

Reaping the Rewards of an Inner-City Garden

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INTRODUCTION

Given the sharp reduction in children's engagement with the natural world, schools can support and foster an interest in the environment in young children. This essay reports on a project that explores this possibility. It also examines how schools with a Christian ethos, and a Jesuit ethos in particular, can cultivate an attitude of 'Caring for our Common Home'¹ in students. This theme and educational goal has been championed in recent years by Pope Francis since the publication of his encyclical *Laudato Si'*² and the challenge has been taken up all over the world in Catholic schools. The latter part of the essay considers how schools with a Christian ethos can identify and use resources to facilitate and address the conversation of youth climate and environmental activism.

PROMOTING WONDER IN THE ENVIRONMENT

Over the last twenty years, there has been a remarkable and well-documented collapse of children's engagement with nature – nearly as fast as the collapse of habitats and environmental resources in the natural world itself. This is described poignantly in Richard Louv's book *Last Child in the Woods*², in which he defines the term Nature Deficit Disorder as describing the "human costs of alienation from nature, among them: diminished uses of the senses, attention difficulties and higher rates of physical and emotional illnesses"³. Children, and particularly urban children, spend less and less time in nature and indeed the area in which they live their lives has diminished significantly in the last generation.⁴

However, this disturbing trend in isolation from nature has not gone unnoticed by educators and a number of initiatives in Ireland in the last decade have been particularly successful. The 'SEED' and 'Living Classroom'

projects, for example, have promoted the establishment of organic school gardens that draw children out of the indoor classroom, and introduce them to ideas of natural seasonal growth and change. Such projects also help children to understand the responsibility and effort required to produce safe and healthy food. Later on, we will discuss a project in a Dublin inner city school that engaged children and teachers in growing plants and food, which was made possible with the support of the Jesuit community next door to the school.

There are several possible reasons for the collapse in children's engagement with nature: parents' fear of strangers and the dangers of increased traffic; the destruction of common areas where previous generations played; the quality of indoor entertainment; and the increased structuring of children's 'free' time. As this decrease in children's engagement with nature has occurred, there has been a rise in childhood obesity and asthma and a decline in cardio-respiratory fitness. These circumstances and conditions may not be unrelated. Louv also links the increase in indoor life to an increase in attention deficit hyperactivity disorder [ADHD] and other mental ill health⁵. So, together with the moral imperative to care for the environment that supports all life on earth, there is good evidence for the immediate value and need in having children connect with the natural world for the sake of their health and well-being.

An educational response to this need to bring children closer to nature again requires both a pedagogical logic and a well-informed pedagogical approach. The pedagogical logic takes its starting point from the observation made by Sir David Attenborough that 'no one will protect what they don't care about, and no one will care about what they have never experienced'⁶. The pedagogical development goes from experience to care and then to the responsibility to protect. As educators, we add to Attenborough's scheme the dimension that 'experience' should always be one that provokes curiosity, inquiry and critical thought.

¹ Caring for our Common Home is one of four Jesuit Universal Apostolic Preferences (UAPs), alongside 'Showing the way to God, 'Walking with the Excluded' and 'Journeying with the Youth'. UAPs are areas which the global Jesuit community has committed to pay special attention to. For more information, see: <https://www.jesuits.global/uap/>

² Louv, R., *Last child in the woods: Saving our children from nature-deficit disorder*. (New York, NY: Algonquin Books, 2008)

³ *Ibid*, page 34

⁴ George Monbiot, "If children lose contact with nature they won't fight for it," *The Guardian*, November 19, 2012, <https://www.theguardian.com/commentisfree/2012/nov/19/children-lose-contact-with-nature>

⁵ Louv, R., *Last child in the woods: Saving our children from nature-deficit disorder*.

⁶ As cited in Williams, M., A. "Securing Nature's Future", *The Ecologist*, 4th April 2013, <https://theecologist.org/2013/apr/04/securing-natures-future>.



No one will protect what they don't care about, and no one will care about what they have never experienced.

This brings us neatly to the pedagogical approach that seems most appropriate to support learning to care for our common world in nature.

INQUIRY BASED LEARNING AND APPRECIATION OF THE WORLD AROUND US

Inquiry-Based Learning (IBL) is an ideal pedagogy for developing children's understanding and appreciation of the world around them. It can be used to promote children's understanding of sustainability, and to develop their connection to, and care of, the environment.

Indeed, even to begin to identify and address the critical issues of our time, such as sustainability, climate change, and global interdependence, both children and adults need to be able to think conceptually, combining creativity and analysis. A stance of inquiry encourages us to wonder and to question. IBL is a conceptually-based approach to teaching and learning, where knowledge and information are tools to explore conceptual understanding rather than ends in themselves.

Over the last 20 years there has been a widespread and growing interest in IBL at all levels of education, from Early Childhood to Higher Education. While this growing interest may be evident, no agreed definition of IBL exists. Therefore, it was important for us to outline our understanding, or working definition, for the purpose of this essay, which we define as follows:



A stance of inquiry encourages us to wonder and to question.

Inquiry is understood as the ways in which curious learners actively and seriously engage with the social and physical environment in an effort to make sense of the world, and the consequent reflection on the connections between the experiences encountered and the information gathered, leading to thoughtful action. Such engagement is rigorous but also captures the elements of excitement and wonderment as articulated in the questions of the learners which are addressed through hands-on investigation leading to sometimes tentative answers.⁷

IBL encourages — in fact demands — deep, critical thinking; the deconstruction of currently held assumptions and preconceptions; the gathering and analysis of information/data; and the formulation of new understanding, which, we argue, moves us to action. Through inquiry, students are motivated to question, explore, and formulate new ideas about issues that they find personally relevant. Indeed, children's engagement with issues like climate change or biodiversity loss may be first kindled by finding wonder in their own local places, in the natural world that surrounds them.⁸ It is this connection that will lead to transformative action and new ways of being in the world. This is perhaps best done by developing a deeper understanding of place.

ATTENTION TO PLACE

Places provide the context in which we learn about ourselves and make sense of and connect to our natural and cultural surroundings; they shape our identities, our relationships with others, and our worldviews.⁹ Kingsnorth suggests that, rather than teaching abstract concepts, effective environmental education embraces the messiness and complexity of the immediate locality, fostering

⁷ Pedaste, M. et al., "Phases of inquiry-based learning definitions and the inquiry cycle", *Educational Research Review*, no 14 (2015): 47-61; Murdoch, K., *The Power of Inquiry* (Seastar Education, 2015); Short, K., "Inquiry as a stance on curriculum", in *Taking the PYP Forward*, ed. Davidson, S, and Carber, S. (Woodbridge: John Catt., 2009), 27-42

⁸ Boxley S., Clarke H., Witt S. and Dewey V., "Talking with trolls: A creative and critical engagement with nature-naivety", in *Critical literacies and young learners: Connecting classroom practice to the common core*, ed. Winograd, K. (Routledge, Oxford, 2015), 70-85.

⁹ Gruenewald, D., "The best of both worlds: A critical pedagogy of place." *Environmental Education Research*, 14 no. 3(2008): 308-324.

connections between children and the natural world they encounter every day.¹⁰ This kind of education has also been termed “vernacular learning” which Selby describes as “place-based learning rooted in close intimacy and connection with the natural world, with nature perceived as being intrinsically valuable.”¹¹

Within the pedagogy of Place Attention, we begin to know the world around us by ‘being present’ in that world through looking closely and wondering. Slow Pedagogies, as outlined by Payne and Watchow, allow us “to pause or dwell in spaces for more than a fleeting moment and, therefore, encourage us to attach and receive meaning from that place.”¹²

Local geographical inquiries connect us not only with place, but also, and importantly, with each other. The phrase “community of inquiry” which is thought to have been coined by C. S. Peirce¹³, was originally restricted to practitioners of scientific inquiry but has since been broadened to include any type of inquiry. Peirce realised that for a community of inquiry to be a *community*, certain conditions were required.¹⁴ There needed to be some continuity of experience among inquirers that allowed the possibility of something to build upon. Often such a community of learners is characterised by expressions of wonder, exclamation and shared ideas.

Time, and our experiences of it, warrants attention of “place” pedagogies in outdoor education. Place typically involves the experience of a geographical location, a locale for interacting socially and/or with nature, and the subjective meanings we attach over time to the experience. Place, however, cannot be severed from the concept and practice of time, as seems to be occurring in the discourse of outdoor education. The way outdoor educators

¹⁰ Kingsnorth, P., “Confessions of a recovering environmentalist”. *Orion Magazine*, January/February 2012, <https://orionmagazine.org/article/confessions-of-a-recovering-environmentalist/>.

¹¹ Selby, D., “Education for sustainable development, nature and vernacular learning”, *CEPS Journal*, 7, no 1(2017): 9-27.

¹² Payne, P., and Wattchow, B., “Slow pedagogy and placing education in post-traditional outdoor education”, *Australian Journal of Outdoor Education*, 12, no1(2008): 25-38

¹³ C.S. Peirce was an American pragmatist philosopher and can be considered as one of the most important philosophers of the later nineteenth and early twentieth century.

¹⁴ Peirce, C.S. [1992]. “Evolutionary Love”, in *The Essential Peirce: Selected Philosophical Writings* ed. Houser, H. and Kloesel, C., vol 1, 353-371 (Bloomington, Indiana University Press) [Original work published 1893].



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carefully conceive of, plan for, manage and pedagogically practice time may positively facilitate an introductory “sense” of place.

Amid the cornucopia of education reforms that emphasise innovation and new methods in environmental studies, school gardens stand out as low-tech and manageable projects. These gardens support and encourage an engagement with simple natural growth processes and healthy eating as a key component of children’s physical wellbeing; considerable knowledge and resources have been developed over the last ten years in Ireland in this area. Before examining one school garden in particular, we will first consider the benefits of establishing a school garden more generally and identify what it may have to offer the school community.

THE SCHOOL GARDEN

A school garden has the potential to be a powerful environmental education tool. The benefits of a school garden have been well documented by a number of authors, for example, Blair argues that:

- school gardens broaden children’s experience of ecosystem complexity;
- vegetable gardening teaches food systems ecology;
- exposure to nature and gardening in childhood shapes adult attitudes and environmental values.¹⁵

Cobb added that children’s experience of nature is connected to and strongly influences later psychological well-being.¹⁶ She also proposed that contact with nature stimulates

¹⁵ Blair, D., “The Child in the Garden: An Evaluative Review of the Benefits of School Gardening”, *The Journal of Environmental Education*, 40 no. 2 (2009): 15-38.

¹⁶ Cobb, E., *The ecology of imagination in childhood*, (Spring Publications, 1977)



Photo taken by Elizabeth Cox. Gardiner Street students planting seeds in upcycled food tins, seedlings are then planted in raised beds in the polytunnel.

creativity. She found that such creativity was evident in children's games which are seen to be more imaginative in green places rather than in concrete playgrounds. Natural spaces were seen to encourage fantasy and role-play, reasoning and observation. The social standing of children there depends less on physical dominance, more on inventiveness and language skills.

Based on our experiences, we will highlight three specific benefits of the school garden. Firstly, the school garden can connect children to nature; secondly, it allows for the planning and teaching of the curriculum to be done in a meaningful and integrated way, and thirdly, it can provide children with opportunities to make choices about how they engage with the world around them.

Considering the first of these, the school garden can offer the opportunity for children to engage with nature in a very real and meaningful way. For many children, a garden offers the only chance to get close to nature. Some lack access to gardening spaces

because of their living situations while others have limited exploratory free time in the outdoors due to the focus on indoor activities and participation in organised outdoor activities. School garden educators in urban environments frequently find that engagement in the garden provides students with an opportunity to dig into the soil and watch a plant grow for the first time.

Establishing a connection with nature at an early age is extremely important. Research has highlighted how childhood experiences with nature are strongly linked to adult attitudes later in life.¹⁷ Participation in active gardening during childhood was shown to be the most important influence in explaining adult environmental attitudes and actions. Even in urban areas, where green spaces are sparse and limited, gardening activities for children can provide a strong enough connection to instil appreciation and respect for nature in adulthood.

¹⁷ Wells, N., and Lekies, K., "Nature and the Life Course: Pathways from Childhood Nature Experiences to Adult Environmentalism", *Children, Youth and Environments* 16, no1 (2006)

Such connection was highlighted by Sandra Austin¹⁸, who conducted an in-depth study into the use of school gardens in Ireland.¹⁹ The primary aim of her study was to build a picture of the many ways school gardens are used and valued in Irish primary schools. In an interview in the Irish Times she made the observation:

“I see school gardens as connective spaces that allow you to see a bigger picture. You can experience the beauty as a whole and then find interesting things like how plants smell or look, and you can open up pieces of fruit and see the seeds. Learning outdoors like that offers really important direct experience of nature rather than just reading about it in class.”²⁰

Her work also highlighted the second benefit mentioned above, that of using school gardens as a foundation for integrated learning and a resource for children’s wellbeing and health. The school garden can support an integrated approach to teaching and learning and give the learning a meaningful context. The subject areas of Science and Geography are the most obvious to be addressed.²¹ However, the school garden also provides opportunities to address aspects of other curricular areas such as Mathematics (measuring and drawing the garden to scale), Visual Arts (sketching some of the produce) or Language (writing about and describing the garden).

Our third recognised benefit is how, through gardening, children can become responsible caretakers. At its best a school garden can help transform learning spaces and can transfer ownership of learning to the children themselves. They have an opportunity to engage in agricultural or growing practices on a small scale, learning about the responsibilities and impacts of cultivating the land. They explore the web of interactions among living and non-living things that sustain life. By doing

so, they develop a greater understanding of the natural world. Without stating the obvious, a school garden can teach children “how a plant goes from seed to plate.”²² Such gardens introduce young gardeners to local sustainable food systems, as children eat their own produce.²³ The act of growing food from seeds is exciting, even miraculous; the product is something special to be taken home to share. This sentiment is well expressed by Thorp and Townsend:

“[G]ardening changes the status of food for all involved. When one gardens, food can no longer be viewed as a mere commodity for consumption; we are brought into the ritual of communal goodness that is found at the intersection of people and plants. Food that we grow with our own hands becomes a portal for personal transformation.”²⁴

Given these documented benefits, it was deemed that a school garden could address many of the concerns of educationalists, health experts and the concerns of the Pope and the Catholic Church with regard to our relationship with nature. In the final part of this essay, we provide an account of a school garden project undertaken in the course of 2022.

DEVELOPMENT OF ONE SCHOOL GARDEN

Our example of a living and breathing school garden is part of a school in the North East inner-city of Dublin. It is the most recent school to join the Jesuit network of schools in Ireland, joining officially in November 2019. Based on the 2016 Census, the parish is located within the most ethnically-diverse constituency in Ireland as a result of migration. Notwithstanding developmental progress and urban regeneration in recent years, parts of

¹⁸ Sandra Austin works in Marino Institute of Education and is a colleague of Karin Bacon, one of the authors of this essay.

¹⁹ Austin, S., “The school garden in the primary school: meeting the challenges and reaping the benefits”, *Education*, 3 no. 13 (2021) DOI: 10.1080/03004279.2021.1905017

²⁰ Claire O’Connell, “Science Lives: Using nature to grow an understanding of Science,” *Irish Times*, July 18 2017, <https://www.irishtimes.com/news/science/science-lives-using-nature-to-grow-an-understanding-of-science-1.3159063>

²¹ For example, the strands ‘Environmental Awareness and Care’ from the Science and Geography Primary curriculum and ‘Living Things’ from the Science curriculum

²² Rahm, J., “Emergent learning opportunities in an inner-city youth gardening program”, *Journal of Research in Science Teaching*, 39 (2002): 164-184.

²³ Moore, A., et al., “School gardens as sites for forging progressive socioecological futures”, *Annals of the Association of American Geographers*, 105 no.2 (2015): 407–415; Passy, R., et al., “Impact of school gardening on learning: Final report submitted to the Royal Horticultural Society”, London, United Kingdom: National Foundation for Educational Research, (2010).

²⁴ Thorp, L and Townsend, C., “Agricultural Education in an Elementary School: An Ethnographic Study of a School Garden”, 28th Annual National Agricultural Education Research Conference, December 12, 2001. p. 357

the parish continue to experience social and economic deprivation.

The school is situated next to the St. Francis Xavier's Church and the Gardiner Street Jesuit Community. During the Covid-19 pandemic, the school was faced with a real challenge of maintaining social distancing for the children during play time. In response, the Jesuit community gave access to their garden which proved to be a real haven. As the pandemic receded, the experienced benefits of the garden did not. A polytunnel was installed in the garden providing new opportunities and possibilities.

The garden also provides the opportunity to explore Ignatian ethos and pedagogy. At an address at the conclusion of the year of Consecrated Life, Pope Francis spoke of wonder saying:

“We are custodians of wonder. A wonder that asks to be constantly renewed is; woe betide routine in spiritual life....Our founders were moved by the Spirit and they were not afraid to get their hands dirty with every day life..”²⁵

The teacher and children at the centre of this story were not afraid to get their hands dirty and learned a lot along the way.

Here the teacher picks up their story

With access to the garden this year, we have been watching it change as the months pass. Learning about how the seasons, time, the calendar and festivals could all be placed in context by the changes in the garden. I found that so many learning experiences across the whole curriculum could be enriched through engagement with life in the garden. The children noticed the roses turn into rosehips as summer ended and declared the cherry tree to be on fire as it blazed yellow, orange and gold in the autumn. The children come in from playtime with grass stains instead of scratches and scrapes from the tarmacadam.

The polytunnel presented a set of new learning opportunities for the class. The three basic elements of Ignatian Pedagogy are: Experience, Reflection and Action. The polytunnel provided a setting for the children to engage in learning experiences that supported them to ask the big questions about how plants grow and about biodiversity, and then to act and reflect upon this learning in a meaningful authentic way.

For example, in Geography, under the theme of study ‘People at Work’, the children were learning about the processes of making tomato soup and the many people involved in its production. The children, under my guidance, were inspired to grow their own tomatoes. Through the sowing of seeds and caring for their tomato plants, the children are beginning to appreciate the labour and effort that goes into each can of tomato soup they pull off the shelf in the supermarket. With a desire to foster an ethic of care for creation, I was able to use this learning experience to guide the children to reflect on problems of food waste and respect for the food we have been provided with.

Keen to use the polytunnel as a site to develop the children’s appreciation for the diversity of creation, we began with taste testing different varieties of popular vegetables. The children tasted a wide variety of tomatoes and voted as to which ones were their favourites. The children explored a variety of potatoes. Even the names seemed wonderful. As each one was taken out of the bag, they would “ooh” and “aah” and attempt to match the potato to its name based on its colour, shape, size and texture. Was it Pink Fir Apple, Mayan Gold, Sweet Potato or Red Emmalie? In the autumn we had done apple tasting. The children are developing a meaningful appreciation for the diversity of creation.

These experiences influenced the children in their decisions about what to grow in the polytunnel. They were very invested in deciding what to grow and this led to important discussion around when seeds

²⁵ “Pope calls on consecrated persons to be a sign of God’s closeness and sharing of humanity’s wounds today,” *Vatican City (AsiaNews)*, February 2, 2016, <https://www.asianews.it/news-en/Pope-calls-on-consecrated-persons-to-be-a-sign-of-God%E2%80%99s-closeness-and-sharing-of-humanity%E2%80%99s-wounds-today-36572.html>

should be sown and what they need to grow, how long they take to grow and what would taste best. The children asked questions like “Can we grow bananas? What about broccoli?” They discovered they would be in 1st class by the time the broccoli was ready for eating. They asked ‘How do raspberries grow?’ and then wondered would they have enough space for raspberry canes in a polytunnel. Together we drew up a seed sowing list and plan for the coming months. Every morning during playtime the children sow seeds, labelling each pot with the name, date and variety. The polytunnel continues to present so many meaningful and authentic opportunities for literacy development.

Seed sowing and work in the polytunnel are rooted in the science curriculum. The Global Identifiers of Global Jesuit Schools resolve that Jesuit schools develop a model of living based on respect for creation and sustainable development and that this commitment should manifest itself in ‘scientifically rigorous curricula’. Good early science instruction is inquiry-based and recognises the hallmarks of literacy practices of expert scientists. The driving inquiry question throughout the work in the polytunnel has been, how do plants grow? To keep track and to understand what was happening with our seeds, we read multiple information texts to better understand what was happening in the polytunnel. In this way the children were guided to engage in scientific talk about what was happening. I taught the children to make scientific drawings with detail and labels. The children keep garden notebooks to track growth.

Our seed box is an important fixture in our classroom. The children love to open it up each morning to choose seeds to sow. I ask them, ‘What seeds are you sowing today?’ They reply, ‘I think I will sow some Tommy Toe Tomato seeds,’ ‘I will grow some Nasturtiums’, or ‘I will sow a blue pumpkin!’ For the children, the potential of each small seed seems like a miracle in itself and that alone has caused the children and

I to wonder and marvel at creation. The natural world has propelled these children into inquiry based-learning. It is impossible for the children to look at a seed and not wonder how it got there and what it might grow into. Every day the children visit their tomato plants and wonder when they will be ripe for eating and consider all the ways to help them grow well. One day, just before home time we dropped over to check on the plants to find Suzanne from the parish playing classical music to the plants. The next experiment shall be does classical music make plants grow faster?

Reflection is an important phase of a learning experience according to the Ignatian pedagogical paradigm. Reading books such as *The Curious Garden* and *Flower Garden* showed children the aesthetic and affective qualities of working in the garden and producing vegetables, fruit and flowers. These texts guided children to take ownership of their learning and to respond personally to their learning experiences. One of the children declared, “I am a gardener now. I wanted to be vet when I grew up. Now I think I will be a gardener and a vet.”

These learning experiences would not be possible without both the provision of the polytunnel and the support of the local Jesuit community²⁶. The polytunnel is a shared venture and the children and I are so relieved that we can rely on Father Niall Leahy SJ to take care of our seedlings during school breaks. The children are also always excited to see what other people have been growing.

²⁶ The Parish Priest Fr Richard O’Dwyer and Fr Niall Leahy, both of whom are resident in Gardiner Street Jesuit Community, were particularly involved in the set up and maintenance of the polytunnel.

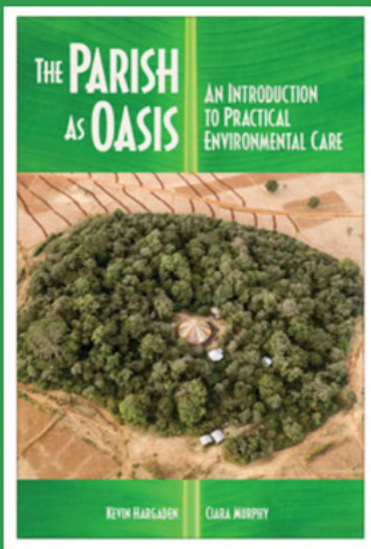
CONCLUSION

Andreas Schleicher, head of OECD's education division, in an interview with the Irish Times, highlighted the need to equip students to 'think outside the box'. He identified the key challenge for Irish schools as getting students to think for themselves, to be able to distinguish fact from opinion. He asks '... what value is literacy, if you can't navigate ambiguity? If we can't manage complexity?'²⁷

To Care for our Common Home is to understand and appreciate complexity while accepting that some of the solutions aimed at protecting our natural environment are sometimes shrouded in ambiguity. IBL, which nurtures children's natural curiosity of the world surrounding them, is an ideal tool to help children navigate this ambiguity. Integrating this pedagogy with a school garden allows the connection children have with nature to flourish, providing opportunities for them to make choices about how they engage with the world around them.

The students in Gardiner Street primary school illustrate the myriad of benefits that evolve when children are able to experience growth from seed to plate. By developing this respect and curiosity of nature, school gardens have incredible potential to cultivate an attitude of 'Caring for our Common Home'.

²⁷ Carl O'Brien, 'Irish schools need to modernise '20th century' approach to learning, warns OECD', *Irish Times*, 22 March 2021, <https://www.irishtimes.com/news/education/irish-schools-need-to-modernise-20th-century-approach-to-learning-warns-oecd-1.4516222>



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