The Australian Educational Researcher (2024) 51:2141–2159
https://doi.org/10.1007/s13384-023-00685-x

Outdoor learning across the early years in Australia: Inconsistencies, challenges, and recommendations

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Received: 4 July 2023 / Accepted: 27 November 2023 / Published online: 23 January 2024

Abstract

In this article, we explore inconsistencies in the implementation of outdoor learning across Australian early years' education. The benefits of outdoor learning justify regular employment of this pedagogical approach in both early childhood education and primary school settings. Early childhood education services provide daily outdoor learning opportunities as required by Australian national policy documents. However, Australian primary schools are not subject to such requirements and teachers often face challenges regarding outdoor learning, thus regular implementation in primary classes can be a low priority. As children in the year before school and the first year of school have similar learning and developmental needs, we argue that the benefits of outdoor learning should be available to all children across the early years. We also recommend regular outdoor learning in the first year of schooling to promote continuity as children transition from early childhood education to primary schools.

Keywords Outdoor learning · Primary school · Early childhood · Transition · Australia

Introduction

The benefits for young children of engaging with natural environments and learning in outdoor settings are well documented (Mann et al., 2022a; Miller et al., 2022; Oberle et al., 2021). However, in many societies, including Australia, fears for child safety, limited access to green spaces, expansion of technology and demanding work commitments (Parsons & Traunter, 2020; Planet Ark, 2017) are resulting in children's diminished time outdoors. These tensions between what is beneficial, what is feasible and what is being experienced by children are significant for families, educational settings, and educational policy makers.

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In educational settings, we define outdoor learning (OL) as based on experiential theories of teaching and learning (Dewey, 1938), involving practical, educational, and often play-based experiences outdoors. Regular OL can be viewed as consistent over time with daily to weekly implementation. The term early years refers to children from birth to eight, and within the context of this article will refer to children in education settings before formal schooling (birth to four or five), and during the beginning years (four or five to age eight) of mandatory education in primary school settings.

Across the early years in Australia and many other countries, care and education are provided by early childhood education (ECE) services and primary schools. The importance of OL, including outdoor play, and the benefits of nature connection have inspired the growing momentum of a nature play movement in ECE in many countries, including Australia (Elliott & Pugh, 2020; Ernst & Burcak, 2019; Kids in Nature Network [KINN], 2018). Contrastingly, in Australian mainstream primary schools there is minimal evidence of regular outdoor experiences and learning occurring beyond the bounds of recess breaks and lunchtime (Green & Rayner, 2022; Jay & Knaus, 2018; Lloyd et al., 2018).

We argue that this inconsistency in OL across the early years is a significant problem in Australian education. The known benefits of OL and the comparable ages and developmental needs of children in ECE settings and the first year of school make OL an approach relevant for both educational settings. We contend that OL in schools can offer learning experiences aligned with mandated curriculum and policies, subsequently increasing children's access to the many benefits of learning and playing outdoors. Teachers and educators can be considered 'gatekeepers' to the outdoors for children (Parsons & Traunter, 2020), hence it is important that educational settings explore ways children can experience greater access to the outdoors and its associated opportunities and benefits.

In this article, we outline the benefits of OL across the early years and its specific relevance for primary schools, then examine the disjunct between OL provision across ECE settings and mainstream primary schools within Australia and internationally, most notably between the years preceding formal schooling and the first year of primary school. We then examine the reasons for these inconsistencies and provide examples of the successful implementation of OL in primary schools, which indicate that challenges are surmountable, and OL is a highly beneficial and relevant pedagogical approach for Australian primary schools.

Benefits of outdoor learning across the early years

Emerging research relating to ECE, and primary school children indicates that OL has convincing cognitive, academic, physical, affective, and social benefits (Harris & Bilton, 2019; Miller et al., 2022; Oberle et al., 2021). Although less researched, there are also convincing benefits for teachers implementing OL (Kuo et al., 2018; Marchant et al., 2019). These benefits emphasise the importance of an OL pedagogical approach across the whole of the early years, including for primary school children and their teachers.

Cognitive and academic benefits

The early years are the most important brain development period within the human lifespan (Alexandra & Victoria, 2015). Research increasingly suggests there are numerous cognitive benefits for young children engaging in OL experiences during lower primary school, including concentration, divergent thinking, imagination (Bento & Dias, 2017; Mason et al., 2021), language acquisition (Mann et al., 2022b), creativity, memory (Dadvand et al., 2015; Mason et al., 2021), problem solving and executive functioning (Carr et al., 2017). The cognitive development promoted through OL supports the implementation of this pedagogical approach in primary school, particularly for children in lower primary at such a pivotal time for brain development (Dadvand et al., 2015).

Research increasingly suggests that OL for primary school children is academically beneficial, improving engagement and academic results in varied subjects (Kuo et al., 2019; Otte et al., 2019; Waite, 2019). Outdoor learning has potential to increase opportunities for children's agency (Baker et al., 2021) and curiosity (Harwood et al., 2022), which also promote academic achievement (Anderson et al., 2020). In many Nordic countries, such as Finland and Sweden, children engage in high levels of OL in ECE settings until aged seven, when they begin formal education (Gustafsson & Blömeke, 2018). Once beginning primary school, they still spend up to half their school day outdoors (Passy et al., 2019; Planet Ark, 2017). Notably, these countries lead the world with academic results in international benchmarking tests, such as the Programme for International Student Assessment [PISA] (Gray, 2018; Schleicher, 2019). While we are mindful of the limitations of such benchmarking tests, this result is an indicator for a more consistent provision of OL across the early years in Australia.

Physical benefits

An increasingly sedentary lifestyle has contributed to a decline in the overall health of children, both in Australia and internationally (Bølling et al., 2021). Chronic health concerns such as asthma, childhood obesity, vitamin D deficiency and myopia are on the rise (Oberle et al., 2021). Time spent outdoors can improve physical activity, decrease immobility (Bølling et al., 2021), and minimise excessive weight gain in childhood (Sharma-Brymer & Bland, 2016). Researchers advocate that primary schools can become effective environments to promote increased physical activity among children and combat health issues (Wu et al., 2017).

Regular interactions with natural environments through OL can result in improved motor skills, including balance, coordination, and endurance (McClain & Vandermaas-Peeler, 2015). Young children can benefit from exposure to sunlight, natural elements, open air and contact with harmless microbes, all of which contribute variously to bone development, stronger immune systems, and protection against disease (Bento & Dias, 2017). Children who spend higher proportions of time outside are less likely to be diagnosed with myopia (Zhou et al., 2017).

Learning outdoors can be a powerful means to combat the health challenges of our time (Oberle et al., 2021). Considering the health threats posed by the COVID-19 pandemic, OL has become a globally recommended approach for education settings, as it reduces the risk of viral transmission and promotes social distancing (Barfod et al., 2021; Oberle et al., 2021). In a 12-month OL pilot project within urban United Kingdom (UK) schools, participating teachers viewed OL as a partial solution to the pandemic health problems (Harris, 2021). In Australia, educational health advice states, 'fresh air is the most effective form of ventilation to minimise risk of transmission…[therefore] outdoor teaching is recommended' (New South Wales [NSW] Education Standards Authority [NESA], 2023a).

Affective and social benefits

The social and interpersonal benefits of learning outdoors include fostering a sense of belonging, connection to community and place within an environment, and these can be conducive to learning and better academic results (Masters & Grogan, 2018). Studies have also shown that children's OL participation can promote empathy and involve less peer conflict than when indoors (Bento & Dias, 2017; Bilton & Waters, 2017). Further to this, researchers report that contact with nature through OL can provide opportunities for children to engage in play, improve communication skills and enhance social relationships (Waite, 2020).

The prevalence of mental illnesses, such as depression and anxiety, among children is increasing worldwide, and this is now a significant health concern (Oswald et al., 2020). Learning outdoors can afford children affective benefits, as part of the remedy (Tillmann et al., 2018). Some documented affective indicators that can improve with OL experiences are self-confidence, resilience, self-esteem, and cooperation (Maller, 2009). Studies have also noted an improved attitude towards school (Sjöblom & Svens, 2019; Waite et al., 2017), increased enjoyment of learning, alongside reduced stress (Marchant et al., 2019; Tillmann et al., 2018).

The potential benefits of OL for primary school aged children are well documented, and although not specific to the first year of primary school, provide compelling evidence for the inclusion of OL across all primary school levels.

Benefits for education staff

The limited research available on the effects of outdoor teaching and learning for education staff indicates that teachers also benefit from being outdoors, and teach in more engaging ways (Kuo et al., 2018). Teachers have described experiencing job satisfaction and a sense of improved personal well-being with the implementation of OL (Marchant et al., 2019). Teacher comments included OL feeling like, 'a breath of fresh air', 'like someone's taken the shackles off us' and 'stress relieving for teachers as well as children' (Marchant et al., 2019, p. 16). Literature highlighting the many affective benefits of being outdoors for adults (Twohig-Bennett & Jones, 2018) can be also applied to teachers within a primary school setting, suggesting that both child and teacher well-being can be increased through OL opportunities.

Given such an extensive range of benefits for both teachers and children, the stark difference between implementation of OL across the early years within an Australian context is problematic, indicating that primary children and teachers may be missing out on many important and far-reaching benefits. The following section outlines differences between OL in ECE and primary school settings in Australia.

Inconsistencies in outdoor learning provision across the early years

When comparing OL provision in ECE and primary school settings, there are inconsistent opportunities for OL in the two educational spaces. This problem is significant, as the disjunct in OL provision means that children in primary school settings cannot partake in the expansive benefits of OL which are often afforded to their ECE counterparts. It is also problematic that Australian literature is largely silent on the provision of OL opportunities for the first year of primary school in comparison to preschool aged children, and how children feel about such inconsistent provision.

Outdoor learning provision in early childhood education in Australia

Early childhood education focuses on educating and caring for children up to five years of age, and whether children attend ECE settings is a matter of parental choice within Australia. The Department of Education, Skills, and Employment (2022) reported that in 2018, 96% of Australian children were enrolled in a preschool service for at least 600 h per year in the year before they began formal schooling, showing that although optional, the uptake of ECE is significant.

In Australia, OL is considered integral to the daily ECE service curriculum and strongly advocated by national policy (Australian Children's Education and Care Quality Authority [ACECQA], 2018; Australian Government Department of Education [AGDE], 2022). In ECE settings, governing policy documents mandate that children have access to both indoor and outdoor spaces for learning opportunities (ACECQA, 2018; AGDE, 2022). For example, Learning Outcome 2 recommends that children 'use play to investigate and explore nature and the natural environment' (AGDE, 2022, p. 43) and Quality Area 3 requires that all children 'engage in quality experiences in both built and natural environments' (ACECQA, 2018). These requirements are upheld with assessment and rating processes monitored by regulating authorities, ensuring that children within ECE settings are provided with regular OL and play opportunities (ACECQA, 2018). The recent national quality standard analysis conducted by ACECQA (2023) revealed that 97% of Australian ECE services are meeting the Quality Area 3 requirements (p. 17). Such access is seen as integral to the daily learning, play and developmental experiences for children (Dankiw et al., 2023; Hughes et al., 2022; Little, 2017).

In addition to these regulatory requirements, in ECE in Australia OL is evident in off-site immersive nature play programs (INPPs) that are gathering momentum (Hughes et al., 2023; KINN, 2018; Speldewinde et al., 2021) and providing children with invaluable play-based learning experiences in local natural environments

(Elliott et al., 2018; Hughes et al., 2022). These programs are often inspired by international examples of OL, sometimes reflecting a translation of European Forest School practices into contexts unique to the Australian environment and climate (Campbell & Speldewinde, 2019; Christiansen et al., 2018; Elliott & Chancellor, 2017). Anecdotally, mainstream Australian schools are yet to embrace such programs, with only a small number regularly exploring local natural environments with children.

In Australia, play-based learning is a foundational ECE pedagogy (ACECQA, 2018; AGDE, 2022). It is commonly claimed that there is considerably more opportunity for choice and play-based learning in ECE, before formal schooling begins (Lillejord et al., 2017). Such opportunities also facilitate greater periods of time learning outdoors (Sahlberg & Doyle, 2019).

Outdoor learning provision in primary schools in Australia

The Australian education system requires that compulsory schooling is attended by all children by their sixth birthday, and some states allow children aged four to begin if they are turning five that school year (NESA, 2021). Dependent on state requirements and parental decisions, children aged four and five may be in ECE settings or transitioning into their first year of schooling. The learning and developmental needs for this age group are comparable, however in contrast to ECE, the Australian primary school policy documents do not require children to have access to both indoor and outdoor spaces for daily learning opportunities. This difference in policy requirements is evident in the minimal implementation of OL seen in mainstream Australian primary school settings, particularly in the first year of school when preschool aged counterparts are still receiving the benefits of regular OL in ECE settings.

The Australian Curriculum, Assessment and Reporting Authority [ACARA] (2020), guides teaching and learning practices in the national Australian Curriculum, yet each state and territory retains autonomy in its implementation and some use additional intermediary syllabus documents (e.g., NESA, 2023b; School Curriculum and Standards Authority, 2023; Victorian Curriculum and Assessment Authority, 2023). The value of learning outdoors in schools was acknowledged by ACARA with the inclusion of OL as a curriculum connection in the 2017 Australian Curriculum (ACARA, 2018; Gray, 2018). The syllabus documents for primary children do not dictate the way curriculum must be taught, meaning that it is possible for teachers to implement OL across every subject. However, OL is not promoted within the mandated syllabus documents for each key learning area and there are variations in OL implementation within educational settings state-to-state (Passy et al., 2019). It has been observed that this state-based, somewhat ad-hoc approach has resulted in OL being promoted and instigated to varying degrees across Australia, often with teachers unaware of the OL recommendations within curriculum documents (Lloyd et al., 2018). This could be addressed through further educational policy changes to advocate for increased OL implementation across all primary school settings.

Presently, there are minimal studies conducted in Australia which provide evidence of current regular OL implementation in primary school settings. In an email survey focusing on the use of primary school playgrounds in the Australian state of Victoria, Chancellor (2013) reported that in 99.4% of the participating schools, teachers conducted lessons in the school playground. The regularity of these lessons is unclear, and such results may indicate one off occurrences within the scope of a school year, as opposed to regular OL implementation. A more recent quantitative study of Victorian children engaging in OL through INPPs revealed that only 8.6% of primary school aged children were accessing these programs (KINN, 2018). This number may not necessarily reflect the implementation of OL within primary schools, as the programs accessed included settings beyond schools, such as off-site excursions or out of school care programs. In a survey of 200 Australian teachers conducted by Planet Ark (2017), less than 34% taught outdoors for 15 min or more within scope of a 10-week term. Collectively, these studies indicate that OL implementation in Australian primary schools may occur in isolated instances throughout the school year, however regular OL opportunities are minimal or even non-existent. Some peer reviewed literature feature instances of OL occurring within Australian primary schools (Beasley et al., 2022; Cumming & Nash, 2015; Green & Rayner, 2022; Lloyd et al., 2018; Miller et al., 2023) and these studies recognise that in Australia, day-to-day curriculum-based OL is a beneficial yet underutilised pedagogical approach to learning.

In increasingly urbanised societies, on-site school grounds have been identified as important places for children to increase their interactions with nature (Aminpour, 2021). Many Australian schools have implemented school ground 'greening' to re-establish natural habitats and increase natural elements in the outdoor school environment (Green, 2014). Green and Rayner (2022) have labelled this movement within Australia as a 'national school garden renaissance' (p. 239). Some Australian school landscape plans are now including carefully designed nature play spaces, providing diverse OL and nature play opportunities (Centennial Parklands, 2021; Miller et al., 2023; Wynne & Gorman, 2015). Research conducted in South Australia (SA) revealed that of the 52 primary schools represented, 88% of these schools had purpose-built nature play spaces currently, planned or under construction (Miller et al., 2023). Recent studies recognise that despite an increased focus on naturalised playground spaces, Australian teachers' use of the school grounds for curriculum delivery was minimal, irregular, or non-existent. It is also apparent that school breaktimes are often the only opportunity for children to engage with the outdoor environment during the school day (Green & Rayner, 2022; Miller et al., 2023). The allowances of school outdoor recess and lunch play time do not compare to the long periods of unstructured outdoor play and regular OL experiences facilitated within ECE settings (Jay & Knaus, 2018).

The minimal peer-reviewed literature focusing on OL implementation in Australia collectively emphasises that this is an under-utilised pedagogical approach in mainstream Australian primary schools. This is an interesting comparison to the provision of OL as prioritised within the ECE sector, where outdoor spaces are integral to daily learning experiences (Hughes et al., 2022; Little, 2017).

An international phenomenon

The disjunct in OL between ECEs and primary schools is not unique to Australia, with some international literature available on the inconsistencies of OL provision between preschool and the first year of school. Research conducted in the UK indicates that teachers in both ECE and school often express value and support of OL pedagogies, however there is a decrease in OL provision for primary school aged children relative to their younger counterparts (Orlandi, 2011; Waite, 2010, 2011). This decline in OL may be in part motivated by an increased focus on performance driven outcomes and national testing as children progress through their schooling (Dickson & Gray, 2022; Patchen et al., 2022; Waite, 2010, 2011).

Orlandi (2011) conducted an in-depth case study examination on the transition from preschool to the first year of formal education in the UK, finding that teachers who claimed to value OL experiences at the beginning of the academic year reflected at the end of the year that the outdoors had only been used for break times (Orlandi, 2011). This highlights that teachers' valuing OL does not subsequently result in the regular implementation of this pedagogical approach. Orlandi (2011) established that in all the case study schools, as children moved from preschool settings into primary school settings, 'the use of the outdoors as a place for learning did not just diminish, it stopped. The outdoors became a place to have a break from learning' (p. 44).

Children's voices in international literature convey that children in the first year of primary school are aware of the inconsistency in provision of time outdoors as they transition into formal education systems, and they are unhappy with the decreased opportunities to play and learn outdoors (Fisher, 2009; Guardino et al., 2019; Hooson, 2020; Orlandi, 2011; White & Sharp, 2007). For example, a key point raised by Orlandi (2011) included children's voices recognising that there was a distinct discrepancy in the play time provided in school in comparison to preschool, and a heartfelt cry of 'I really miss going outside; we never go out!' (p. 41). Reasons for the disjunct in OL provision as children transition from preschool settings into formal schooling are highlighted in the following section.

Challenges promoting outdoor learning inconsistencies across the early years

There are tensions between the reality of the copious benefits of OL and the challenges hindering this pedagogical approach in primary schools. Alongside the plethora of literature reinforcing OL benefits, a strong body of international research has arisen to investigate reasons for the void between OL knowledge and practice.

Some physical hindrances to the implementation of OL in a primary school setting include weather considerations, availability of equipment and resources, suitability of the accessible OL spaces and obstacles to improving these areas (Edwards-Jones et al., 2018; Harris, 2021; Oberle et al., 2021). There can be safety, staff ratio and class management concerns associated with leaving the bounds of a classroom (Oberle et al., 2021; Van Dijk-Wesselius et al., 2020). Aversion to perceived

risk-taking and litigation concerns associated with experiences beyond classroom boundaries can also deter OL implementation (Hyndman, 2021; Jerebine et al., 2022; Shume & Blatt, 2019). A critical consideration for teachers is time constraints within an overcrowded curriculum, combined with heavy content demands and an emphasis on measurable academic results (Harris & Bilton, 2019; Patchen et al., 2022; Waite 2019).

With an understanding that not all OL experiences are necessarily educational (Humberstone & Stan, 2011), some studies have reported teachers' lack of confidence in meeting mandated outcomes through OL and how to communicate or measure what outcomes might be addressed (MacQuarrie, 2018; Oberle et al., 2021). In various studies, teachers have expressed apprehension about their own capabilities, confessing that teaching habits, dispositions towards being outdoors and lack of confidence and experience affected their ability to provide educational experiences beyond the classroom (Harris, 2021; MacQuarrie, 2018). In addition, Hoath (2015) points out that 'good classroom practice is not synonymous with good out-of-classroom practice' (p. 20). This suggests that not all excellent teachers may transfer their teaching skills effectively to an outdoor environment. These points emphasise that a significant pedagogical change is required for teachers to implement quality OL (Van Dijk-Wesselius et al., 2020).

A finding across various studies is that school leadership and/or administration can have a significant impact on OL implementation (Dring et al., 2020; Harris, 2021; Oberle et al., 2021). Research suggests that if a school's leadership is supportive of OL, this enables a higher degree of OL implementation, and correspondingly, even if teacher motivation is high, unsupportive school leadership can be a significant barrier (Dring et al., 2020).

A recent study in the United States of America (USA) (Patchen et al., 2022) recognised nuanced differences across a range of studies identifying prominent OL challenges, and these differences were due to the unique and varied contexts. The authors postulated that these dissimilarities suggest there is not yet an extensive grasp on the challenges and enablers for OL in primary schools, with further research warranted. We concur, noting that there is a paucity of Australian research regarding OL and limited knowledge of the unique barriers and enablers specific to Australian educators and their contexts.

Interestingly, the documented challenges to OL implementation in primary school settings are not replicated in research surrounding ECE settings. This may signal that the varied pedagogical approaches and policies for the two different educational settings impact on OL implementation. What enables OL in ECE may reveal, in part, what hinders OL in primary schools. Some of the tensions between the two settings are attributed to the differences between ECE play-based, child-led pedagogy and primary schoolings' teacher-led instruction (Lillejord et al., 2017). Formal training around play-based pedagogy is rare for pre-service primary school teachers in Australia (Chancellor & Hyndman, 2017; Hyndman, 2021). Coupled with a lack of training related to teaching outdoors or education about the OL spaces available to primary school teachers, may result in teachers not perceiving play and learning outdoors as valuable to curriculum delivery (Hyndman, 2021).

The challenges identified above shed some light on why OL is an under-utilised approach within many primary school settings, despite the overwhelming benefits of learning outdoors. Correspondingly, studies are emerging to disseminate strategies to overcome these challenges (Edwards-Jones et al., 2018; Green & Rayner, 2022; Oberle et al., 2021). Enablers for OL in primary school settings can be context specific and may include staff development, supportive leadership, provision of relevant resources, planning for OL, establishing supportive routines, and networking (Edwards-Jones et al., 2018; Oberle et al., 2021).

The disjunct between ECE and primary school settings, and the challenges to OL in primary settings outlined above, are of concern not only because of the documented OL benefits, but also because OL can play a role in easing the transition to school.

The contribution of outdoor learning to potentially enhance transition to school

Transitioning into compulsory schooling is internationally recognised as a significant process. Positive transition experiences are linked to school engagement, leading to beneficial educational and social results (Lillejord et al., 2017; Wallis & Dockett, 2015). The different pedagogical approaches between ECE and primary settings are seen to contribute to sometimes disconcerting transition experiences (Boyle et al., 2018). The consideration of consistent OL provision to potentially enhance the school transition process is an approach warranting further research.

Some early Australian research consulted with children to better understand how this transition could be improved, and a desire suggested by some children was, 'being outside when we can' (Perry & Dockett, 2011, p. 378). Australian parents and educators are also questioning why activities that are encouraged in ECE settings (particularly INPPs), such as tree climbing, fire making and playing with sticks, are not permitted in most mainstream primary school settings (Hughes et al., 2022; Rayner, 2020). Participants in an Australian webinar entitled *Provocations from nature play in early childhood to inspire transformation in school settings* commented that children and families who are actively engaged in INPPs prior to formal schooling can find the transition into kindergarten 'quite jarring' due to the significant inconsistencies in OL provision (Rayner, 2020). Most pertinently, Hughes et al. (2022) comment, 'there is still much to be achieved in the school sector regarding the value of outdoor nature play' (p. 90). To amend this, recommendations from a state-wide study of OL and nature play in one Australian state, Victoria, called for a 'coordinated approach to OL across early years, primary school and community' (KINN, 2018, p. 19).

Although the continuation of OL experiences into the first year of primary school is not widely recognised or documented as a tool to improve the transition period, we suggest this approach has the potential to promote children's well-being and further extend the outdoor benefits experienced in ECE settings into the primary school years. We now turn to studies documenting what is possible when OL challenges are

surmounted by school communities and consider the positive outcomes for primary-aged children.

Surmounting outdoor learning challenges

Innovative programs around the world have shown what is possible when OL is prioritised in primary school settings. These programs include, but are not limited to, *Udeskole* (outdoor school) in Denmark (Mygind et al., 2018), UK in-school Forest School programs (Waite & Goodenough, 2018), Finnish Nature Schools (Sjöblom & Svens, 2019) and the Curriculum for Excellence through Outdoor Learning in Scotland (Education Scotland, 2022; Scottish Government, 2018). International literature pertaining to OL reveals a strong body of research for ECE programs and a slowly building momentum for primary school implementation. According to researchers, primary schools worldwide are now more readily placing value on school ground landscaping and re-designing with increased green spaces offering potential OL areas (International School Grounds Alliance [ISGA], 2023; Van Dijk-Wesselius et al., 2020). Specifically designed school ground zones have been identified as potential pedagogical tools for enabling OL (Dring et al., 2020).

Countries such as Denmark and Scotland have proven to be frontrunners in valuing the place of OL within primary school curriculum and policies (Education Gray, 2018; Scotland, 2022). For example, the Scottish Curriculum for Excellence (Scottish Government, 2018) requires OL to be a regular experience for all learners. However, some authors note that increasing policy support does not necessarily equate to quality OL implemented in schools, and for effective policy changes to occur, cultural change at practitioner level is required (Passy et al., 2019). This is also true within the Australian context (Passy et al., 2019).

Stand-alone examples of successful OL implementation in Australian primary schools exist and are exemplified in the following schools. The Upper Sturt Primary School in SA, was the first mainstream school in Australia to holistically implement a nature-based OL approach to the Australian Curriculum (USPS, 2023). Additionally, The Nature School (TNS) in NSW, focuses on nature-based OL using place-based and inquiry-led pedagogies (TNS, 2023). Schools such as these prove what is possible within the bounds of the Australian schooling system, providing inspiration for further OL implementation within mainstream Australian primary schools.

Conclusion and recommendations

Despite the vast and well documented benefits of OL for primary school aged children, this is an under-utilised teaching and learning approach in Australian primary school settings. Numerous challenges contribute to the minimal implementation of OL in Australian primary schools. These are counteracted by enablers and examples of effective, regular OL implementation that reveal what is possible.

The disparity between ECE and school-based OL provisions is concerning given the similarly aged children across ECE and the first year of formal

schooling. Evidence suggests that children are aware of the disjunct and unhappy with the limited OL provision in formal school settings compared to their previous ECE settings. We suggest that OL may potentially enhance the transition into schooling, as well as promote a range of learning and developmental benefits. A more cohesive approach to OL across ECE and primary school settings would also be conducive to uptake in the first years of schooling.

Outdoor learning should not be viewed as an additional requirement of already overworked teachers, but as a change of pedagogical approach, beneficial for both teachers and their students. We therefore recommend that Australian primary school teachers are supported through increased teacher training and professional development opportunities to learn how to implement OL and make effective use of school grounds. Further, teachers would benefit from leadership endorsement, networking, provision of relevant resources and planning time to increase and enhance their implementation of regular OL. Collaboration with existing OL specialists from Australian organisations (e.g. outdoor and environmental education centres, nature play organisations and residential outdoor school associations) could equip teachers with OL skills and build professional learning communities. Collaboration with local early childhood educators could enhance transition processes and upskill primary school teachers, particularly in relation to play-based OL.

One way of enabling increased OL implementation and supporting these cultural changes, is challenging educational policy. The current state-based approach to OL in primary schools may be enhanced with the explicit inclusion of OL suggestions within the national curriculum and syllabus documents, alongside the introduction of a national OL policy encouraging increased OL implementation across all primary school stages in every Australian state and territory.

The paucity of peer-reviewed literature focusing on OL implementation in Australian primary schools reveals a gap necessitating further research. To promote increased OL opportunities across the early years, we propose that research examining OL in the first year of school would significantly add to the fields of both ECE and primary school literature within Australia, drawing attention to the importance of OL opportunities for children in both settings. Such research would also contribute to the knowledge base specific to this phenomenon at an international level. Further, the potential of consistent OL provision to enhance the school transition process is an approach warranting further research, both within Australia and internationally.

The pedagogical approach of OL has largely untapped potential for both primary school educators and children, and this paper calls attention to the disjunct between the OL implementation in Australian ECE and primary school settings, which can be significantly jarring as children transition into the first year of primary school. This phenomenon warrants increasing support for Australian primary school teachers to regularly implement an OL pedagogical approach, challenging educational policy, and further research in this field.

Funding Open Access funding enabled and organized by CAUL and its Member Institutions.

Declarations

Ethical approval This theoretical paper did not require human research ethics approval.

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