

2019-04

# Integrating outdoor learning into the curriculum: an exploration in four nations

Passy, Rowena

<http://hdl.handle.net/10026.1/13307>

---

10.1007/s41297-019-00070-8

Curriculum Perspectives

Australian Curriculum Studies Association

---

*All content in PEARL is protected by copyright law. Author manuscripts are made available in accordance with publisher policies. Please cite only the published version using the details provided on the item record or document. In the absence of an open licence (e.g. Creative Commons), permissions for further reuse of content should be sought from the publisher or author.*

## **Integrating outdoor learning into the curriculum: an exploration in four nations**

*Rowena Passy<sup>a</sup>, Peter Bentsen<sup>b</sup>, Tonia Gray<sup>c</sup> and Susanna Ho<sup>d</sup>*

Rowena Passy <sup>\*a</sup>

<sup>a</sup> Senior Research Fellow, Institute of Education, University of Plymouth,  
Drake Circus,  
Plymouth, UK, PL4 8AA

\*Email: R.Passy@plymouth.ac.uk

Peter Bentsen <sup>b</sup>

<sup>b</sup> Health Promotion, Steno Diabetes Center Copenhagen, the Capital Region of Denmark,  
Niels Steensens Vej 6, 2820 Gentofte, Denmark

<sup>b</sup> Center for Outdoor Recreation and Education, University of Copenhagen, Noedebovaenge  
77A, 3480 Fredensborg, Denmark

Tonia Gray <sup>c</sup>

<sup>c</sup> Centre for Educational Research, School of Education, Western Sydney University,  
Locked Bag 1797, Penrith, NSW, Australia, 2751

Susanna Ho <sup>d</sup>

<sup>d</sup> Assistant Director, Outdoor Education,  
Senior Specialist Physical, Sports and Outdoor Education Branch,  
Student Development Curriculum Division,  
Ministry of Education, Singapore

## **Introduction**

This paper explores an increasing awareness among policy-makers that learning outside can provide beneficial experiences for pupils in compulsory education. It has arisen from the work undertaken during a three-year UK Economic and Social Research Council International Networking and Partnership Award (ES/J019445/1), in which colleagues from Australia, Denmark, England and Singapore met regularly to discuss learning outside, to theorise activity and to disseminate research undertaken in each nation.

## **The global context: flows and connections**

Bringing researchers together from four very different nations enabled us to think about trends within our own countries, and then more broadly to ideas of policy commonalities and differences across the globe. The idea of 'flow' has been prominent in globalisation literature, with Lewis and Lingard (2015, p.622) suggesting that we currently live in a dynamic, highly interconnected world of flows 'of people, ideas, discourses and capital'. This has intuitive appeal as a way of understanding developments in a world in which policies are frequently 'borrowed' (Steiner-Khamsi and Waldow, 2012). One example is the growth of an economic approach that sees education as the primary means of ensuring national competitiveness in a global market, and that prioritises national and international test results as a way of measuring a country's human capital (Sellar and Lingard, 2013). Critics of this approach argue that it can reduce education to 'an empirical problem open to quantification' (Grek, 2015, p.480) rather than recognising it as a complex political, moral and social process, and that it encourages the adoption of standardised, test-based accountability policies that are linked to a narrowing of the curriculum and greater control over teachers' performance. Sahlberg (2012), in an excoriating critique of this particular flow, argues that it

reduces the range of school activity and has the effect that ‘schools get ill, teachers don’t feel well, and kids learn less’.

### *A flow of resistance*

There is, however, a strengthening flow of resistance to this type of test-dominated education, associated with an international ‘renaissance of interest’ (Gilchrist et al., 2016) in outdoor learning (OL) or outdoor education (OE). Following Atencio et al. (2015), we think of these as practical and experiential learning activities conducted outside in school grounds and other locations such as parks, forests, residential camps/centres or on expeditions; activities can be curricular or non-curricular, focus on different areas of cognitive, social, emotional and moral development, and be related to indoor learning. They may take place during curricular time or outside school hours. OL is narrower in scope than learning outside the classroom, which may include learning in different built environments and/or visits to sites such as museums, galleries and/or historical monuments (Davis, 2018), although the Danish term *udeskole* refers to all learning that occurs outside the classroom on a regular basis.

There are three particular discourses running into this flow of resistance. The first is that OL widens the range of school activity by providing enjoyable experiences that promote pupil engagement with learning, stimulate curiosity and improve social relations (Bentsen et al., 2009). An important part of this rests on the inclusive nature of OL, which arises partly through offering pupils new ways of learning and the chance to offer their own ‘funds of knowledge’ (Moll et al., 1992, p.132) in these different contexts.

The second relates to children’s health and wellbeing. A report from the World Health Organization (WHO) argues that ‘childhood obesity is reaching alarming proportions in

many nations', and calls for governments to implement school programs that encourage healthy eating, exercise and health education (WHO, 2016, p.vi). Similarly, the incidence of mental health problems among young people has been rising steadily internationally (e.g. Gustafsson et al., 2010), with examination pressures at school a significant source of stress (Gutman et al., 2010). OL can help to convey important messages around health and wellbeing; research shows that taking school-based lessons outside the classroom is associated with higher levels of physical activity and an increase in aspects of social wellbeing and school motivation (Bølling et al., 2018a, 2018b; Schneller et al., 2017) potentially by providing physical and mental space away from the pressures of the classroom (Waite et al., 2016).

The third area of discourse relates to the environment. Fears for our planet are accelerating in light of the latest research on climate change (Watts, 2018), and recent research shows that children's increasing distance from nature may be reducing young people's sense of responsibility towards the environment (Barthel et al, 2018). Encouraging children to develop connections with local natural spaces, such as gardens, rivers, local woodlands or parks, can raise awareness of the wider global environment and inspire pupils to respond carefully and thoughtfully to issues that relate to its sustainability (Gray and Birrell, 2015; Lloyd and Gray, 2014).

We suggest this flow of resistance is providing a counterbalance to an economic approach to education, and that it is now entering government agendas. In what follows, we draw on our experience as researchers and practitioners to explore policy developments in our nations. Broadly, we describe two models; a bottom-up approach in which OL organisations, practitioners and academics have supported different forms of OL, brought together evidence

and contributed to persuading different government departments of OL's value; we see variations of this in Denmark and England. The other approach, seen in Australia and Singapore, is a more top-down approach in which central policy-making has decided the extent to which OL can and should be included in the school curriculum (Ho, 2014; Ho et al., 2016). We describe the processes below.

### ***Top-down: Australia***

Australian OL varies from state-to-state, as education is primarily a state responsibility rather than federally determined. The six states and two territories in Australia have a range of policies, and the discrepancies between the state educational bodies lead to marked disparity in practice. Arguably, the state leader in design and implementation of OL is Victoria (Gray & Martin, 2012) and the intensity of curriculum delivery within each state, fluctuates according to teacher expertise and pre-service training opportunities (Gray & Pigott, 2018). In short, teachers are unsure about how to implement OL.

Australian OL is a fusion of three foundational paradigms: the Outward Bound movement and Kurt Hahn tradition; experiential learning philosophies; and derivations of North American adventure education. OL itself is shaped by two broad policies, the Melbourne Declaration (MCEETYA, 2008), and the National Curriculum (Foundation - Year 10), while the Australian Curriculum Assessment and Reporting Authority (ACARA) provides the framework for schools' outcomes and accountability. The Melbourne Declaration advocated a well-rounded curriculum to address pupils' moral, spiritual and aesthetic education holistically. It was instrumental in shaping the three cross-curricular priorities (CCPs) to provide national, regional and global dimensions to enrich the curriculum. These CCPs incorporate links to knowledge of Aboriginal and Torres Strait Islander history and cultures,

aim to improve Australia's engagement with Asia, and incorporate education for sustainability.

According to Gray and Martin (2012) the shift from state-based to a national curriculum was on the radar of federal policy for almost twenty years. This event heralded the arrival of a homogenous curriculum that attempted to unify content and assessment across Australia, and has been termed an educational revolution. In 2017, ACARA implemented OL as a curriculum connection (<https://www.australiancurriculum.edu.au/resources/curriculum-connections/>), which signalled to pedagogues the importance of moving beyond the four walls of the classroom (Gray, 2018). However, the authors are mindful that states and territories follow different syllabus documents. For instance, the NSW Geography Syllabus contains mandatory fieldwork to be completed outside and emphasises connection to place.

Clearly, Australia's national educational revision has broad implications for the amount of OL on offer to pupils, particularly in secondary school (Years 7 – 10). The curriculum connection of OL offers a framework for children to experience learning in natural environments, and can be presented across four curricular dimensions that were developed in consultation with Outdoor Education Australia: health and physical education; humanities and social sciences; geography; and science. In practice, OL is currently implemented in a myriad of ways that include school-developed programs, residential outdoor centres that cater for long-or short-term stays, private and commercial contract providers and community-based programs working with schools, such as the Duke of Edinburgh Award. The scope and sequence of the program are contingent upon the needs and interests of the individual schools.

However, the implications of this top-down approach spawn further discussion about the uptake and implementation of OL. For instance New South Wales, which is the most densely populated state, has had reservations about embracing the use of OL and left it to teachers to decide their approach and levels of engagement (Gray & Pigott, 2018). There has been greater disparity across the country than had initially been envisaged by the federal government, in part attributable to different state approaches to pre-service teacher training, and to varying levels of support at the state/territory and local level. Both of these can be linked to funding, state culture and state political will to adopt OL. In sum, educators are attempting to switch thinking to a more productive ‘bottom up’ approach by working within their ‘top down’ documents to generate a ground swell of interest.

### ***Top-down: Singapore***

Since Singapore’s independence in the 60s, policies have tended towards pragmatic considerations related to the future of a small and young nation-state without natural resources, where ‘the principle of meritocracy undergirds its political and education system’ (Lim, 2016, p.5). The beginnings of outdoor education in Singapore can be traced to the days of its independence, which arose from the need to build its defence capability.

To dispel the fear and resentment towards the army and police as symbols of colonial coercion, extra-curricular activities (ECA) such as the National Cadet Corps (NCC) and National Police Cadet Corps (NPCC) were set up in all secondary schools, so that parents could identify them with their own sons and daughters. The onus was also on the Ministry of Education (MOE) to improve the physical condition of youths by getting them to participate in sports and physical activity of all kinds, and to develop a positive attitude toward adventure and strenuous activities. Schools started organising adventure courses for their



pupils in response to Singapore's leaders' call for the building of a 'rugged and dynamic' (Lee, 2000, p. 25) society.

OE has long been perceived by majority of Singaporeans and schools as contributing to the national agenda of building a rugged society of resilient youths. At the turn of the century, there was a realisation that the world was becoming increasingly complex, competitive and interconnected. Education reviews, starting with primary school education in 2008, were conducted to scan the environment and provide solutions. This led to recommendations to rebalance the learning of content knowledge and the development of skills and values so that future generations of youths would be well-prepared for life (MOE, 2009). The Physical Education (PE) curriculum was subsequently reviewed in 2011; OE became formalised as part of the Singapore curriculum (Atencio et al., 2015), and was aimed at enabling all pupils to acquire the rudiments of outdoor living skills, and develop knowledge and attitudes to take care of the environment. These, in turn, could facilitate pupils' lifelong pursuit of outdoor physical recreation (Ho et al., 2016).

It was at the joint Ministry of Culture, Community and Youth (MCCY) / Ministry of Education (MOE) retreat in 2014 that government ministries identified OE as a key area to develop pupils' twenty-first century competencies, and to instil positive values such as confidence, resilience and leadership in youths. MOE and MCCY developed a National Outdoor Adventure Education (NOAE) Master Plan and announced it at the Committee of Supply (COS) in 2016. Amongst other provisions such as school camps, the Master Plan intends for the entire population of secondary three pupils to experience a capstone five-day expedition-based program at Outward Bound Singapore. This program aims to strengthen Singaporean youths' self-efficacy, resilience, social cohesion and civic responsibility. Shared

common experiences were created through team-based challenges and expeditions around the island-state. It is hoped that, through the exploration of interesting outdoor spaces within Singapore via the park connectors and waterways, pupils would build memories of these places and gain deeper appreciation for Singapore's natural and national heritage.

As the Master Plan scales up to provide OE experiences for all pupils, the lack of outdoor educators and training provision remains major barriers. Teaching in and of the outdoors demands specific forms of expertise and experience, and needs to be developed over a long period of time.

### ***Bottom-up: Denmark***

Denmark has a long-standing culture of *friluftsliv* (understood as 'outdoor recreation and education'), which, in combination with a long coastline, around 14 per cent of land covered by forest and few dangerous plants or animals, means that engaging with the outdoors is an integral part of life. Nonetheless, the decision to take learning outdoors rests with individual teachers, who have autonomy over their curriculum content as long as they cover the aims and skill sets outlined by the Ministry of Education. They also have relative freedom to develop new pedagogical ideas and methods.

In the 1990s, a grassroots movement of *udeskole* ('outdoor school') in which teachers used settings outside school buildings on a regular basis, started in Danish schools. While it arose through the personal initiative of teachers or schools, it was also a movement that brought an understanding that education exists in, and should be in harmony with, the social, economic, political and geographical context (Bentsen et al., 2009). Early research (Mygind, 2007; Mygind, 2009) investigated its benefits in terms of children's increased physical activity and

improved social relations, and later research (Bentsen et al., 2010) showed that around 15 per cent of schools had teachers practising *udeskole* on a regular basis throughout the year. The movement grew in stature during the 2000s, and was supported by educational municipalities such as Copenhagen, by non-governmental organisations such as the Outdoor Council, and there was increasing interest from university researchers and the media. At this point, however, there was no formalisation of *udeskole*, or support at a governmental level (Bentsen et al., 2010).

This started to change as projects funded by the European Union improved practice in learning outside the classroom among in-service teachers and teacher educators. The knowledge gained through these projects provided a foundation for larger projects and grants. The first of these was ‘TEACHOUT’, a four-year, €1.3 million project funded by the TrygFonden, that studied the effects of *udeskole* on both pupils and teachers and, broadly, showed greater levels of physical activity (Schneller et al. 2017), motivation (Bølling et al., 2018a), well-being (Bølling et al., 2018b) and improved social relations (Bølling et al., 2018c) among primary aged children who regularly participated.

A school reform in 2014 did not mention *udeskole* explicitly, but three aspects have helped to expand its development. The first was a longer school day, giving time for different learning approaches such as *udeskole*; the second was a statutory demand that all children should be physically active for around 45 minutes per day; and the third was the ‘open school’. This requires schools to integrate into the local community, encouraging them to visit different local areas and businesses, and to invite a wide range of people, such as forestry workers, into the school. This legislation was supported by ‘The Development of *Udeskole*’, a €1.8 million

project funded by the Danish government that aimed to develop and communicate practical knowledge in *udeskole*.

*Udeskole* has shifted in a short time from a bottom-up, counterculture movement to something that is explicitly encouraged in Danish schools through government legislation. But a structural framework and steering documents do not necessarily lead to enhanced outdoor learning; the decision to take learning outside still rests with teachers, and it will be up to individual schools to continue with the culture change that *udeskole* promises.

### ***Bottom-up: England***

From the early 1990s there has been an emphasis on school choice, diversity of provision and school standards in England. These are demonstrated by Ofsted, the powerful school inspection body, and by pupil examination results at the ages of 11 and 16, reported annually in school performance tables. Most schools design their teaching around the detailed demands of the national curriculum.

OL has a long-standing history in England, but has never been a national movement as in some European countries. The sector is marked by a wide range of public, private and charitable organisations and individuals offering different kinds of services (Ogilvie, 2012) and by research undertaken in a few universities and organisations. These could have believed that a critical moment was reached by the government's *Learning Outside the Classroom Manifesto* (DfES, 2006), which was supported by funds of £4.7 million (Taylor et al., 2010) and by the school inspection body (Ofsted, 2008). However, this policy offered mixed messages; fears over health and safety regulations and an increasingly prescriptive national curriculum were encouraging teachers to remain indoors, and the government was

introducing a high number of educational initiatives at the same time, leaving schools ‘struggling to keep up’ (Passy and Waite, 2008, p.321). Teachers committed to OL would take their pupils outside, but most tended to remain indoors.

The pivotal moment for OL was the government publication *The Natural Choice* (HM Government, 2011), which responded to the perception that people were losing connection with the natural environment. A small part was concerned with the school-based project ‘Natural Connections’, delivered by the University of Plymouth, that aimed to support teachers in taking curricular learning outside. The project showed that there was a latent demand for OL in schools (Waite et al., 2016), and the findings of OL benefits for children have chimed with both international research findings and lobbying from English groups. For instance, long-term campaigning raised awareness of poor quality school lunches, and has advocated that food growing should be an important part of school culture (Page et al, 2017); the charity Young Minds’ campaign ‘Wise Up’ (<https://youngminds.org.uk/get-involved/campaign-with-us/wise-up/#wise-up>) shows the increasing problem with mental health in schools, while others have shown the wellbeing benefits of being in the natural environment (DEFRA et al., 2017); longitudinal research into residential camps has demonstrated benefits for pupils of all ages (<https://learningaway.org.uk/impact/>). These different campaigns are all visible in a new policy initiative – a project, to begin in 2019, that aims to encourage schools to improve their school grounds and take children on more trips to the natural environment; increase the use of care farms; and encourage schools and forestry organisations to link up. Rather than trying to change attitudes and approaches through curricular directives, the government is aiming to change school culture by funding support for teachers in schools; a long-term strategy that may be in tension with the current high levels of demand on teachers in schools. Watch this space.

## **Conclusion: the question of implementation and the need for links between policy, practice and research**

Our intention with this point and counterpoint paper was to highlight and try to understand how educational communities are changing – which, according to Reid (2018), in a world of increasingly complexity and change, is highly necessary. The paper began by observing a ‘renaissance of interest’ in learning outside. We then explored policy developments based on work from our international partnership network funded by the UK ESRC. Top-down and bottom-up models were presented and illustrated through exploration of our four nations as cases. Readers may reflect on the extent to which the cases resemble their own country or how it might act as inspiration.

In conclusion, it seems that policy makers in these different nations have increasingly recognised the value of OL, and have attempted to support it in different ways. We have demonstrated how research can show the benefits of OL and how policy can support its uptake. But we have also shown that any policy change needs to be underpinned by culture change at the grassroots/practitioner level; that top-down and bottom-up approaches need to meet harmoniously for change to be sustained. If OL is to become embedded in school practice, it is essential to provide time and resources for training new teachers and supporting more experienced practitioners in taking their teaching outdoors.

## **References**

Atencio, M., Tan, M. et al. (2015). The place and approach of outdoor learning within a holistic curricular agenda: development of Singaporean outdoor education practice. *Journal of Adventure Education and Outdoor Learning*, 15(3), 181-192.

Barthel, S., Belton, S. et al. (2018). Fostering Children's Connection to Nature Through Authentic Situations: The Case of Saving Salamanders at School, *Frontiers in Psychology*, <https://doi.org/10.3389/fpsyg.2018.00928>.

Bentsen, P., Jensen, F.S. et al. (2010). The extent and dissemination of *udeskole* in Danish schools. *Urban Forestry & Urban Greening*, 9(3), 235-243.

Bentsen, P., Mygind, E. & Randrup, T. (2009). Towards an understanding of *udeskole*: education outside the classroom in a Danish context, *Education 3–13*, 37(1), 29-44, <https://doi.org/10.1080/03004270802291780>.

Bølling, M., Otte, C.R., Elsborg, P. et al. (2018a). The association between education outside the classroom and students' school motivation: Results from a one-school-year quasi-experiment. *International Journal of Educational Research*, 89, 22-35.

Bølling, M., Niclasen, J. et al. (2018b). Association of Education Outside the Classroom and Pupils' Psychosocial Well-being: Results From a School Year Implementation. *Journal of School Health* [accepted].

Bølling, M., Pfister, G. et al. (2018c) Education outside the classroom and pupils' social relations. A one-year quasi-experiment. *International Journal of Educational Research* [in 2nd review].

Davis, K. (2018). Exploring student-teacher relationships outside: an ethnographic case study of two alternative education centres. Presentation at British Educational Research Conference, September 11-13.

Department for Education and Skills (2006). *Learning Outside the Classroom Manifesto*, <http://www.lotc.org.uk/wp-content/uploads/2011/03/G1.-LOtC-Manifesto.pdf> (accessed 14.12.2018).

Department for the Environment, Food and Rural Affairs, European Centre for Environment and Human Health & University of Exeter (2017). *Evidence Statement on the links between natural environments and human health*. Online:

<https://beyondgreenspace.files.wordpress.com/2017/03/evidence-statement-on-the-links-between-natural-environments-and-human-health1.pdf> (accessed 22.09.2018).

Gilchrist, M., Passy, R., et al. (2016). Exploring schools' use of natural spaces, in Freeman, C. & Tranter, P. (eds) *Risk, Protection, Provision and Policy*, Vol. 12 of Skelton, T. (ed) *Geographies of Children and Young People*. Springer, Singapore, [doi:10.1007/978-981-4585-99-6\\_18-1](https://doi.org/10.1007/978-981-4585-99-6_18-1).

Gray, T. (2018). Outdoor Learning: Not New, just newly important. *Curriculum Perspectives*. 38:145–149. <https://doi.org/10.1007/s41297-018-0054-x>

Gray, T. & Birrell, C. (2015). Touched by the Earth: A Place-Based Outdoor Learning Program Incorporating the Arts. *Journal of Adventure Education and Outdoor Learning*, 15(4), 330-349. <http://www.tandfonline.com/doi/abs/10.1080/14729679.2015.1035293>.

Gray, T., & Martin, P. (2012). The role and place of outdoor education in the Australian National Curriculum. *Australian Journal of Outdoor Education*, 16(1), 39-50. <https://doi.org/10.1007/BF03400937>

Gray T. & Pigott, F. (2018). Lasting Lessons in Outdoor Learning: A Facilitation Model Emerging from 30 Years of Reflective Practice. *Ecopsychology*. <http://doi.org/10.1089/eco.2018.0036>

Grek, S. (2015). Seeing from the top of the tower: PISA and the new governing panoramas in Europe, *Compare: A Journal of Comparative and International Education*, 45(3), pp.479-481, DOI: 10.1080/03057925.2015.1027512.

Gustafsson, J.-E., Westling, A., Akerman, A., et al. (2010). *School, learning and mental health: A systematic review*, <http://su.diva-portal.org/smash/get/diva2:317965/FULLTEXT01.pdf> (accessed 14.12.2018).

Gutman, L., Brown, J. et al. (2010). *Change in wellbeing from childhood to adolescence: risk and resilience [Wider Benefits of Learning Research Report No. 34]*, Centre for Research on



the Wider Benefits of Learning, Institute of Education, University of London: London, <http://discovery.ucl.ac.uk/10019040/> (accessed 14.12.2018)

HM Government (2011). *The Natural Choice: securing the value of nature*, [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/228842/8082.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/228842/8082.pdf) (accessed 14.12.2018).

Ho, S. (2014). The purposes outdoor education does, could and should serve in Singapore, *Journal of Adventure Education and Outdoor Learning*, 14(2), 153-171.

Ho, S., Atencio, M. et al. (2016). The inclusion of outdoor education in the formal school curriculum. In B. Humberstone, H. Prince, & K. Henderson (eds.), *Routledge International Handbook of Outdoor Studies* (pp. 277-287), London: Routledge.

Lee, K. Y. (2000). *From third world to first: The Singapore story (1965-2000) (Vol. 2)*, Singapore: Times Editions.

Lewis, S. & Lingard, B. (2015). The multiple effects of international large-scale assessment on education policy and research, *Discourse: Studies in the Cultural Politics of Education*, 36(5), pp.621-637, DOI: 10.1080/01596306.2015.1039765.

Lim, L. (2016). *Knowledge, control and critical thinking in Singapore*, Devon, UK: Routledge.

Lloyd, A. & Gray, T. (2014). Outdoor learning and the importance of environmental sustainability in Australian Primary Schools. *Journal of Sustainability Education*, [http://www.jsedimensions.org/wordpress/content/place-based-outdoor-learning-and-environmental-sustainability-within-australian-primary-school\\_2014\\_10/](http://www.jsedimensions.org/wordpress/content/place-based-outdoor-learning-and-environmental-sustainability-within-australian-primary-school_2014_10/) (accessed 14.12.2018).

Ministry of Education (2009). *Report of the primary education review and implementation committee*. Singapore: Ministry of Education.

Moll, L., Amanti, C. et al. (1992). Funds of Knowledge for Teaching: Using a Qualitative Approach to Connect Homes and Classrooms, *Theory into Practice*, 31(2), 132-141.

Mygind, E. (2007). A comparison between children's physical activity levels at school and learning in an outdoor environment, *Journal of Adventure Education & Outdoor Learning*, 7:2, 161-176, DOI: 10.1080/14729670701717580.

Mygind, E. (2009). A comparison of children's statements about social relations and teaching in the classroom and in the outdoor environment, *Journal of Adventure Education & Outdoor Learning*, 9:2, 151-169, DOI: 10.1080/14729670902860809.

Ofsted (2008). *Learning outside the classroom. How far should you go?*, <http://www.lotc.org.uk/wp-content/uploads/2011/03/G1.-LOtC-Manifesto.pdf> (accessed 14.12.2018).

Ogilvie, K. (2012). *Roots and Wings – a history of outdoor education and outdoor learning in the UK*, Institute for Outdoor Learning.

Page, A., Bremner, M. & Passy, R. (2017). School Gardens and the School Food Plan: contributing to a culture of healthy living, in Waite, S. (ed) *Children Learning Outside the Classroom from Birth to Eleven (Second Edition)*, London: Sage.

Passy, R. & Waite, S. (2008). Excellence and Enjoyment continuing professional development materials in England: both a bonus and onus for schools, *Journal of In-Service Education*, 34(3), pp.311-325, <http://dx.doi.org/10.1080/13674580802003300>.

Reid, A (2018). *Beyond Certainty: A Process for Thinking About Futures for Australian Education*. Report Commissioned by the Australian Secondary Principals' Association. ISBN: 978-0-646-99919-1.

Sahlberg, P. (2012). How GERM is infecting schools across the world? <http://pasisahlberg.com/text-test/> (accessed 14.12.2018).

Schneller, M., Duncan, S. et al. (2017). Are children participating in a quasi-experimental education outside the classroom intervention more physically active? *BMC Public Health*, 17, 523.

Sellar, S. & Lingard, B. (2013). PISA and the expanding role of the OECD, in Meyer, H-D. & Benavot, A. (eds) *PISA, Power and Policy: the emergence of global educational governance*, Oxford: Symposium Books.

Steiner-Khamsi, G. & Waldow, F. (eds) (2012). *World Yearbook of Education 2012: Policy Borrowing and Lending in Education*, London and New York: Routledge.

Taylor, C., Power, S. & Rees, G. (2010). Out-of-school learning: the uneven distribution of school provision and local authority support, *British Educational Research Journal*, 36(6), pp.1017–1036.

Waite, S., Passy, R. et al. (2016). *Natural Connections Demonstration Project, 2012-2016: Final Report*. Natural England Commissioned Reports, Number 215, <http://publications.naturalengland.org.uk/publication/6636651036540928>.

Watts, J. (2018). Huge risk if global warming exceeds 1.5C, warns landmark UN report, *Guardian*, 8 October, <https://www.theguardian.com/environment/2018/oct/08/global-warming-must-not-exceed-15c-warns-landmark-un-report> (accessed 08.10.2018).

World Health Organization (2016). *Report of the Commission on Ending Childhood Obesity*. Available at: [http://apps.who.int/iris/bitstream/10665/204176/1/9789241510066\\_eng.pdf](http://apps.who.int/iris/bitstream/10665/204176/1/9789241510066_eng.pdf) (accessed 14.12.2018).