A forest-based environment as a site of literacy and meaning making for kindergarten children
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Abstract

This study analyses the valued school experiences of 15 five- and six-year-old Canadian children, through their creation of multimodal texts. Throughout the school year, the students spent a large portion of each school day in the expansive forest on the school grounds, and their texts revealed their significant interest in this natural outdoor environment. Specifically, the data revealed that the outdoor space provided a context where the children could engage with each other and the environment in meaningful, creative and collaborative ways. This research has the potential to contribute to our understanding of the capacity of young children to share their thoughts on their school experiences by drawing on a range of modes and to contribute to our understanding of the power of alternative learning spaces, such as forest environments, on children’s literacy learning and development.

Key words: children’s everyday literacy lives, curriculum, language arts, multimodality, narrative, pedagogy, outdoor education, forest environments, kindergarten

In many elementary school settings, there has recently been a transformational shift in the ways educators conceive of literacy and meaning making. This shift aligns with the recognition that in our social, cultural and economic worlds, children engage with a range of diverse texts and modes (Siegel, 2006) across many different environments (Bronfenbrenner, 1999). This perspective has made significant contributions to our understanding of the importance of all communicative modes for children’s meaning making (Pahl and Rowsell, 2006), including the social and cultural impact of children’s environments on their learning (Rogoff, 1990).

In this article, I describe how a forest environment located on an urban elementary school property in Canada provided a space for kindergarten students to create meaning with each other in socially constructed, collaborative ways. This study focuses on how natural, outdoor environments have the potential to provide children with multiple affordances in relation to their meaning making, allowing for a wide range of learning opportunities (Fjortoft, 2001). According to Sidelnick and Svoboda (2000), a significant pedagogical challenge for elementary educators is to provide children with opportunities to transform their ideas into modes of representation that allow for the full range of human experiences and to align approaches to language arts teaching and learning with children’s individual strengths, interests and personalised styles of representation.

For the 5- and 6-year-old children enrolled in kindergarten classrooms in British Columbia, the westernmost province of Canada, the development of a new Language Arts curriculum (British Columbia Ministry of Education, 2015) has provided a space for educators where they can draw on a multimodal approach to learning which recognises that children’s meaning making occurs through multiple modes (Cope and Kalantzis, 2009; Kress, 2003). In the recently developed British Columbia Language Arts kindergarten curriculum (2015), the following learning principles are stated: (i) students need to be provided with opportunities to create a variety of communication forms (e.g. oral, written and digital) for different purposes and (ii) all students have a unique personal story and perspective. Another overarching theme of the newly revised curriculum focuses on the importance of utilising flexible learning environments with students and providing students with autonomy and voice in their learning. In relation to research, Clark (2007, 2010) argued that children should be provided with opportunities to be heard in studies in which they are participants. Barratt Hacking et al. (2013) contended that children should be engaged as active researchers in studies in which they are involved because they have the right to “participate in matters of relevance to them” and they offer “unique perspectives ... of their own and other environments” (p. 438).

The British Columbia Early Learning Framework (2007), another supporting document for kindergarten teachers in the province, acknowledged that play is a valued form of communication for young children and defined play as a significant literary and social text in children’s worlds. Roskos and Neuman (1998) articulated that children’s play is very story-like in its structure with specific characters, including a plot and setting. Additionally, children’s play is often focused on an issue of interest to them (e.g. making dinner, putting a baby to bed, superheroes). Moreover, roles and perspectives are interchanged in play among

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peers, as young children often visit and revisit aspects of their own lives. The narratives that evolve from children’s imaginative play may also provide interesting social situations for educators and groups of children to deconstruct and analyse. The role of play as part of a robust literacy programme in a kindergarten classroom is significant as children represent and transform the world around them as they play, providing other children and adults with a window into their thoughts and perceptions. Bakhtin (1981) noted that through stories and play, children construct their relationships with others and express their unique perceptions of the world around them. Play also allows children to create “possible roles in possible worlds” (Dyson, 1997, p. 14) where ‘pretend’ identities are appropriate.

This research is therefore situated within a pedagogical framework focused on play, multimodality and voice. In the study, a classroom of 15 culturally and linguistically diverse kindergarten children were asked to share their valued learning experiences at school at the midpoint of the school year and at the end of the school year through any mode or assemblage of modes that they chose (e.g. drawing, painting, storytelling and photography). The intent of this study was to provide children with opportunities to share what learning experiences they valued at school by drawing on a range of modes and to reflect on how the students’ valued school experiences have the potential to inform elementary literacy pedagogy and the development of future curriculum documents in language arts. The research questions guiding this study are as follows: (i) what learning experiences do kindergarten children value at school? and (ii) what modes are they choosing to express and represent their valued school learning experiences?

Research context

The study took place in an urban kindergarten classroom, as well as in the school’s expansive forested outdoor area. A key initiative of the school district in the study was to engage students in more outdoor learning experiences based on the growing evidence that natural outdoor spaces benefit children’s development and learning (Zamani, 2015), including their physical development (Fjortoft, 2001), cognitive development (Refsheuge et al., 2015) and social and emotional tendencies (Mereweather, 2015). The school district’s perspective was also informed by a number of studies that have investigated the role of diverse learning spaces on children’s learning and development that move beyond the traditional classroom (Coe, 2016; MacQuarrie et al., 2015).

One of the most important attributes of outdoor learning is that it is learning that is play-based, child-initiated and child-led as far as possible (Knight, 2009). Children’s outdoor engagement is also more personally directed and intrinsically motivated. In this way, the potential for open-ended play is maximised (Knight, 2009). Additionally, more diverse learning experiences can take place in outdoor settings, as opposed to the limited opportunities provided in a traditional classroom setting. Thus, outdoor, flexible learning environments also provide opportunities for educators to observe children in action and acquire valuable insight into their individual learning styles (Ackerman, 1999).

The school where the research was conducted was situated in a mountainous forested area in a large, coastal city in British Columbia, Canada. The kindergarten teacher involved in the study was also enrolled in an Outdoor Environmental Leadership programme cohort that was developed by the school district in collaboration with local environmentalists and community members. The teachers in the cohort met 5 days throughout the school year in various outdoor contexts (e.g. local canyons, caves and bay in the area and forested areas). The intent of the cohort was to enhance teachers’ understanding of the potential of experiential outdoor learning practices for young learners by providing them with opportunities to engage in a diverse range of experiential, ecologically based field studies on salmon, forest habitats, local birds and local Indigenous ways of knowing.

Due to the kindergarten teacher’s interest in outdoor learning and her participation in the outdoor learning cohort, the kindergarten children spent half days (afternoons) in the forested area of their schoolyard, where the teacher engaged the students in an integrated learning approach where many curriculum areas were addressed (e.g. language arts, social studies, science and physical education). She also provided the students with time to freely explore the forest where they participated in a range of student-initiated play narratives.

Theoretical perspectives

This study is framed by the following theories: multimodality (Kress and van Leeuwen, 1996, 2001), socio-cultural theory (Vygotsky, 1978; Wertsch, 1998) and place-based learning (Sobel, 1996). The field of multimodality addresses how human beings use different modes of communication to represent or make meaning in their world (Kress and Jewitt, 2003). Kozulick (2016) added that a multimodal perspective views children as sign-makers who make use of the resources available to them in their specific socio-cultural environment. Socio-cultural theory (Vygotsky, 1978) is grounded in people’s experiences and perspectives. Specifically, a socio-cultural perspective highlights how individuals construct their knowledge by participating and interacting in different social environments.

Place-based, outdoor learning promotes children’s relationships with the natural environment and enables them to develop environmental awareness and knowledge (Sobel, 1996). Norling and Sandberg (2015) contended that outdoor environments provide children
with opportunities to experience phenomena (e.g. constantly changing outdoor environments and shifting seasons and weather) that contribute to their meaning making. In outdoor spaces, there appears to be more ambiguity surrounding discourses of teaching and learning which allows for more child-initiated learning and play (White et al., 2013). Thus, outdoor spaces enable children to experiment with ways of relating to each other, offering a blended cultural context of play and schooling. As a collective, the theories of multimodality, socio-cultural theory and place-based learning provide a comprehensive framework for the study.

Method and analysis

A qualitative, interpretative research approach (Merriam, 2009) was utilised in this study. Mason (2002) argued that a qualitative, interpretative research design produces holistic understandings of rich, contextual and generally unstructured data by engaging in conversations with the research participants in a natural setting. In this study, I drew on a range of qualitative research methods which included combinations of the following: (i) group discussions, (ii) participant observations, (iii) anecdotal notes, (iv) artefact collection and (v) individual semi-structured interviews (children’s narratives). These research procedures always occurred within the context of the children’s everyday activities in their classroom and the forested area at the school. I initiated a group discussion at the onset of the study to explain the purpose of the study to the students and to answer any of the students’ questions about the research process and my presence in their classroom. To establish trustworthiness with the children I shared my research inquiries with the students in a large group discussion, I explained the role they would potentially assume in the study, and I encouraged them to ask any questions they had in relation to the research. This approach aligns with the work of France (2004) who posited that information about the research children are being invited to participate in should be shared with them in a way that they can understand and should include the aims and objectives of the research. The children’s families also provided written consent for the students’ participation in the study.

Throughout an 8-month period (October to May), I interacted with the children in the classroom and outdoors where I made anecdotal notes based on my observations and participant observations of the students’ learning experiences, interactions and friendships. I also recorded my informal conversations with individual students or groups of students about their learning experiences. During that time, I visited the school every other week and developed positive relationships with the students within the everyday context of their school life. Throughout that period, I spent time with the students in their classroom, outside in the forest, and I also assisted with local field trips. The individual semi-structured interviews occurred twice throughout the school year (February and May), where I asked each child about their valued school experiences, transcribed their verbal narratives and then asked the children if they would like to share this knowledge in additional multimodal ways (e.g. photography, painting and drawing). During my time in the classroom, I observed the children engage in play-based learning and exploration each day, as well as participate in more traditional literacy experiences (e.g. writing in journals and reading levelled books in small reading group sessions). Although the children were used to engaging in a range of literacy and multimodal practices throughout their school day, sharing their valued school experiences with an adult was a new experience for them.

The data in the study were analysed within a qualitative, analytical research approach (Mitchell, 2011; Prosser, 1998). I used a range of analytical approaches to identify themes embedded within the children’s multimodal texts and then used these themes to synthesise, sort and articulate meaning into a collective narrative form. For example, the following three stages of data analysis occurred in this study: (i) narrative analysis, (ii) image-based analysis and (iii) thematic analysis. Narrative analysis recognises that an individual’s stories represent “the social reality of the narrator” (Etherington, 2004, p. 81) and conveys a sense of that person’s experience by using the actual words spoken (Kress and van Leeuven, 1996). It also acknowledges the researcher’s part in the conversation and the ways in which these stories are shaped through dialogue and co-construction. In this study, my analysis was aided by the children’s verbal descriptions of their images through conversations inspired by their texts.

Image-based analysis includes the analysis of images, such as photographs and drawings (Mitchell, 2011). Kendrick and McKay (2016) proposed that images provide researchers with a different sequence of data and an alternative means of perceiving that data. Rowsell and Pahl (2007) suggested that multimodal texts are representations that are closely linked to the identity of the sign-maker. These texts “can be thought of as an identity text which carries the traces of its author within” (Stein, 2008, p. 83). The children’s images were analysed as a way to acquire a deeper understanding of the children’s interests, knowledge and visual perceptions. Additionally, the research participants’ visual representations were analysed in relation to the children’s environmental awareness and use of the outdoor forest-based environment.

Finally, thematic analysis was used in this study to identify, analyse and report patterns within a dataset, allowing the organisation of data in a way that describes it in detail (Braun and Clarke, 2006). Thematic analysis enabled me to make interpretations about the data by describing what was happening within it (Boyatzis, 1998). Braun and Clarke (2006) posited that thematic analysis is more than just themes emerging from the data, as this suggests that the analyst is passive in the process; instead, thematic analysis is an active ongoing process. In this study, a
thematic analysis approach enabled me to develop richer and more complex insight into the nature of the children’s valued practices by drawing on Braun and Clarke’s (2006) six phases of coding: (i) familiarising oneself with the data and identifying items of potential interest, (ii) generating initial codes, (iii) searching for themes, (iv) reviewing potential themes, (v) defining and naming themes and (vi) reporting the themes.

Children’s perspectives

Over a 3-day timeframe in February (midpoint of the school year), I individually met with the students (15–20 minutes) where they verbally shared their most valued learning experience at school. During the next 2 days, after the semi-structured interviews occurred, I met with each child again for a longer time period (30–45 minutes) where they created multimodal texts through drawings, paintings and digital photographs. Although the children were used to engaging in oral discussions in the classroom and also drew, paint and wrote in their journals, the possibility of using photography to represent their interests was new to the children and was used by three of the research participants. During these sessions, 13 of the 15 research participants shared that the time they spent outside, engaging with nature and each other, was the most significant aspect of their school day. The following examples revealed that the children utilised many different modalities to express their interests at school and highlighted how they positioned themselves in their school worlds. Most significantly, the children’s representations revealed that the students viewed themselves as social beings who engaged in a range of meaning making practices and who valued their interactions with their peers and their local outdoor surroundings. The following three narratives and multimodal depictions represent the majority of the 15 children’s valued experiences over the course of a school year and signify an accurate portrayal of the research participants’ perspectives.

Narrative 1: Delia’s painting of time spent in the forest.

Delia: “I like going outside and playing! I like playing with my friends, Sydney and Megan. We play hide and seek on the playground and hide in the forest in the logs and trees. I like outside because it’s so fun and I really like to play. Sometimes I play with my sister too; I like all the colours outside and all the space.

In the aforementioned narrative and accompanying painting, it was evident that options for choice, opportunities for play and the possibility of re-imagining outdoor settings are irreplaceable values in children’s worlds (Lindholm, 1995), all of which appeared to be important to Delia. The ways in which Delia explored and engaged with the outdoor environment and with her peers also seemed to position her in a more independent and autonomous role than when she was in the classroom. For example, during my time in the classroom, I observed Delia, whose first language was Farsi, struggle with some of the learning experiences that were practiced in that setting – such as displaying competency in reading and writing in English.

Based on my observations and interactions with Delia in the classroom and outside, I noticed that she created strong bonds with her peers when she was outside as they communicated in the same ‘language’ and she displayed a strong desire to be part of a peer group. Based on her explanation of her most valued school experience, it was apparent that she was adept at forming allegiances with her peers and older sister while engaging in outdoor play. From a socio-cultural perspective, another aspect that emerged in Delia’s multimodal representation was the notion of how her friendships were developed in genuine ways through outdoor play scenarios and games. Broadhead (2009) argued that more balanced power relationships seem to exist in outdoor environments for children, as opposed to inside classrooms where teachers may direct children’s play narratives and encourage children to be inclusive in their play. Broadhead added that although there may be a leader or initiator of a play theme, its continuance and success in a group is dependent on negotiation of a shared vision, which was evident in Delia’s description of her play. Since Delia was a new English language learner, her engagement in social, active outdoor play as a multimodal practice and her interpretation of the outdoor space at school through oral language and art enabled her to share her values and experiences in multiple ways (Figure 1).

Figure 1: Delia’s multimodal representation of her valued play with peers in the schools forest. [Colour figure can be viewed at wileyonlinelibrary.com]
Narrative 2: Lenora’s drawing of herself playing with friends on the school playground.

Lenora: I like being outside with my friends. We make shelters and we make up different games, like getting trapped on an island, or being on a boat and making our escape! I like doing science outside too – like different experiments, especially when the sun is out.

In the described narrative, Lenora and her friends created imagined identities within an imagined community where they participated in dynamic narratives and adventures. The importance of social relationships and friendships was evident in this narrative, particularly in regard to the power of shared, communicative events in young children’s school lives. Avgitidou (2001) asserted that children develop a sense of well-being due in part to the relationships they form at school. For Lenora and her peers, this sense of well-being appeared to be created within the development of their shared beliefs and values which were practiced on the school playground. Additionally, for Lenora and her classmates, their imagined community outdoors were situated at the intersection of play and multimodality (Kendrick, 2016) as their play presented new possibilities for them where they negotiated their own imagined identities and narratives that best suited their individual needs (Figure 2).

Narrative 3: Dustin’s photograph of his friends building a fort.

Dustin: I like playing in the fallen logs and trees on the playground: it is so much fun, but a bit scary too! I like the big pile of sticks and logs that we made – it is for another fort that is going to be really high off the ground.

For Dustin, the school’s diverse backdrop of trees, rocks, hills and other natural structures presented an ideal environment for him to engage in challenging play experiences. Although many school grounds fail to provide a varied natural landscape to students, this was not the case in the students’ outdoor context as the landscape had a diverse topography that was embraced by Dustin and his classmates (Figure 3).

When Dustin and I spent time in the forest, he took many photographs of the outdoor space and he also asked me to video record him climbing on the branches and logs. He also took photographs of his friends climbing on the pile of sticks and branches that he and his peers were collecting to create a fort. Dustin’s attraction to the natural world and the physical challenges that this space provided (Coe, 2016), combined with his interest in finding and collecting natural elements that have meaning and purpose, enabled him to build positive and collaborative relationships with his peers towards an end goal (Parsons, 2011). This was continually apparent in Dustin’s play, which also linked to some of the six categories of risky play developed by Sandseter (2007) which included the following: (i) playing with great heights, (ii) playing with high speed, (iii) playing with harmful or dangerous objects, (iv) playing near dangerous, (v) rough-and-tumble play and (vi) playing where children can ‘disappear’/get lost.

Several months later, the 15 children involved in the study were asked to once again share what they valued at school during individual, semi-structured interviews. This provided them with another opportunity to share a different activity or experience that they valued even more as the school year progressed. During these sessions, each child and I revisited his or her multimodal representation from February, including each child’s accompanying oral explanation. All of the research participants shared that what they
valued earlier in the school year remained the same. For several of the children who shared that they valued being outside with peers and with nature, their stories, risk-taking, and imaginative play became even more elaborate and collaborative, as they also talked about having marshmallow roasts with rocks, sticks and leaves, climbing on hollowed tree stumps that they transformed into their houses and towers and moving large sticks into a pile to build a rocket ship to transport them to outer space.

Discussion

In this study, I used a range of analytical methods to develop an understanding of kindergarten students' valued practices and experiences at school. Firstly, I asked the children to share their valued school experiences verbally, as well as through their use of diverse modes. My use of narrative analysis enabled me to understand each student's social reality at school and acquire a rich understanding of their experiences through their personal stories. The majority of children (87%) shared stories about the value they placed on their outdoor experiences. In comparison, a small number of students (13%) revealed that they enjoyed playing with different, favourite toys in the classroom. Most significantly, the children's narratives revealed that children conceptualize themselves as social beings, and the data also provided some insight into the strong sense of autonomy they felt when they were engaged in collaborative, outdoor play.

By examining the children's multimodal, image-based representations, I was able to decipher deeper meanings of their valued school experiences. In addition to verbally expressing their valued school learning experiences, the students created drawings, paintings and took photographs with an iPad. These images provided me with a sequence of data and an alternative means of perceiving students' valued experiences and realities. The children's narratives and multimodal representations also revealed their early formations of self as they moved through their first year of formal schooling and revealed the importance they placed on constructing social, play-based stories with each other in a particular place—specifically the school's forest. This study is particularly significant in providing some knowledge on how children have the capacity to reveal pertinent information about their school experiences by utilising an assemblage of modes to share their personal values and beliefs and how diverse sites beyond the classroom have the potential to be rich site of literacy learning and development.

In this study, the recursive nature of multimodality in the children's worlds and the research participants' socially constructed narratives at school were highlighted. By having a researcher ask the children to share their valued practices at school through multimodal methods, the children were able to share what mattered to them, which the students and I also shared with their teacher. Based on the findings of this research, my intent is that this study will enable elementary educators to recognize, support and provide students with opportunities to engage in meaning making practices, particularly outdoors, as different environments offer children a space for experimentation with different modes and communicative practices, and provide unique and important holistic opportunities for children. As children select modes and share significant learning experiences and spaces that meet their learning purposes and meaning making needs at school, they offer glimpses of their authentic lives to educators who are open to listening, seeing and acting on their interests and valued experiences.

References
