# Early Education Journal

Spring 2025

No 105

The Three Pillars of Sustainability



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## Editorial Lesley Curtis

Early Education published a Journal issue on Cultures of Sustainability in Summer 2024. The journal started a conversation exploring sustainability, referenced by Jan White in the editorial. This issue is a follow on from that one, building on the articles and educators' experiences of sustainability in practice. This journal will reference the "Three Pillars of Sustainability" (Boyd, 2025). If you are not familiar with these, they are Economic, Social and Environmental. What do these three pillars look like in early childhood? The intention is that the articles in this journal share examples of the three pillars in action with young children.

The 17 Sustainable Development Goals (SDGs) (United Nations, 2023) will also be explored. Are early years settings aware of the SDGs? Do they know these SDGs exist and, if so, how relatable are they to early childhood? From engagement with early years settings, the answer is often "No" when asked if they are aware of the SDGs.

As we all can acknowledge, early childhood is a holistic experience that supports the development of the whole child. The same thinking must be applied when reflecting upon the Three Pillars of Sustainability and the 17 Sustainable Development Goals. The pillars and goals are interwoven and threaded together mutually supporting each other, so if you only drew upon one pillar for example, you are weakening the concept of interconnected sustainability. The goals and pillars must not be viewed or actioned in isolation, but always together through a natural holistic approach.

NCFE published an Early Childhood Education for Sustainability resource (NCFE, 2021) relating to the goals and early childhood in 2021. This resource provides an opportunity for educators to reflect on their practice with regards to the 17 SDGs, plus making links to the Early Years Foundation Stage (EYFS) and UNESCO.

In 2023, Early Education celebrated 100 years and published, *Early Childhood Education – Current*  realities and future priorities. In Chapter 4 "Developing a culture of sustainability in early childhood education", Featherbed, Lloyd-Evans and Moylett share practical examples of the Three Pillars and the 17 SDGs in action and put forward that we should "adopt a slow pedagogy which puts children first, listens to their voices, and values their creativity and problem-solving abilities".

In England, the Department for Education has a Sustainability and Climate Change Strategy for Education (DfE, 2022) that aims to make the education sector a leader in sustainability by 2030. The strategy has five action areas: Climate education, Green skills and careers, The education estate and digital infrastructure, Supply chain and operations and International collaboration. The DfE has set a target for all education settings to have a sustainability lead and a climate action plan in place by 2025, to help embed sustainability in all they do.

Highfield Nursery School in Ipswich has partnered with Everton Nursery School in Liverpool (both Stronger Practice Hubs) to create an Early Years Sustainable Hub (see link below). The hub is developed with the Early Years sector at its heart. The aim is to share practical resources and support, to help educators design their Climate Action Plan. The Climate Action Plan (CAP) does not have to follow any design and can be drawn up to meet the unique needs of the setting. However, we have designed a simple, easy-to-use template based on the Three Pillars of Sustainability that educators can adapt to their setting. In an early years setting, the role of the adult is pivotal in shaping children's understanding of the world around them, particularly regarding environmental sustainability.

In this issue, Diane Boyd (Independent Consultant) highlights through her three articles how the children have engaged with the economic and social pillars. Ruth Coleman and Lil Newton of Highfield Nursery School, Ipswich acknowledge in their article the environmental pillar of their journey the children and staff explored in practice.

Adults serve not only as educators but also as role models, demonstrating a passion for the environment that can inspire young learners. By integrating environmental education into daily activities, adults can cultivate a sense of responsibility and stewardship in children, encouraging them to become ambassadors for sustainability. We hope the journal articles provide opportunities for reflection on your present position on sustainability with young children and how you can go forward to embed this further into your practice.

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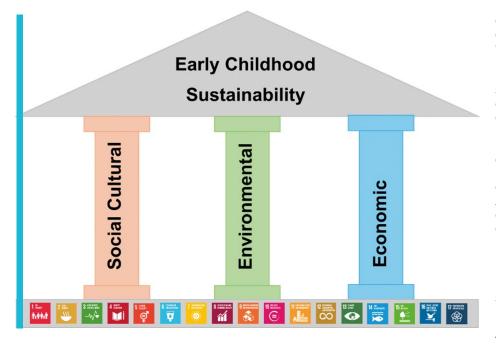
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# Social sustainability

## Diane Boyd



The Sustainable Development Goals (SDG) were developed as a "shared blueprint for peace and prosperity" (Boyd et al, 2021) and were adopted by all United Nations Member States. The SDGs provided a framework that calls the world to work collaboratively in partnership towards a safe and peaceful planet for everyone. The SDGs were and are clearly challenging, and we have a long way to go. The Sustainable Development Goals Report (UNESCO 2024: 4) "makes for sobering reading," demonstrating the urgency of the situation. As with social sustainability the aim of the 17 SDGs was "to end poverty, improve health and education for all as lifelong learners, reduce societal inequalities and develop a sustainable economic growth" (Boyd, et al, 2022:6). As educators, we need to empower children to ask questions, ignite their passion for connecting with the planet and reinforce relationships with the community.

When defining social sustainability, the emphasis is on how political, economic, environmental or cultural decisions can affect local community and society globally. Social sustainability is concerned with the quality of people's lives within these communities ensuring everyone has access to a just and inclusive society. When reflecting historically, for Montessori, Froebel, Steiner and Malaguzzi, social sustainability was clearly threaded throughout their philosophies and pedagogical practice (Boyd, 2018). Key terminology that defines both the pioneers and social sustainability are empowerment, rights, agency, security and inclusivity. In 1989 the United Nations Convention on the Rights of the Child highlighted that children must in all aspects of their lives, have the right to make choices. These "rights" include peace, quality education, good health and wellbeing and safe inclusive communities. However, the Shaping Us Framework (Royal Foundation Centre for Early Childhood, 2025:4) highlights the complexity of modern society today and how this can lead to a world filled with "mistrust and misunderstanding, leaving many people feeling isolated and vulnerable during difficult times," impacting upon mental health, causing many of society's problems such as addiction and homelessness. It calls for an investment in humankind. Social sustainability in early childhood is that investment; we must empower children as required for the 21st Century. The DfE Sustainability and Climate Action strategy (2022) highlights that the views of children must be "taken into account in the development of climate change policies."

Sustainable Development Goal 4 Quality education and Goal 10 Reduced Inequalities highlight the need for quality pre-school education for all children to support their inclusive and holistic development across all areas

of learning. They recognise that education "liberates" and "opens the world of opportunities" for lifelong learning (SDG 4). The Early Years Foundation Stage (DfE, 2024:9) states children can learn to "manage emotions, develop a positive sense of self, set themselves simple goals" Research (McClelland et al, 2013, para,1) indicated that "children's early executive function and self-regulation have emerged as a salient predictor of later outcomes" However, Wright & Jackson (2022) note the importance of social connections as a predictor of later success, demonstrating an urgency for achieving a socially inclusive education for all children. More recently the Education Endowment Foundation (2024) suggests "Strategies that seek to improve learning by increasing selfregulation have an average impact of three additional months' progress" Additionally, the EEF research further opines a strong sense of self, has a positive impact on both early literacy and early numeracy, aligning with SDG 4.6 - "Literacy and numeracy skills, that is reading, writing and calculating, are vital skills for individuals to further their learning and to develop throughout their lives independently" (UNESCO, 2015).

#### So how can you as an early years educator support children to develop self-regulation?

Firstly, it is important to recognise how you view the child as a learner. Do you consider children are vulnerable and always needing adult direction, incapable of making decisions for themselves? Nikiforidou et al (2024: 37) calls this a "cotton wool child" and challenges adults to encourage developmentally appropriate challenging and risky play. The UNCRC (1989) reminds us that children have the right to a quality education (article 28), the right to have their views heard (article 12), the right to play (article 31) and the right to express themselves (article 13).

## Strategies to support self-regulation

The International approach in Reggio Emilia considers that children are protagonists of their own learning experiences and adults are collaborators and co-researchers alongside them. The EEF (2024) recently published new guidance, suggesting strategies to support selfregulation, such as "working towards a goal, which may be self-chosen or guided by a suggestion or request from an adult". When I visited Reggio Emilia, I was lucky to witness first hand children following their own self chosen goals and observing their strong self-regulatory behaviours. I arrived at a children's centre at 9am when the children were choosing their tasks for the morning. We make assumptions that children as young as 3 years old do not have the capacity to concentrate and stay focused beyond a certain period. McClelland et al (2013:para 3) suggested that "attention span-persistence refers to selecting and attending to relevant information, such as listening to the teacher, and persisting on a task." This thinking aligns with the EYFS (DfE, 2024:17) characteristics of effective learning, which requires practitioners to provide tasks that support persistence and help "children to concentrate and keep on trying if they encounter difficulties."

At the Reggio Emilia children's centre, I witnessed children choosing their tasks. Two boys decided they were going to investigate a bicycle literally breaking it up, taking it apart and scientifically exploring it, with scaffolding from an early years pedagogue, who had provided the bicycle following their initial question about how the wheels went round. Rather than "give" the answer, the children were encouraged to try and find it for themselves co-operatively demonstrating a strong sense of social sustainability through collaborative community learning. The EEF (ibid) highlight the importance of "creating a community of collaborative learners." Like the Reggio Emilia Pedagogue, the EEF suggests "facilitating" such learning by using the children's questions will help them co-ordinate their ideas and make suggestions as how to proceed. When I returned to the children in the bicycle workshop three hours later, they were still totally focused on their exploration. This is authentic and natural persistence at completing a theorybased task, which demonstrated, as the EEF self-regulation guidance suggests, children managing "their own behaviour and aspects of their learning".

The EEF research on self-regulation also indicates that personal, emotional and social development strategies can support children's selfregulatory behaviours as the children start to understand how their mind and body work. For example, the EEF suggest children having opportunities to manage their emotions through either mindfulness or physical activities. SDG 15 Life on Land requires children to develop a relationship with nature and as a result develop empathy and feelings towards their world, demonstrating the interconnectedness of the Three Pillars and SDGs. As practitioners we need to recognise the need for this "slowness" in our daily practice and encourage children to be still outside. Encourage the children to wallow in the stillness, listen to the birdsong, smell and breathe in the freshness, stopping the urgency of "doing" phonics or work-related tasks. Not only will these experiences connect or reconnect the children with nature, but it will help children to become "more aware of their physical sensations, thoughts, and feelings' (ibid). Try to encourage that slowness in them, develop all the relational aspects of friendship so they can learn to be part of a social community and foster friendships.

As the EEF suggests for children's self-regulation, they "to need learn how to make good friendships, co-operate and resolve conflicts peaceably", which is a valuable skill in the current world we live in, resonating with SDG 16 Peace, Justice and Strong institutions. Research highlights that early childhood is the crucial period for developing attitudes and values in relation to empathy, kindness and caring for others. Boyd et al (2025) noted that the ability to develop empathetic sustainable attitudes to those less fortunate, empowers children (and adults) to make informed decisions and act for a more sustainable world. As the Shaping Us Framework (2025: 6) recognises "it means better understanding of how we can protect and build upon what connects and unites us, so that we can find new ways to strengthen communities".



It is important that children can talk about their feelings with each other and for practitioners to provide strategies to help understand feelings and how to rationalise their thinking. Malaguzzi stressed that children have a "100 languages" and we must not focus on the one way of teaching, as artist Claudia Giudici stated:



When we refer to the different ways children (human beings) represent, communicate and express their thinking in different media and symbolic systems: languages are therefore many fonts or geneses of knowledge. (Vecchi 2010: xviii)

Back in Reggio Emilia, the children go out daily into the local town and visit the piazza, experiencing all aspects of their community. Some children however, initially found it difficult to navigate and manage their feelings of panic amongst the crowds in the piazza. The Shaping Us Framework (RFCEC, 2025:25) notes "understanding our own thoughts and feelings, and how we respond to the world around us, is an important element of self-awareness".

Rather than ignoring this issue, with close support and co-regulation, the early years pedagogue decided to help the children to understand, talk aloud together, sharing and becoming aware of their feelings. As "very young children begin to develop" their self-regulation, in part, through close support and co-regulation from the adults around them. Through teaching, modelling, and practice, children gain an increased capacity to regulate their thoughts, emotions, and actions" (EEF, 2024). Using their 100 languages, the educator used clay as the provocation. Initially the children reflected upon how they felt whilst in the crowds and articulated their feelings (Filippini & Vecchi, 1996). The children described the crowd as if it was a carpet of moving people feeling squeezed by the passers-by. They were worried about getting lost because all they could see were lots of heads and lots of people. This feeling of worry was clearly apparent when they reflected about how being in the middle of a crowd was hard and black, with the anonymity of no faces visible, just backs and a strong smell of sweat.

These statements from the children are demonstrably expressive about their feelings of unease. But with the co-regulation of the early years pedagogue the children were able to articulate how they felt. This activity supported the children to recognise everyone had similar feelings of unease in crowds, but with the skilful dialogue of the educator, they were able to start understanding it and use powerful words to describe it (early literacy in action).

Each child used clay and designed a character that they could have seen in the piazza, bringing the experience into their own lived reality and making "human sense" to them (Donaldson, 1978). The depth of discussion, the high level of concentration and manipulation during the task, aided their holistic development. All the clay statues were then situated together as a "crowd" so the children could visualise it.



Credit: Diane Boyd, Reggio clay figures

The intricate detail of each character and their story is wonderfully powerful. For example, Enrico described his character "an old man": "He was another kind of old man, who didn't have a cane or any hair, he was like a young person, but he wasn't, you could see it in his face." Frederico articulated his characters "Two Friends": "It's two friends hugging, because they have not seen each other for a long time". (Centro Internationale Loris Malaguzzi, 2016)

This is quality pedagogy in action (SDG 4), an awareness of a community of learners (all the children collaborated) and the understanding of their locality in the piazza, resonating with SDG 11 Sustainable cities and communities. This example highlights how young children are part of and connected to a social community. This exercise not only helped children to self-regulate their feelings of anxiousness, but it also helped them to feel better about themselves and understand everyone can have feelings of unease in large crowds (SDG 3 Good Health and Wellbeing). EEF (2024) reminds practitioners to "explore activities designed to help children better label, understand, and manage their own emotions" which this clay experience achieved for these young children. This is important as the EEF further suggests that there is "promising evidence that these [types of] activities may benefit self-regulation and executive function".



In Reggio Emilia, visual thinking books (A3 sized) are positioned on the wall at children's level, so they can reflect upon the learning activity, revisiting it and re-evaluating as it proceeds. Key here is the idea of selfreflection, as we need to encourage children to "perceive and reflect on their own thoughts and feelings", resulting in them being "able to understand and recognise feelings, and to have the words to talk about them" (RFCEC, 2025 25).

As educators we need to be mindful of how we can scaffold young children's learning; provide opportunities to work collaboratively; to help them self-regulate when challenged and persist in all tasks; to enable time to slow down and be at one with themselves; and to be able to articulate feelings and anxieties. The Shaping Us Framework (ibid:27) notes that "having a nurturing adult to provide co-regulation is a critical resource to support children's development throughout childhood". Social sustainability is about ensuring all children are fortunate to have these nurturing relationships, as quality educators are critical for the development of self-regulation and executive function, key for future success.

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# Socio-cultural sustainability

Culture is a critical aspect of social sustainability, recognising the importance of the traditions and heritage threaded throughout society. Culture is reflected in multiple ways from architecture and monuments, to music, languages, dance, songs and stories reflecting history, place, art, creativity and community. Culture is entwined throughout all aspects of every day and enriches every aspect, building strong, innovative and sustainable intergenerational communities. The pedagogical philosophy of Reggio Emilia in Italy highlights the importance of the 100 Languages of Children which recognises the creative potential of all children incorporating culture through multimodal ways of being (Reggio Emilia Approach, n.d.). This challenges educators to reject early childhood educational experiences which do not foster awe and wonder, and push children "to love and to marvel only at Easter and Christmas" (ibid).

We must be mindful of the deep cultural significances and meanings of different cultures and festivals, because over the course of the year, there are a diverse range of festivals to celebrate in early childhood. There is the Lunar New Year, Mid-Summers, Diwali and Christmas to name a few. Some of these festivals are strongly reflected in society generally whilst others sit on the periphery. In Early Childhood we should not just "celebrate" these latter on the day, never to be discussed again. Children need to be aware of the complexity of these diverse local, national and global community traditions and understand how they are, and should be, reflected in the context of their lives. For instance, we should avoid "doing" Lunar New Year as a oneoff Chinese celebration but instead weave cultural stories from around the world together, so children can see similarities rather than differences. "Cultural tokenism" is when another culture is acknowledged because educators "have to" or when educators are not thoroughly prepared or misunderstand or reflect it incorrectly in practice.

The United Nations Educational, Scientific and Cultural Organization (UNESCO) (2009) suggests that "culture shapes individuals and societies, fostering unity through

shared values and traditions". In 2024, UNESCO developed the Framework for Culture and Arts Education (UNESCO, 2024) which promotes culture and the arts as being "integral to the holistic and inclusive development, resilience, and overall wellbeing of individuals and societies," This is crucial in terms of addressing Education for Sustainability, as it is at the heart of everything that makes us human. Culture binds communities together, providing a sense of self for children, which is why culture is included in socio-cultural sustainability.

As educators we need to recognise how culture impacts upon early childhood and be aware of all the traditions that are an intrinsic part of their community. In 2015 at the Paris Treaty a date was set (Agenda 2030) for the achievement of all 17 Sustainable Development Goals (SDG) (UNESCO, 2015) of which a key aspect is the respect and recognition of diverse beliefs, and cultural traditions (Socio-cultural sustainability). **UNESCO** defines social sustainability as supporting all communities and society to thrive in a positive, healthy and equitable way, ensuring all have a chance to reach their full potential regardless of gender, geography or age. The SDGs (ibid) are at the heart of the cultural aspect of sociosustainability highlighting challenges that society faces. These challenges include the need to protect culture and traditions, preserve heritage, and develop creative thinking inclusive communities.

So how does early childhood education fit into socio-cultural sustainability?

## The need to protect culture and traditions

The Brundtland report (1987) discussed the need to bridge intergenerational and cultural divides. Early Childhood Education for Sustainability has its roots with the pioneering giants such as Montessori, Froebel and Malaguzzi who advocated for a community of learners, working collaboratively, intergenerationally and practically (SDG 11 Sustainable Cities and Communities) (UNESCO, 2015). A key element of their philosophy was the realisation of hands and minds working together in traditional real-life skills, resonating with the all three pillars of sustainability (economic, environmental and socio-cultural). A case study example highlights how this looks in practice. In the Legacy Cafes in Liverpool (Boyd, 2018) elders were invited into the nursery not as passive observers but as mentors and guides to share valuable cultural and contextual wisdom and knowledge, scaffolding early childhood educators, children and their families in the lost arts of childhood (Langlands, 2018). The elders supported children to weave, sew, mend and make fresh dinners, such as "scouse", whilst parents learnt how to backstitch or mend punctures. The skills are contextual to the place and community that resides within it.



Image: Legacy Café Everton Nursery and Family Centre - weaving skills

Early childhood educators are in a valuable position to incorporate all aspects of cultural heritage in their everyday pedagogical experiences. By connecting to all aspects of your community through walks and conversations, the children's cultural world will open to them. As the Education Endowment Foundation social communication research notes "showing children good examples of social communication ... can help them to understand and follow the rules of social communication." (EEF 2024a) The connections formed will ensure the elders' knowledge and wisdom are not just shared but are saved and protected. Research from the EEF on Personal, Social and Emotional Development reiterates the importance of stronger cultural relationships across generations and communities. It advocates, "creating a culture in which children are taught how to talk

about and exchange ideas or share experiences, in a learning environment where there are opportunities to make connections with others and build relationships." (EEF, 2024b)

## **Preserve heritage**

UNESCO (2009) defines cultural heritage as being artefacts, monuments, museums, buildings and sites that have a diversity of values including symbolic, historical, social and scientific. UNESCO also recognises the cultural significance of festivals, paintings and celebrations. Socio-cultural sustainability in early childhood is about reflecting upon past and present, celebrating diversity through a range of artefacts and monuments etc, ensuring all children can identify with the cultural significance of them but also how others see them differently. For example, conversations could centre around looking at old black and white photographs that reflect their community and looking for differences in how it looks today. What sort of uniforms did the firemen wear? You could note here the fact that it was only men who could do this job (SDG 5 Gender equality) at the time – but reflect on different cultural attitudes to women in roles. Questions emerge naturally such as how did the fire engines move or how the term "horsepower" came about.

Early childhood educators need to ensure they value all heritages and ensure that there is no unconscious bias in any discussions and reflections. The EYFS (DfE, 2024:11) includes some indication of cultural heritage through the specific area of learning, Understanding the World noting that providing diverse personal experiences such as "visiting libraries or museums" will support children's "knowledge and sense of the world around them". Here we see the museum as a base to share cultural stories from the community across generations.



Image: Museum of Liverpool Intergenerational Learning about the Titanic

This will also include taking opportunities on your neighbourhood walks, taking time to observe the beautiful architecture representing the past or present or religious buildings such as mosques or churches, monuments to commemorate past events and art galleries with a range of paintings. Talking with children during these visits opens their world to include "otherness", which in turn develops empathy. During Remembrance Day on 11 November, the children may have seen parades or wreaths of poppies laid at the foot of monuments as they walked around their community. Encourage them to ask questions such as "why poppies?" Young children are capable and able to make a wreath together with foraged materials, and to place it onto the Remembrance monument. This is the beginnings of understanding pride and historical celebration. Remember, children need to understand past and present. The EYFS (DfE, 2024 :11) asks that educators ensure children meet "important members of society," and the fallen are true heroes. Early childhood educators should ensure that these conversations about fallen heroes are handled sensitively as the EEF research on PSED shows it is important that "children are taught to use appropriate verbal communication to express their emotions and feelings" (EEF, 2024b).



Image: Armistice Day Wreath Tugulawa Early Education Brisbane Australia

## Develop inclusive creative thinking communities

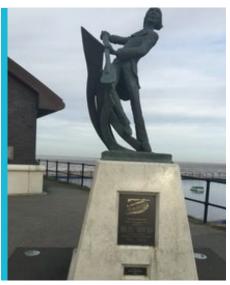
The EYFS (DfE, 2024 :11) recognises society and culture in the Understanding the World, with a broad definition asking educators to guide "children to make sense of their physical world and their community." Young children need to have a strong relationship with their locality to develop their feeling of belonging and a strong sense of being. The EEF (2024c) highlight that social and emotional learning is closely linked to the development of self-regulation and how young children live and learn alongside their peers, family and community. It also states that children from disadvantaged backgrounds are more likely to have weaker social and emotional skills, which is why as educators personal, social and emotional development must be a key aspect of all practice. As a result, the EEF advises educators to support children to understand and engage in healthy relationships with peers and emotional self-regulation, both of which may subsequently increase academic attainment. UNESCO (2019) stress the need for children to be strong and emotionally able, noting how "rigorous research has established that social and emotional competencies early in life-such as self-management skills in children five years of age-are better predictors of major young adult life outcomes such as health and financial success, than traditional academic metrics of grades and standardized test scores?

SDG 4 Quality Education and SDG 10 Reduced Equalities (UNESCO, 2015) remind us of the need to provide all children with a positive start in life and the recognition of their cultural background. Article 31 of the UNCRC (Unicef UK, 1989) also highlights the need to respect children's background and the cultures to which they belong so demonstrating true authentic inclusion. If children do not recognise themselves in the setting, this will impact on how they learn, play and develop. Research from the EEF finds that a safe, secure, effective enabling environment supports children's personal, social and emotional development and that as a result they "can benefit in terms of recognising, expressing and regulating emotions."

It is important therefore, to open your gates as wide as you can and invite all diverse members of the local community to become part of your pedagogical experiences. This could be the local intergenerational allotment club who would share their elders' wisdom and knowledge of seasonal traditions, or the librarian to share stories both past and present or the local lifeboat volunteers (SDG 11 Sustainable Cities and Communities). On your neighbourhood walks become aware of statues and what they represent to the community, so the children understand the story behind them.

It is also important to recognise the different religions that are represented and ensure all are included and celebrated. Children need to be able to have empathy and understanding of "others" to ensure a tolerant and peaceful world (SDG 16 Peace, Justice and Strong Institutions) (UNESCO,2015). Remember, it is important that festivals and practices of other cultures must not be just





tokenistic but truly embedded into all playful learning over the year.

If we can support the development of strong emotionally resilient children, we are laying secure foundations for strong resilient communities of the 21st century. We do not know what the world will look like in 20 years' time, but we need to prepare children for all difficult societal and ecological situations ahead. UNESCO (2017) suggests that we need to help children to be "critical, to be responsible citizens, to know about the world and to learn in diverse and interactive modalities." By unpicking the language, it is apparent that we can and must offer children pedagogical experiences that motivate children to become divergent and critical thinkers. Let children reflect, evaluate and hypothesise when investigating - do not rush to provide the answers. Challenge their learning to encourage resilience and patience, it is far better to work collaboratively towards a solution than to work alone. By encouraging global cultural awareness, making connections - for example, comparing their locality with the powerful images of flooding in Valencia, Spain - and pose questions:

how can we stop a flood and why do they happen? Encourage children to use real materials to investigate and have a go, reflecting as they try to find a solution. As the Characteristics of Effective Learning state under Creating and thinking critically, "children (must) have and develop their own ideas, make links between ideas, and develop strategies for doing things". As UNESCO (2014) states, children have more creativity than adults because "they are not yet fully aware of rigid logic and convergent views" as "they are divergent, open, inventive and playful, which are features of creativity." This is highlighted too through the EEF research on PSED, asking educators to support children to develop "their ability to collaborate, negotiate and solve problems with others." This is quality early childhood education, providing inclusive, creative and worthwhile pedagogical experiences for all (SDG 4 Quality Education).

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## Economic sustainability

## Diane Boyd

Whilst being reminded of the interconnection of all three pillars, how does economic sustainability look in early years management and pedagogy?

Management provides many opportunities to develop a more economical and moral attitude towards sustainability through choices that are made both professionally and personally. This could be simple choices such as encouraging both staff and parents to share cars or encourage walking to nursery, thereby reducing the setting's carbon footprint. Additionally, decisions regarding from where to source materials also impact upon all aspects of sustainability. Economically, do you, as a setting, choose local high street shops to support or large chain providers that deliver? By using local providers or shops, the nursery is clearly demonstrating a moral and sustainable approach, resonating with SDG 11 Sustainable Cities and Communities (UNESCO,2015). Choices of purchase also impact economically and environmentally, for example, does the nursery use disposable nappies or eco cleaning products? How do you, or the company you choose, dispose of your waste materials? As a management team, every decision you make can be researched to ensure it is a sustainable choice.

You could encourage the children to understand about waste choices (such as small compost waste bins for them to use) so their sustainable thinking is taken home and shared with their family and community. On neighbourhood walks, encourage children to reflect and ponder choices everyone makes and encourage children to question. For example, if children constantly notice litter on roadsides or their beach, what can they do? Who can they contact to make change possible?





Children engaged in a beach project (Boyd and Hirst, 2016) were mindful of the amount of debris on their beach and wanted to start a beach campaign involving local councillors, shop keepers and the community. Unfortunately, the educators in this instance were more concerned with phonics and not climate action, so the campaign the children planned never happened. The children had brainstormed together as a "community of learners" (Lave and Wenger, 1991) suggesting effective ways forward, such as writing to the council for additional bins and designing posters to stop adults littering. Children can be change makers if the adult supports their agency. Remember, every action (or non-action) taken in early childhood is a transformative opportunity to model and scaffold both with the child and their family. UNESCO (2017) highlight that education needs to provide children with skills for the 21st Century, opportunities for children to be critical, problem solve and make informed decisions about their world.

In another example in Wales, children articulated reasons why their school not only needed a certain number of bins, but where they were to be placed, and the staff listened and changed their practices to reflect the children's decisions (Boyd et al, 2025). This sustainable thinking and action started in the nursery, demonstrating that foundational values and attitudes are formed early, because by year 6 (aged 11), the children were all strong sustainable advocates of all three pillars. The school displays the Sustainable Development Goals both inside and outside, so children,

staff, parents and community are aware and engage in all aspects of sustainability.

Pedagogically, Siraj Blatchford et al (2010) highlighted that awareness of economic sustainability in early childhood is "extremely weak". However, the historical pioneers Froebel and Steiner were both clear advocates of young children engaging in economic practices.

Steiner championed the idea of economic sustainability through repairing, encouraging children to mend rather than throw away (Boyd, 2018). Steiner advocated engaging in handwork, arts and crafts, regenerative gardening and sustainable living through his biodynamic programme in 1924, which resonates with economic values of recycling, reusing, regenerating and avoiding waste. Or as Avison and Rawson (2016:239) note, Steiner was developing a "foundation for grounded judgement and responsibility."

Froebel too through his kindergarten inspired children to grow fruit and vegetables from seeds, tending and caring for the produce before selling or donating to the needy outside in the village community (Boyd, 2018). Froebel later inspired McMillan (1919), who again emphasised the need for a sustainable and selfmotivated nurturing community of learners to do the same. Children as young as 3 and 4 can grow, nurture and sell their produce, giving them an understanding of economics from early childhood. At Discovery Childcare in Carlisle, the children are already economically aware through selling their produce in brown (sustainable) bags outside the nursery to parents and the community or donating unused food to the local food bank, resonating with Froebel's original idea of an inclusive social community (SDG 2 Zero Poverty and SDG10 Reduced Inequalities). The children nurture and are responsible for their chosen produce from beginning to end. This highlights not just economic sustainability but resonates with SDG 8 Decent Work and Economic Growth and SDG 11 Sustainable Cities and Communities (UNESCO, 2015).



Credit: Tracie Dowling: Children watering

The seven areas of learning of the EYFS (DfE, 2024) can be interwoven and interconnected through playful sustainable pedagogies, for example, Personal, Social and Emotional Development is one of the three prime areas of the EYFS (DfE,2024:9) promoting "children to lead healthy and happy lives [which] is fundamental to their cognitive development," which clearly aligns with the Sustainable Development Goal 3 (SDG) (Good Health and Wellbeing) (UNECO 2015). Happy, healthy children have an appetite for life and are constantly questioning their world as they see and engage with it. Early years pioneer Maria Montessori called this the "absorbent stage", when their minds and bodies soak up encounters, through skilful quality early years education (SDG 4 Quality Education) extending their thinking.

Research conducted into Early Numeracy Approaches by the Education Endowment Foundation (EEF) reminds practitioners that there is a strong correlation between excellent social and emotional learning strategies through a quality environment, having a positive effect on both early literacy and numeracy. In England, it is a statutory requirement that practitioners offer "a strong grounding in number (which) is essential so that all children develop the necessary building blocks to excel mathematically". The EYFS (DfE,2024 :10) recognises the need for a holistic approach that does not solely focus on number operations but for "rich opportunities" which

will "develop their spatial reasoning skills across all areas of mathematics." This holistic and integrated approach to mathematics resonates with the EEF research Improving Mathematics in the Early Years and KS1 (n.d.) which suggests there are missed opportunities to embed natural and organic teaching of mathematics through other playful experiences. EEF research on Early Numeracy Approaches notes that practitioners must have the knowledge of mathematics, how children develop holistically and the developmental trajectories in mathematics to provide quality numeric experiences. Reading texts together with children as provocations about number, patterns or money is another simple but effective approach to both economics and mathematics, but remember to always follow the children's thinking and line of interest as you reflect on their narrative. Walking through the neighbourhood noticing patterns environmentally such as the shapes of windows, numbers on buses or repeating patterns of bricks provide natural ways to embed early numeracy organically. Observing different trade practices on your walks too help children understand occupations and businesses.

Research shows that economic sustainability is viewed as the least understood pillar with schools focusing more on the Environmental pillar (Siraj Blatchford et al, 2010). Interestingly Roedder (1999:187) stated that children's knowledge of money and economics is rarely understood "beyond a surface level". So, how as an early years practitioner can you support children's understanding of money and help them to develop a strong economic foundation?

The Good Childhood Report (The Children's Society, 2023) notes an increasing concern with older children today regarding their understanding of money, especially regarding rising prices and, from a socio-cultural sustainable perspective, the addition of food banks. Practitioners can support young children to develop understanding about money and develop empathy towards those who are less fortunate and give them a stronger foundation, preparing them for later life.

An early provocation into introducing money is the "Little Economics" set. The text provides a starting point for educators to share with young children regarding the importance of change, credit, and other aspects of money. Link these monetary conversations to children's realworld experiences and bring in euros and pounds to discuss differences and similarities. For example, which currency uses paper money or coins? This is both early literacy and numeracy when considering the mathematical language of size, shape, weight and value, alongside descriptive language. Settings can provide experiences in role play of mathematics through sorting and classifying, looking for numbers on the coins or notes and discussing what they may mean. This introduces monetary value as well as time through dates. Highlight with the children that size does not always mean the "most" money to spend, which is a similar mathematical enquiry when considering heavy/light. Does the largest item mean this is the heaviest? Is the smallest item the lightest? These are provocations to reflect upon with your children in your setting. You can also draw upon early literacy provocations that include text to supplement children's thinking and further consolidate understanding of it in practice, for example, the lovely Ladybird Moneybunny series which includes Earn it!

Children rarely see, let alone use, real money in their everyday lives as they usually watch their parents go into a supermarket and, with the swipe of a little plastic card, wheel out a trolley of food. Children must have opportunities to use money and have conversations about money. The more you use the language of money with the children, the more familiar this becomes, especially if you share this incentive with the parents and encourage them to use real money out shopping too! The EYFS (DfE,2024) promotes positive relationships and partnerships. This includes going beyond the gates of your setting and taking your children out into the neighbourhood, resonating with SDG 11 Sustainable Cities and Communities (UNESCO,2015).

Kate, the practitioner at Everton Nursery, took the children to the DIY shop to buy materials for their garden project, which helped the children to start to understand the concept of trade. Children must recognise that money is used as a trade, as an exchange for goods. The children each had a shopping list and knew what they were going to buy with their £5-pound note. When they had identified the goods needed from their list, they pushed their trolley to the till. Again, this provided another mathematical experience of weight the empty trolley was light and easy to push, whereas when the goods were added, the trolley was now more difficult to push. These organic early experiences provide opportunities for

quality numerical discussions and highlight the holistic nature of early childhood. The children were given change and a receipt. A receipt is also a provocation too - compare a credit card receipt with a monetary receipt with change. Research suggests that from 7 years old children can understand that change is returned by the shopkeeper, which can be challenged through such experiences. However, Brocas and Carrillo (2020:19) maintain that children as young as 5 years old can "understand the value of commodities as a basic medium of exchange" through quality agentic practice.







Helping children to become aware of money used as an exchange for goods could also be in general conversations around birthday money, but like the example above, try to incorporate opportunities in your setting for understanding this monetary transaction in practice. Take the children down the high street to purchase snack fruit or organise cake or craft stalls that the children sell from and see the actual monetary process in action. In one school the children have their own enterprise, being responsible for all aspects of the business economically. They designed the labels, products and sold them to their community at fairs resonating again with Froebel's idea of economic sustainability. The nursery children designed and sold name plaques, and the reception children made and sold vegan dandelion honey. During all economic exchanges real money was used and afterwards most importantly, the children had agency in making decisions about spending the profits. This research (Boyd et al, 2025) challenges the literature which suggests that children aged 7 years are only just beginning to understand that money can be exchanged for goods (Berti and Bombi, 1988).

If children can design and sell products, they should also be encouraged to be "environmentally marketplace literate", recognising key brand names. When out shopping with the children, encourage them to read familiar brand labels, such as baked beans, and eventually the children will start to recognise and read other labels. This can also extend to different fresh ingredients such as types of potato or apple. The more terminology you use with children the more economically literate they will become.

Extending the high street into your setting in the role play area and recreating familiar shops they have visited on walks in the community will support their awareness of how words and images have meaning. Additionally, this economic awareness could be further developed from both early literacy and numeracy perspective, with opportunities to sort and classify labels from tins and boxes, highlighting the importance of providing quality experiences, resonating with SDG 4 Quality Education (UNESCO,2015). Culturally when visiting the high street on your neighbourhood walks, there could be a vibrant mix of shops selling a range of new products to see and buy. When visiting these shops children will not only see labels which may have different printed languages on them but new products to smell and try, and always to use real money, strengthening both economic awareness and positive relationships in the community too.

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## Highfield Nursery School: a journey to sustainability

## Ruth Coleman and Lil Newton

When deciding to become a sustainable nursery, we found our attempts challenging. In the early days of our journey, the answer often seemed to be "no!": no, you can't install solar panels as the roof is not strong enough, or, how will you prevent rats if a composting system was developed?

As nursery staff we realised that if we wanted to start this journey to a more sustainable footprint, three areas were important:

- Start small
- The children and their families must be an integral part of all that we do
- We needed to support the Highfield team to learn alongside the children.

Barriers can be everywhere but to explore your passion is important, as driving behavioural change is hard. We recognised that through changing behaviours, significant climate action can happen. Raising awareness through sharing knowledge with children and their parents (and of course taking the staff team with you) is critical.

## Litter and recycling

When a boy came in commenting unhappily about the amount of litter on the path at the side of the nursery each morning, we chatted about what we could do when we didn't know who else used the path. A suggestion was that he draw a picture and we made this into a sign with his words on, asking people who used the path to keep the path clean of litter. I don't think over the next 12 years I have ever picked up a piece of litter along that path. This is SDG 13 in action: children making decisions and taking action to improve their environment and learning that they can have a voice and make positive change with the help of adults who listen to them.

We decided to share information on litter and recycling with all the children of the nursery. Although recycling is quite a small part of national climate emissions this is an important aspect for young children to consider as they are involved in thinking about the impact of daily choices. Starting with rubbish and recycling is a practical way young



children can be actively involved. Children can make active choices and independent decisions from their learning. We squeezed bins into each learning area so that items could be sorted at source and worked with the council to increase our recycling bins. We had sessions with the children choosing into which bin to put different items and this led to knowledge of plastics, with number and signs telling us their type and recyclability.

Learning then developed about materials and their properties, such as the challenge to squash a plastic bottle with the lid on. Children helped to wash nursery cups and plates and they talked about the bins they had at home. The children began to help their parents with bin duty, sharing their new knowledge of materials and how long plastic takes to break down with their parents. We organised staff training at the local recycling centre and the council attended our family days to share information with parents. The snack table now has a small brown bin which leads to discussions about waste during snack time. Children now take the bin out to the composter and worm bin at the end of each day.

A book to help with this was *Five Little Men in a Flying Saucer* (Dan Crisp, 2005). Over the years this book and song has sparked many rich observations from children about human actions and the planet, and many comments and requests for action from the children. A letter to Prime Minister, Theresa May at the time showed children how they can take direct action and have a voice at the highest levels. **This is linked to SDG 15: Life on Land.** 

G STREET 26 February 2019 THE PRIME MINISTE Dar Chiller Thank you for your letter of 11 December 2018 which your teacher kindly sent to me. I really enjoyed reading your thoughts about how we should protect our environment. As Prime Minister, I am trying hard to protect the environment so that children like you can grow up in a safer world with clean air, water and lots of trees and I really liked some of the ideas you have all come up with, like how more people should use the bus or walk, and how we should all use the recycling bins. I agree that if we all make small changes, we can help to change the world. Thank you, once again, for your letter. Your shouly

## What is a garden?

Our garden had a large tarmac paved area, a bright climbing frame structure, a square of grass and a large sand area, mature trees edged the garden. This felt like a municipal play area, not a garden as I recalled as a child, not what we wanted our young children to experience.

We wanted:

- a secret rich place to play with hiding places, full of scents and sights to delight and stimulate curiosity.
- a place of diversity for wildlife, to learn about nature and be involved in practical learning about growing and composting, a place to be quiet.

The immediate job was to involve the children in more growing in the garden and redesigning the garden to be as environmentally friendly as possible. A large display of photographs of flowers, vegetable raised beds, arches, places to hide was put up in the garden and as the children rode their bikes and played they looked at the photographs. Adults engaged the children in conversation about what they liked and ideas they had. Everyone wanted a tree house as well as a pond and a willow tunnel.

Percy the Park Keeper's After the Storm (Butterworth, 1992) helped with tree house designs. Most of the children drew their ideas and explained them to an interested adult. The final creation was more like a stage, quite simple and just off the ground, but the importance of involving the children in the process was key. The outdoor wooden structure was adaptable for the children to use as they wanted.

Parents helped make raised beds, and barrowing the soil from the carpark was a joint community effort. We had family days to make bird boxes, hedgehog houses, and regular autumn afternoon fun gathering leaves in wheelbarrows and mulching up our newly planted additions, filling the composter and leaf mould bin. This is SDG 10: Reduced inequalities, all children, families and staff have access to our garden and a shared investment in the upkeep and development.

We invited a willow-making expert to come in and create a giant dragon as part of one of our family days so parents could be active too. A favourite story of the children has always been *George and the Dragon* (Wormell, 2002).

Apple trees were planted along a fence, and tyres planted up with anticat plants like lavender were added to the large sand area. As *Peter Rabbit* (Potter, 1901) is part of our story curriculum, rows of vegetables were planted to be discovered by children and a scarecrow was always created in the autumn near the artefacts of the old water can, sieve and terracotta pots with flowering geraniums, waiting for Mr McGregor to need them in his tasks.

A pond was also added in a small area at the back of the garden that could be fenced but had access for a whole group. The pond had a strong covered steel mesh over the water so that the children would not have to be held back from the edge, and pond dipping adults could lie on the mesh too! At every family day since, to see the family fun that happens in this area where families spend almost the entire time engrossed in dipping a yogurt pot tied with string into the water and bringing out items to be intrigued by, has never failed to reassure that adding the pond was a great idea; not to mention the increased biodiversity this has added to the garden area.

We planted moth-friendly and scented plants and have digging and growing areas. Signs on each bed with helpful information provided opportunities for writing and drawing and we realised we needed "edible" and "inedible" signs to help everyone recognise the plants that were good for stews and soups and those that were for looking at but not for eating.

## What were we learning?

We simply needed to listen and then find opportunities to extend, enhance and deepen the children's interests and therefore, learning through books and exploring our outdoors.

#### Story curriculum

A decision is very early on that stories would form the bedrock of all we teach and share with the children enabled us to develop our Story Curriculum. A selection of stories that followed the seasons and had nature connection at the heart were selected. Alongside this, the children were taught that at Highfield Nursery, we learn to care for ourselves, to care for each other and to care for the world.

#### Nature connection

During the autumn term, the children are introduced to Peter Rabbit, the little rabbit who breaks into Mr McGregor's garden to steal vegetables. This is an opportunity for our class community to discover Peter's connection with nature and to experience this for ourselves. Through active drama, we all felt Peter's fear as he realised he is lost and cannot find his way home, the moment of silence and stillness as he hides in the watering can and the joyful elation as he spots the gate and sprints to the safety of his home. The class lead takes the children on an emotional journey where the children all feel the emotions of Peter and his connection to nature, in the safety of their classroom and back to the safety of the group at the end of the story.

We realised one key feature of our nature connection curriculum was to "bring the outside in". Every day and all of the time there are opportunities for children to connect with and develop their language through questioning, developing curiosity and knowledge in the indoor environment as well as when they are outside. Hence natural displays inside, and the role play area, such as Peter's burrow, was made with real leaves on the floor, and real leaves as part of the Diwali forest journey. Real natural resources (apples, herbs, pastry, conkers) were used for cooking and



chopping in the home corner every day and In Mrs Rabbit's Kitchen role play area. Dead flower heads would be left to be explored and observed on the display table with magnifying glasses close by and also every autumn there were over-large marrows and pumpkins to carry and spoons to dig out the seeds. Ears of corn provided opportunities to winnow, sieve and grind using tools provided from the kitchen and this led to stories of The Little Red Hen (Dodge, 1918), playing and making windmills, bread making, which in turn led back to Mrs Rabbit and her visit to the bakers, cardinal and ordinal number activities, singing the Five Currant Bun songs, using money to pay during visits to the local bakers too. Over the year children would learn the recipe to make the bread by heart as this became a regular activity.

Further stories, following the changing seasons of the year enabled children to learn about other aspects of sustainability, the natural world and habitats and climate change. A sense of fairness comes through each story and this is something our young children readily identified with.

## The laminator

The dismay to hear that a laminated pouch takes over 200 years to decompose meant action was needed. When asked how many laminated pouches we used, the Office Manager's answer was "a lot!" We used them for the children's photographs and names on their coat pegs, for displays in the corridor, for outdoor displays, to make lotto games for our speech and language groups, support cards on lanyards, the list went on and on, with each practitioner giving a sound reason why they must laminate. But still ... 200 years!

The easy decision was to remove the laminator. The trickier one was to find substitutes for the laminator. Staff were set the challenge to find a different, more sustainable solution to each problem and they did. We now use wooden log slices for naming each child's peg and we have waterproof outdoor display boards in the garden. We are designing our own lanyard support cards and had bespoke sets made. Did the lotto game need laminating? No, we can still play without lamination and print again if required.

The office team also cancelled all paper brochures that were delivered to the school. If we want to look or order, we now do this online and have dramatically reduced the amount we receive in the post that went straight into the bin.

#### Sustainable lunches

When looking at the contents of packed lunch boxes, the worry of what our children were eating as well as the food miles and the plastic packaging all concerned the team. However, we only had a small staff kitchen and over 100 children to feed! This did not stop us; we employed a cook and dish washer and started writing a menu. The food needed to be locally sourced, nutritious, healthy and cooked from scratch each day.

We sourced the fish from a local fishmonger, meat from the local butcher and cheese from the local cheese supplier. All fruit and vegetables came from the local greengrocers who supplied the nursery snacks. This just left the dry goods, delivered from our very local supermarket. The children now eat a two-course hot meal each day and we no longer offer a packed lunch option.

We have also written a cook book for parents to recreate the meals we have at school. Fish pie is a particular favourite, along with courgette pinwheels this term! **SDG 2: Zero Hunger**. Children and families making positive contributions to menu ideas and teaching children to anticipate that food tastes good before trying.

As we refined the offer over the last few years, we have replaced beef with turkey, as turkey has a much lower carbon footprint than beef. We also have vegan and vegetarian days for all children, as well as catering for all dietary requirements of the children in nursery. We were awarded the Food for Life Early Years award from the Soil Association in 2017 and haven't looked back.

#### **Climate Action Plan**

With the need to name a sustainability lead and write a Climate Action Plan (CAP) for the nursery (DfE, 2023) this needed to be an holistic approach that includes the whole centre. This began with a whole school training day to discuss nature connection, soil literacy and then what our focus should be on for our Climate Action Plan, personalised to our nursery. Each class documented what they thought was working well and what needed more work and finally, what our focus should be for the next year. Each class also nominated a sustainability lead for their class.

## Where are we now? 2025

Our Climate Action Plan is designed under the Three Pillars of Sustainability – Economic, Social and Environmental. Each section has a target, decided from the main feedback and themes from our training day. You can see examples of Climate Action Plans at the Early Years Sustainable Hub (Everton NSFC, n.d.) as well as curriculum ideas, stories linked to each sustainable development goal and blogs and vlogs.

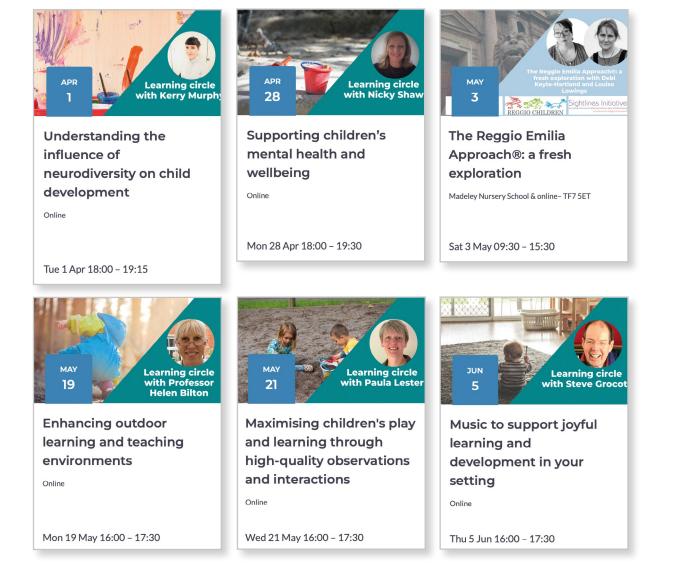
If you would like to submit a case study to the Sustainable Hub, please send your information to: sphubnw@ evertoncentre.liverpool.sch.uk

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