses and, at times, oppose them. (p. 3)

Many consumers accept art or media production in its polished state as a *fait accompli* without considering the many metamorphoses a production might have undergone while being created. Students are forced to reflect on the numerous choices they have to make when they themselves are in charge of the art/media production. This process of producing a work of art or media also compels students to question why and how is it that certain discourses tend to circulate widely and construct commonly held views more than others? And to ask which discourses have shaped their process of production? They become more aware of how the frame they choose inevitably privileges certain discourses, while to some extent marginalizing others. In sum, students start to recognize that what may at first appear to be individual choices are always anchored in the context of their larger cultural milieus.

As Graham (2007) says, “Art education can move from the important, but limited, notion of art being solely about personal expression toward a vision of teaching that engages students in a reflective social process with the larger community” (p. 382). The coordinator recounted that at one inner-city school that was scheduled for demolition, the students, of their own volition, chose to photograph the school itself rather than nature. It was a historic building, and their photography focused on the architectural details. They shared their photos with the wider community to express to themselves and the adults their perspectives on urban environmental stewardship. In their own call to social action, students felt motivated to use art to express their concerns.

McDougall (2007) states, “Since literacy is more than just encoding and decoding, meanings need to be understood as inscribed within particular social and cultural practices (Kress & van Leuwen, 1996; Lankshear, Snyder, & Green, 2000). Therefore, in line with multiliteracies and other new literacies, this mindset may be linked to critical and cultural aspects of literacy” (p. 28). Serfini (2011) observes, “Moving from what is noticed in the visual images and design of a multimodal text to what these objects and elements mean and the inferences drawn to the world outside the text is an important aspect of the comprehension process” (p. 345). This ecology arts-based pedagogical model might be politicized further in the future to engage in “inferences drawn from outside the text” by using photography as a prompt in relation to other resources provided by teachers within the classroom. For example, many students chose to take pictures of debris such as a rusted car in natural habitats. One insightful comment that a student made about his own photo, according to the coordinator was, “it’s ironic that there’s a thumb tack in the stump because it’s modern plastic, you know, a manmade object in a natural object.” These types of photographs suggest that the students felt interest in exploring environmental concerns, which could be further supported in their classes with a more conscious focus on raising social justice issues, or inviting students to interrogate their own socially-constructed positionings in society, or scrutinizing how interpretations of nature are mediated through cultural representations.

One premise of this model is that we cannot expect children to be concerned environmentalists when they have limited contact with the natural world outside of urban environments. According to the most recent census data (Statistics Canada, 2006b), more than 80% of Canadians were living in urban areas in 2006. Indeed, this shift is reflected in our language usage as *The Globe and Mail* (2008) reported,

The Oxford Junior Dictionary has replaced ‘beaver’—and friends such as the ‘heron,’ ‘porcupine,’ and ‘kingfisher’—in its pages with new, plugged in alternatives. For instance, the juicy ‘blackberry’ is out. But the electronic ‘blog’ is in, joined by ‘MP3 player,’ ‘broadband’ and ‘biodegradable, in the 10,000 entry edition aimed at children aged 7 and up. (Wingrove, p. 1)

The Oxford English Dictionary’s choice to replace words that reflect natural environments with technological terms acts as a bellwether for our rapidly changing North American culture. The organic farmer echoed similar concerns when she stated,

“We are so disconnected to where food comes from, and we are so disconnected from the natural world” (Participant 4, Organic farmer). The photographer said,

The camera gets the kids to slow down and really take notice. And that intimate experience of looking more closely at something is what connects you to the wonder of that thing, and I think that can create a respect for and a love for the natural environment. I think that is what we need in order to get this generation to actually take responsibility to look after and to care for the natural environment because obligation isn't enough of a motivation. (Participant 4, photographer)

If children are growing up with little connection to the outdoors, somewhat ironically, technology and the power of visual literacies may help to reconnect youth with what the outdoors has to offer.

Visual Literacies to Scaffold Print-based Literacy

For struggling writers, reading and writing often feel like a series of obstacles based on grammatical hurdles instead of feeling the excitement of ideas that come out of narratives. Photography acts as a medium to introduce the excitement of creating stories – that literacy – whether cursive, printed, audio, or pictorial, ultimately is about how ideas are shaped in meaningful ways. Seglem and Witte (2009) explain: “By teaching students how to critically read and view all texts, not just the traditional print texts, teachers can build upon the skills needed to read and write, increasing students’ literacy levels in all areas. And perhaps even more important, as O’Brien (2001) pointed out, “the study of visual symbols can reach those students who have been burned by print” (p. 224). Getting students to increase their levels of literacy increases their abilities to socially construct their identities in more powerful ways. Falihi and Wason-Ellam (2009) note it “helps learners transform themselves from objects to subjects, from being passive to being active, from recipient to participant, and from consumer to producer” (p. 415). The emotional element of feeling successful with literacy should not be underestimated.

As part of an on-going Social Sciences and Humanities Research Council study, one aspect of our research is to talk to organizations in Canada that help to promote a Canadian “voice” by fostering creative writing through exposure to and mentorship with experienced, professional authors. It is valuable to bring in this perspective to better understand in the larger context of the Canadian nation how such programs allow for multiliteracies through creative expression that emphasizes youth’s agency to share their viewpoints. For example, in one organization that promotes creative writing amongst immigrants, the key informant said,

If people can communicate to other people what their life is, what their experiences are... what their thoughts and hopes and dreams are, then I think it creates empathy amongst citizens; and I think that's how you grow a country.

In another writers’ organization, the key informant stated,

We send uniquely qualified writers to work with at-risk populations. So it could be with a lockdown school that's part of a social services system or even the penal system. It could be a school that specializes in working with kids with learning disabilities, it might be in a school or in a drop-in centre in a lower income neighbourhood; and they work with those kids...To develop... confidence in their ability to express themselves and their belief that using words can help them to get by in the world; help them to accomplish things. They always come out with some sort of a product. It might be a music video that they've written the words to, it might be a spoken word performance.

Within the broader Canadian society as well as in schools, developing people's literacies seems to work best when print-based literacy is practiced *in tandem* with other kinds of multiliteracies.

Building Visual Literacies for ELL Students

Utilizing visual literacy in school curricula in part addresses what Grant and Wong (2003) state will achieve equity:

We advocate for meaningful change at every level to ensure that children from diverse linguistic and cultural backgrounds are not left behind. If this does not happen, for these children the results will be limited school success, reduced opportunities for college and technology training, restricted access to well-paid jobs, and failure to become full participants in a democratic society. (p. 39)

Digital literacies are only going to increase, and it is people who have historically been marginalized in our society and are more vulnerable (including new immigrants, elderly people, people with mental and physical disabilities, people of lower social economic status) who will most suffer as the disparity in literacy levels increases. Digital photography and a critical engagement with visual literacy as a language in and of itself may open doors for those students who are working in several languages. As Cummins (2007) points out, ELL students are always trying to catch up to a moving target in the sense that an ELL's peers are also moving ahead in their learning without the extra challenge of trying to mediate new knowledge and skills through an additional language. It may also help students to attain what Pegrum (2008) refers to as intercultural competence, which "de-emphasises the acquisition of a native-like identity and encourages the learner to carve out a 'third place' (Kramersch, 1993) from which he or she will be able to negotiate and mediate between the native and target cultures" (Pegrum, p. 137-38). By using visual literacy as an integral part of pedagogical practices in a school environment, all students are more likely to engage in learning.

Conclusion

Citizenry, for children as well as adults, involves questioning what is equitable and just. Giving students opportunities to express their views and feelings on the environment through the kind of artistic expression that visual literacies and

multiliteracies afford also opens up possibilities for them to feel more stake in their claim on their local environments. Multiliteracies deepen students' thinking about ecology by having wrought anew through new modalities and unexpected curricula juxtapositions ways of seeing ecological systems in and of themselves as well as part of the larger context of students' lives and society. Being a citizen in large part is just this – critically and emotionally engaging in the thoughts, attitudes, and beliefs that construct the community and feeling able to take action and to have a say in how the community will continue to be shaped. Creativity is a key antidote to hegemony. The ability to imagine a better world, an alternative to how systems of oppression currently operate, an illumination that reconceptualises current ways of being—that is what engagement with multiliteracies ultimately strives for. Morawski (2008) remarks, “Maxine Greene (1991) challenges us that ‘the arts offer opportunities for perspective, for perceiving alternate ways of transcending and being in the world’” (p. 9). The New London Group calls for civic pluralism, which argues for citizens of diverse backgrounds to find meaningful ways to engage with one another and proposes that people need to “have the chance to expand their cultural and linguistic repertoires so that they can access a broader range of cultural and institutional resources” (1996, p. 15). This ecology arts-based pedagogical model gives a concrete means of thinking through how to implement the tenets of a multiliteracies framework in the classroom.

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