

Outdoor Learning and Experiences as a Way Forward During the COVID-19 Pandemic and Beyond

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Abstract

This article examines how the inclusion of outdoor learning can provide early childhood education and care (ECEC) a way forward during the COVID-19 pandemic and beyond. The pandemic has significantly impacted ECEC programs and, although it is not a new concept, outdoor learning provides opportunities to mitigate negative impacts of pandemic-related restrictions for children and educators. Practice-based examples from an early learning setting are provided to highlight some of these opportunities. Some of the challenges and limitations of outdoor learning and experiences are also discussed, and a resource list to support programs to begin embracing outdoor learning is provided.

Key words

COVID-19, early childhood education and care, early years pedagogy, outdoor environments, outdoor learning

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Outdoor Learning and Experiences as a Way Forward During the COVID-19 Pandemic and Beyond

The COVID-19 pandemic has substantially impacted many people's lives, including the lives of young children. Most children's daily routines saw significant shifts with the closing of early childhood education and care (ECEC) settings and schools. In addition, many children experienced physical isolation, illness, and even death (Araújo et al., 2020; Cost et al., 2021). UNICEF (2020, para. 2) noted "this is a universal crisis, and for some children, the impact will be lifelong." Throughout the pandemic, there has been speculation about how to get back to "normal" and what the "new normal" will look like.

Despite the impacts on children, ECEC has been largely overlooked in many conversations about the pandemic in Canada. The limited conversations including ECEC have focused on policy issues, such as access to childcare, funding considerations, and closure-related economic impacts (e.g., Cressy, 2020; Daley & Saad, 2020; Dessanti, 2020; Friendly, Ballantyne et al., 2020; Friendly, Forer et al., 2020; Wallace & Goodyear-Grant, 2020). Advocates are rightfully concerned about the permanent closure of many ECEC programs and the need to secure additional funding to safely keep programs open (Daley & Saad, 2020; Friendly, Ballantyne et al., 2020). Unfortunately, consideration of children's well-being and the potential impact on their learning has been missing from the narrative. Moreover, the well-being of early childhood educators has been ignored, which is concerning as they are caring for our youngest citizens during a time of heightened emotions and uncertainty.

In Ontario, Canada, as the pandemic has progressed, there has been confusion related to ever-evolving policies and public health advice, and the spurning of advocacy calls for protecting early childhood education programs from complete collapse.

Consideration of the impact on children beyond their protection from the virus and collaborative consultation with the ECEC field has been non-existent (Walker, 2020; Wong, 2020). This article looks at how a shift to outdoor learning can support children and educators as they both survive and thrive during this ongoing pandemic.

Outdoor learning, an educational movement focused on learning opportunities in the outdoors, can benefit children of all ages; however, this article will focus specifically on the youngest learners involved in ECEC. For the purposes of this article, outdoor learning will be considered as a broader construct within ECEC that involves playful opportunities based on exploration and inquiry as well as caring practices, such as eating and resting, as learning can also occur during these experiences.

It is well-established within the field of early childhood education and care that play is a critical component of children's learning. For example, *How Does Learning Happen? Ontario's Pedagogy for the Early Years*, a key pedagogical document for the early years in Ontario, identifies engagement in play as a foundational component of optimal learning and development (Ministry of Education, 2014). Play within natural outdoor spaces and playgrounds is specifically mentioned as being highly beneficial through the physical experiences and challenges that are offered and the increased opportunities for independence, perseverance, and problem solving (Ministry of Education, 2014).

Unfortunately, extensive pandemic-related health and safety regulations have necessitated adjustments to many common pedagogical approaches in ECEC, particularly the reduction of close interactions between children and educators.

These adjustments, though necessary to protect the health of both children and educators, are not congruent with pedagogically sound practices for early learning. Early learning pedagogy specifies that engaging in close, reciprocal interactions is critical for the development of relationships between children and educators (Ministry of Education, 2014). Accordingly, this article explores how outdoor learning offers a way forward for relationships between children and educators during the COVID-19 pandemic, with specific consideration of practice-focused examples.

As the authors of this article, we speak to our practice-based experiences in Ontario, Canada. We begin by examining the pandemic's impact on young children's physical and mental health and on educators and the operation of ECEC programs. We then discuss how outdoor learning can meet current, enhanced health and safety regulations while supporting previously established pedagogical approaches and values. Some of the challenges that programs face while focusing on outdoor learning, particularly during the pandemic, are also highlighted. The lead author is the Pedagogical Leader at an ECEC setting in Ontario and examples from this setting are shared to illustrate some of these outdoor learning-focused approaches and decisions in action. We propose that, while outdoor learning can provide a way forward during the pandemic, the opportunities it offers to the ECEC field go beyond the pandemic. Readers are asked to consider the following questions:

- Can a focus on outdoor learning and other outdoor experiences encourage more innovative practices within the field of ECEC?
- How can outdoor learning provide more varied and engaging opportunities for inquiry and learning?
- How can outdoor environments provide more opportunities for connections and strengthening of relationships?

COVID-19 Pandemic Impacts on Early Childhood Education and Care

The pandemic caused substantial changes to many children's daily lives and routines, potentially impacting their physical and mental health. In addition, through centre closures and additional regulatory requirements, the pandemic has significantly impacted daily ECEC program operation.

Impacts on Children

The primary concern during the pandemic has been children's physical health, especially the many concerns associated with contracting the COVID-19 virus (Mayo Clinic, 2020). Yet the pandemic has affected children's physical health in other ways. Children are spending more time inside due to closures of places they previously visited, such as educational settings, playgrounds, and recreational spaces. Government directives to physically distance, stay-at-home orders, and virus transmission fears have re-enforced children's inactivity and isolation. While pandemic-based research is just emerging, initial findings indicate that children's physical activity levels have significantly decreased (e.g., An, 2020; Moore et al., 2020). For example, a microsimulation childhood obesity study in the United States recently projected that school closures will be associated with increases in children's body mass indexes, potentially leading to long-term health consequences (An, 2020). Additionally, a Canadian study found that only 4.8% of a national sample of children were meeting recommended activity guidelines during the pandemic (Moore et al., 2020, p. 4). Decreased physical activity levels are linked to increased negative health outcomes related to obesity and associated health concerns, such as Type 2 diabetes, hypertension, and cardiovascular disease (McCurdy et al., 2010). These research findings are concerning, and immediate action must be taken to improve children's health by encouraging healthier, more active lifestyles.

The pandemic is also affecting children's mental health through added fears, stress, and social isolation. Specifically, children and families are experiencing stress and fear about becoming infected with the virus (Klein et al., 2020). Reminders of the dangers of the virus are omnipresent in the media through attempts to increase public education and compliance with government directives. News broadcasts, public signage, and regulations implemented in public and online spaces are consistent reminders of how much life has changed. It is clear that children are absorbing these messages, given the ways in which children's play now includes COVID-19-related themes (Pelly, 2020), and researchers have reported increased stress and anxiety for children and their families resulting from the pandemic (Cost et al., 2021; Fegert et al., 2020; Klein et al., 2020).

This impact has been exacerbated by contextual and intersectional factors already present in some children's and families' lives, such as inequalities based on race, ethnicity, gender, or socio-economic conditions (Prime et al., 2020; Maestripieri, 2021). For many families, shifting from in-person to online/remote learning for older children increased stress for caregivers juggling many responsibilities, which often included working from home. Family members who lost employment during the pandemic found themselves under increased financial pressures, adding stress and anxiety. These stressful experiences increased risks of child maltreatment, domestic violence, and parental mental illness, which can significantly impact young children (Araújo et al., 2020; Cost et al., 2021; Fegert et al., 2020).

Strict pandemic-related containment measures have reduced social interactions. Lacking social interactions outside their household due to physical distancing restrictions, children and their families may feel isolated, which can affect their mental health (Fegert et al., 2020). Further, parents juggling additional responsibilities may struggle to have quality interactions with their children; they may find other ways to keep their children busy, such as increased screen time (Prime et al., 2020), while fulfilling their employment responsibilities from home.

A reduction in quality parental interactions and the inability to interact with individuals outside of their household due to pandemic restrictions can also have a significant impact on children's play. Playful interactions are critical for children's early learning and development (Ministry of Education, 2014) and, if they do not have as many opportunities to socialize with others, it is likely that they are engaging in less play, especially social play opportunities. Finally, lack of interaction with others outside of their household may result in fewer social supports for children and families. Families may have relied on childcare support from extended family, such as grandparents, however, this has not been recommended due to contact restrictions outside the family "bubble."

Though negative mental health impacts are possible for children and their families, some families have found the pandemic's contact restrictions beneficial. For example, with childcare and school closures, some families have increased time together, offering opportunities for improved family cohesion (Fegert et al., 2020). Though there may be benefits for some children and families, the pandemic has clearly had a notable—and likely negative—impact on the physical and mental health of many young children (Cost et al., 2021).

Impacts on Educators and Programs

The closure of ECEC programs has had a considerable impact on their financial stability and long-term viability (Daley & Saad, 2020). Once COVID-19 case rates began to decrease in various regions, childcare centres reopened with significant new health and safety practices in place (for details see Childcare Resource and Research Unit, 2020). In Ontario, these practices included screening protocols for all children and staff, consistent cohorts of children and educators, enhanced cleaning measures, restriction of non-essential visitors (including members of children's families), removal of all learning materials not easily sanitized, and mandated educators' use of personal protective equipment (PPE) with masks and eye protection always required indoors, and, when sufficient physical distance cannot be maintained, outdoors (Ministry of Education, 2020).

One significant impact of the new regulations was reduced close interactions among children and between children and educators, even though such interactions are critical to children's early learning and development (Bertrand & Gestwicki, 2016). Individuals were encouraged to maintain distance from each other, making it challenging for children and educators to engage in collaborative or joint play interactions. Physical distancing created a practical challenge for educators as it made it significantly more difficult to perform many of the aspects of their roles, such as engaging in close play interactions and guiding children through daily routines and transitions. Distancing also jeopardized the caring relationships and interactions with the children, which is a fundamental value of ECEC practice (Ministry of Education, 2014). Caring routines that might have previously held significant relational value, such as diaper changing, dressing, and mealtimes (Ministry of Education, 2014), were conducted differently to support physical distancing. For example, family style mealtimes that focused on connecting and enjoying a meal together were set up as pre-portioned meals with a focus on distancing between individuals. Additionally, excluding non-essential visitors and using intense screening protocols significantly reduced in-person interactions between educators and family members. Where non-essential visitors were restricted from entering centres, educators and parents did not have in-person contact, eliminating the previous daily contact at drop-off and pick-up times.

Another significant impact of the new regulations was on the learning materials that could be included in ECEC programs. In Ontario, the restrictions required the removal of all learning materials and equipment that could not be easily cleaned and disinfected (e.g., fabric, natural items, sensory materials). This meant that soft materials (e.g., stuffed animals, blankets, pillows) that can be critical sources of comfort for children, especially during these stressful times (Bertrand & Gestwicki, 2016), could not be used. This regulation also eliminated many nature-based materials, resources that hold significant pedagogical value for children, educators, and programs (Ministry of Education, 2014). Use of

natural items was a common pre-COVID-19 strategy to strengthen children's connections with the natural world. Unfortunately, most natural items (e.g., sticks, rocks, or leaves) are porous and cannot be disinfected in accordance with the new regulations. Finally, sensory experiences, such as a sensory bin filled with water, were also restricted despite offering valuable learning opportunities (Bertrand & Gestwicki, 2016); sensory experiences could be used minimally and only as individual experiences.

Clearly, these new health and safety regulations have restricted many key aspects of quality ECEC settings, including opportunities for close interactions and the use of diverse learning materials.

How Outdoor Learning Can Provide a Way Forward During the COVID-19 Pandemic

A focus on outdoor learning offers ECEC programs a significant opportunity for moving forward during the pandemic while supporting children's well-being and learning. Children's engagement with and in nature has demonstrated physical, cognitive, emotional, and social benefits, including increased physical activity and cognitive function (Brussoni, et al., 2017; Gill, 2014; Herrington & Brussoni, 2015; Kemple et al., 2016; McCurdy et al., 2010). In general, outdoor learning opportunities benefit children's learning and development by providing a diversity of experiences and opportunities, such as a greater variety of sensory experiences, seemingly endless elements of nature to learn about and explore, and opportunities to negotiate risk (Änggård, 2011; Herrington & Brussoni, 2015; Kemple et al., 2016).

Although outdoor learning has demonstrated these benefits in pre-pandemic circumstances, outdoor learning experiences can offer greater advantages during the pandemic restrictions. Outdoor learning can help ECEC programs better support children's development and learning and mediate some of the pandemic-specific concerns, especially regarding physical health, safety, and mental health. Though not specifically related to children, a recent Canadian

study found that participants who engaged in more outdoor physical activity during the pandemic had lower anxiety scores than those who spent less time outdoors (Lesser & Neinhuis, 2020). Accordingly, a program using outdoor learning can support the mental and physical health of both ECEC educators and children. A focus on outdoor learning can also help ECEC settings better meet the pandemic-related regulations, while remaining consistent with previously established pedagogical approaches and values.

Supporting Social Connections Outdoors

Infection risk during the pandemic has been a significant concern, resulting in requirements for physical distancing and the use of PPE (Klein et al., 2020). Unfortunately, these requirements limit the close interactions among children that are critical for many aspects of children's growth and learning, especially their social-emotional development (Bertrand & Gestwicki, 2016). Further, these measures limit the close interactions between children and educators that are critical to offering care and support, facilitating learning opportunities, and guiding children through transitions, routines, and expectations.

Since the pandemic is an ever-evolving situation in 2021, limited research currently exists on virus transmission among young children; however, preliminary research suggests that infection transmission is less likely outdoors (Bhagat et al., 2020; Quay et al., 2020). This lower infection risk outdoors reduces concerns and offers increased play and learning opportunities for ECEC programs while adhering to regulations. Children can socialize with each other and engage more closely without as much worry about virus transmission. In addition, more space and freedom to maintain physical distancing can help educators reduce their regulation of children's interactions with each other to encourage distancing. As preliminary research suggests that COVID-19 impacts children less than adults (Escosa-Garcia et al., 2020), educators can also be less concerned for their own health while having close

interactions with children (Figure 1). In addition, with lowered infection risk, educators will be able to engage with children outside without full use of PPE when maintaining the recommended distance. As the use of PPE is a new regulation within the field (Ministry of Education, 2020), it is likely that moments where PPE is not necessary may feel more natural for both educators and children.



Figure 1. Educator and children engaging in a close interaction outdoors while wearing required PPE (safety goggles & mask, not visible in picture).

Supporting Learning and Inquiry Outdoors

Outdoor learning remains less affected by new regulations and protocols. For example, the regulations affecting learning materials impact the environment indoors more than outdoors. Many typical learning materials have been removed from the indoors, leaving environments looking bare and less welcoming. Children and educators can feel less comfortable in these indoor spaces, while the outdoor learning environment feels more typical, comforting, and relatively unchanged.

Given the relationship between educator mental well-being and quality of care (Corr et al., 2017), interactions and relationships with the children in the outdoors can mitigate some of the anxieties experienced due to drastic changes and limits indoors. Additionally, children benefit from being able to engage in experiences that naturally occur or are permitted by regulations while outdoors. For example, group sensory experiences such as

the water sensory bin are restricted inside; however, outside, a puddle formed from a rainstorm provides a naturally occurring group sensory opportunity with unlimited learning potential (Figure 2).



Figure 2. Children engaging in an outdoor sensory experience together.

Re-imagining Caring Practices Outdoors

Times of challenge encourage innovative thinking and reignite passion. From the authors' experience, early childhood educators are passionate about the encounters they offer to and engage in with children. Though there can be resistance to change, innovative ideas can reignite educators' passions for their profession. Educators are excited and curious to see how the children react to and benefit from new experiences. During the pandemic, early childhood educators are experiencing dramatically different circumstances, which create opportunities for innovative thinking as they adapt to new restrictions and overcome challenges. Daily routines can be re-imagined, presenting a perfect opportunity to be bold with new practices that have traditionally been met with resistance, such as eating outside (Figure 3), sleeping and resting outside (Figure 4), or remaining outdoors for the bulk of the day. The educators in the program of the lead author were curious to see how the children would respond to these new experiences and were excited to share their results with their colleagues. The passion that the educators felt was clear as they shared these new experiences; this is especially important during challenging times dealing with pandemic-related stresses at work and home.



Figure 3. Children eating lunch outside.



Figure 4. Children resting outside.

Challenges and Limitations of Outdoor Learning

Though outdoor learning can provide a way forward during the pandemic, it is not without challenges and limitations. Challenges typically mentioned while discussing outdoor learning are weather, safety concerns, and educator comfort (Kemple et al., 2016; Skar et al., 2016; van Dijk-Wesselius et al., 2020). Though these challenges may seem overwhelming at first, they can be overcome with specific strategies, access to materials, and knowledge (see Appendix for a list of resources). Particularly in Canada, seasonal changes are challenging at times, and it is crucial to understand the variety of clothing that children need to engage comfortably outdoors during the various seasons. Yet Canadian educators do engage in outdoor learning throughout the year and in diverse weather conditions (Harwood, Boileu, Dabaja, & Julien, 2020). It is important for ECEC settings to support families

The Tamarack Room
Tuesday September 8, 2020

The forest is a space that has the ability to capture focus and encourage new ways of thinking. What will the children point out to us today? What might they explore that is new or exciting? Surely we get to see and feel things outside that we don't get to see or feel from inside our classroom. For instance, this growth on the side of the log. What does it look like to you? What do you notice about it right off the bat?



DO YOU KNOW WHAT THIS IS A
PICTURE OF?

A Natural Fascination



Today it seemed as though this was a hot topic of discussion. "Look, orange," a child said as she got very close to the log. "Look! Look at the log. Don't pull it out," another child told us. "They look like potatoes. I think they're sticky." Curious, a child asked us, "is it pizza?" While holding two pieces of bark in her hands, we watched as another child put tiny pieces of this growth in between both pieces of the bark. "I'm making a sandwich," she said with a smile. "I think it's a mushroom, my daddy told me," determined another.

After investigating this discovery for a while longer, we still found ourselves wondering about the growth. Is it a mushroom? Is it a fungus? Is it a flower? The educators assured the children that we would get to the bottom of this mystery (it just might take some more research first)!

Figure 5. Documentation written about a preschool classroom's discovery outdoors.

in understanding what clothing is needed and provide help with accessing this clothing, if required.

The availability and naturalization of outdoor spaces can be a challenge for some ECEC settings. However, ECEC programs do not need direct access to a forest to focus on outdoor learning, although it is a nice feature to have nearby. Instead, educators should focus on embracing and using accessible outdoor spaces, whether they be on-site, a nearby community space, or dandelions in a sidewalk crack. Generally, the natural space that is available is not as significant as educators' mindsets about these spaces (van Dijk-Wesselius et al., 2020).

There are challenges with outdoor learning that are more specific given the current pandemic, but there have been limited opportunities for conducting research on the aspects that impact the ECEC field. Further, there is often a time-lag between research evidence and implementation of regulatory changes. For example, initial research suggested that COVID-19 virus particles may be detectable on non-porous surfaces for longer periods of time than on porous surfaces such as wood; however, this difference is not yet reflected in the regulations (Chin et al., 2020). Therefore, under current Ontario regulations, ECEC settings can only use a natural material such as sticks or rocks for one day and then the material must be quarantined for seven days. (That said, until quite recently, the quarantine period was 14 days.) In addition, until recently, the use of naturalized playgrounds was restricted because the naturalized elements could not be sanitized in accordance with the new regulations. According to regulations, these spaces could only be used by one cohort and then had to be left for three days before another cohort could use them.

Another challenge to shifting to outdoor learning is the mindsets relating to outdoor learning and the use of technology. Outdoor learning and technology are sometimes viewed as opposing or competing approaches, with particular concern about young children and the appropriate amount of screen time (Bergen, 2017; McCurdy et al., 2020; Skar et al., 2016). Yet technology has been consistently used throughout the pandemic and seems to have gained even more importance in everyday lives as a result. Examining the ways in which technology can support and extend

outdoor learning opportunities is important (Rose et al., 2017). The need to challenge existing notions of technology as a detractor from outdoor learning has never been more urgent. Technology can be an important tool for conducting research about a natural discovery that the children and educators have made outdoors—by using devices to record experiences and learning, and by using apps and computer programs outdoors to find out more information (Bergen, 2017). (Figure 5)

Conclusion

The measures used to contain the pandemic have significantly impacted the ECEC field, with effects on children's and educators' physical and mental health, as well as program operations. Indoor programs are required to follow new regulations that restrict key aspects of quality childcare, such as limiting the number and scope of interactions between children, educators, and families, as well as limiting the nature and type of learning materials used. Outdoor learning offers a way forward during the pandemic by helping ECEC programs follow the necessary pandemic-related guidelines while maintaining critical practices for quality programs. Precautions and care are absolutely needed to ensure children's physical health and safety (i.e., practices to reduce COVID-19 infection risk); however, it is also crucial that care for children's overall well-being, learning, and growth be at the forefront of consideration. ECEC programs must find ways to balance these complex and often competing priorities for the children in their care, and educators can positively move forward by focusing on outdoor learning.

Although the authors have focused on current circumstances during the pandemic, we conclude that outdoor learning can benefit children and ECEC programs beyond the pandemic. We encourage readers to consider how outdoor learning and other outdoor experiences could support more innovative and pedagogically significant practices within the field of ECEC. Could a focus on outdoor learning offer children and educators more opportunities, connections, and inspirations? The pandemic offers opportunities to meaningfully integrate a greater focus on outdoor learning within current pedagogical approaches, which will encourage ECEC practitioners to continue to recognize its value.

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Appendix

Helpful Free Resources for Getting Started with Outdoor Learning

Articles and Books

Position Statement on Outdoor Active Play (Outdoor Play Canada, 2015): <https://www.outdoorplaycanada.ca/position-statement-on-active-outdoor-play/>

10 Tips for Teaching Outside the Classroom (Zeni, 2020): <https://meganzeni.com/teaching-outside-the-classroom/>

Outdoor Learning Tips (Coburn & Kirk, n.d.): <https://www.coeo.org/wp-content/uploads/2020/08/Outdoor-Learning-Tips.pdf>

Ready... Set... Wonder! Nature Prompts for the Early Learning & Care Educator (Back to Nature Network, n.d.): <http://www.back2nature.ca/ready-set-wonder/>

Preschool: The Power of Nature: Developing Prosocial Behavior Toward Nature and Peers Through Nature-Based Activities (Acar & Torquati, 2015): <https://www.jstor.org/stable/pdf/ycyoungchildren.70.5.62.pdf>

Enriching Outdoor Activities for Children While Social Distancing (Coghill, 2020): <http://blogs.studentlife.utoronto.ca/redefiningconference/2020/07/17/enriching-outdoor-activities-for-children-while-social-distancing/>

Nature Play at Home: A Guide for Boosting your Children's Healthy Development and Creativity (The Natural Learning Initiative & National Wildlife Federation, 2012): https://natureplayandlearningplaces.org/wp-content/uploads/2014/09/NaturePlayatHome_WEB_0_508.pdf

Websites

Thrive Outside: <https://childnature.ca/thriveoutside/>

Outdoor Play Canada: <https://www.outdoorplaycanada.ca/>

Play Outside: <https://outsideplay.ca>

Child & Nature Alliance of Canada: <https://childnature.ca/>

Back to Nature Network: <http://www.back2nature.ca/>

Ontario Children's Outdoor Charter: <http://www.childrensofdoorcharter.ca/>

Childhood by Nature: <https://www.childhoodbynature.com/>

Learning through Landscapes: <https://www.ltl.org.uk/free-resources/>

Children & Nature Network Research Article Search Tool: <https://research.childrenandnature.org/research-library/?h=NGuxxebT>

Webinars

The Great Outdoors: Integrating the Natural World into Early Learning Programs (CECE, 2021): <https://youtu.be/sJEwEMOUOpU>

Outdoor Play Webinar Series (CCCCF-CNAC, 2019): <https://www.gotostage.com/channel/0937d93b97574a1cb23e9b1b19c2f1f4>

Practical Approaches to Teaching Outside in Cold Weather (Harder, Klein, Rittinger, & Conner, 2020): <https://greenteacher.com/webinar-recording-practical-approaches-to-teaching-outside-in-cold-weather/>

The Importance of Outdoor Play and How to Design Outdoor Spaces in ECE (Brussoni & Herrington, 2020): <https://theeducationhub.org.nz/ece-webinar-the-importance-of-outdoor-play-and-how-to-design-outdoor-spaces-in-ece/>