Utilising Place based learning through local contexts to develop agents of change in Early Childhood Education for Sustainability.

Diane Boyd, Liverpool John Moores University, School of Education

Abstract

The aim was to consider how young children could develop an education for sustainable mind-set, through place-based learning within a local context. This research built upon the development of an Education for sustainable (ESD) framework (Boyd, Hirst and McNeill 2017) which recognised early childhood as a transformative phase (Davis and Elliott, 2014; Boyd and Hirst, 2016). The place based research focused upon Dewey's theory of experiential learning and by engaging in offsite longitudinal community based projects, where young children become familiar with their own locality. This resonated with a concentric approach (Tickell 2011,) where children are submerged in an ever-changing natural environment and the Forest School Philosophy, with the emphasis upon regular visits conducted over an extended period. This allows children to become familiar with their environment, developing a sense of ownership, (Welsh Assembly 2009) and an ecological self (Tilbury 1994). Over a period of a year children and adults in different and diverse settings experienced opportunities for place based learning to develop their ESD perspectives. Observations focused upon children and adults, how they started to become aware of critical issues and related them to their own reality. The research received ethical approval by LJMU and all involved chose to take part and could withdraw at any time.

Keywords

Place based, Pedagogical spaces, Education sustainable development, critical pedagogy, Agentic.

Introduction

The development and subsequent trailing of an Early Childhood Education for Sustainability framework (ECEfS Framework, Boyd, Hirst and McNeill 2016) in various early childhood settings and situations, represented an opportunity to remind practitioners of key aspects of practice that are topical. Within the ECEfS framework (2016) it highlighted the three pillars of sustainability- economic, environmental and social/cultural, (Brundtland 1987) the English Early Years Foundation Stage (EYFS DfE 2017) with explicit links to fundamental British values, the now ten themes of the English Eco school programme and contextualised place based learning. Nationally within England, Early childhood practitioners are familiar with the EYFS (DfE 2017) as it is a statutory requirement for all providers (0-5 years). Fundamental British values became an explicit requirement in the OFSTED inspections, however, there seems to be less confidence about how these "values" looked in practice. Interestingly, the three pillars of sustainable development recognise the same intrinsic values that underpin the fundamental British values.

Place within Early Childhood

Historically, early childhood has always been situated within "a place", with different terminologies used for example, nursery, pre-school, kindergarten but always with the notion that this "place" was a safe, secure and enriched environment. Rousseau portrayed children as innocent and therefore in need of protection, whilst Pestalozzi also advocated the importance of an inclusive, secure and loving base for children in a natural outdoor environment (Joyce 2012). These are still the foundations of early childhood today in terms of a supportive enabling environment, with the (EYFS) (DfE 2017, 5) requiring children to be "healthy and safe." Morgan and Waite (2018 52) highlight early childhood should provide shelter and a "safe place from which to explore and play". Joyce (2012) argued that another strong feature of a childhood place was that it should be natural, unhurried and happy. However, Dahlberg et al (1999) suggested this view of providing "shelter" paved the way for the dominant "protective" discourse prominent in early childhood today, highlighting this image of an innocent child needing "shelter from the corrupt surrounding world" and adults needing to facilitate an environment that will offer "protection, continuity and security" (Dahlberg et al 1999, 45).

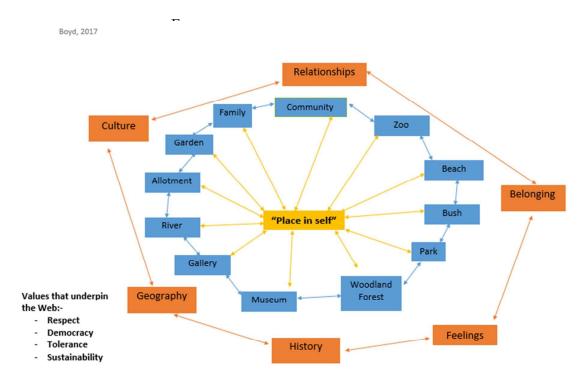
Froebel inspired by Pestalozzi's ideas, developed them further with the introduction of his "kindergarten". Liebschner(1992, 25) asserted that Froebel wanted to avoid the term "school" within this new "place" for early childhood, contrasting his play and activity "kindergarten" with school as a place for just "putting in" knowledge. Liebschner (1992) further stated the term "kindergarten" came to Froebel like "a revelation" uniting all of his key principles of his pedagogy, where trained knowledgeable adults could care, nurture and cultivate young children like a gardener would his seeds and plants, sensitively intervening when necessary (Wood and Attfield 2005). The term kindergarten is still widely accepted in Western Early Childhood as a designated "place" of nurturing for young children.

Early Childhood is situated in an ecological context resonating with the original ideas of Fröebel who emphasised the importance of the community that surrounded his kindergarten as a relational and supportive system, reflecting the theoretical framework of Bronfenbrenner's "nested system theory" (1977). Fröebel believed in the "unity of all

things" which Liebschner (2001,128) interpreted as meaning "where the child is firmly placed in the family setting, the family in the village, the village in the larger context of the country and finally mankind in general", each influencing each other. Pestalozzi also highlighted "spheres of influence in a child's life" (Joyce 2012, 41) which encompassed the child including parents, the family/neighbours and the natural world, both animal and inanimate, resonating with Davis "revisioning of children's rights" (2014,21). These biocentric and ecocentric rights, ensured children have deep connections with their world and universe as Davis (2015) maintained. Children should recognise that all "biological specieshave value and inherent rights to life", as well as understanding that these "rights" also extend to the Earth's "entire ecosystem" (Davis, 2015, 26). The English benchmark standards for Early Childhood Studies also reflect this, noting "an understanding of the ecology of early childhood from conception, and of children in an ecological context. Ecological context is understood as encompassing both time and geographical space, and encompassing the contexts of family and community, and children's and family services." (QAA) (2014, 6).

These ecological and biocentric views of early childhood reflect the principles of education for sustainability. Lang (2007, 6) positions education for sustainability (ESD) as transformative, noting the focus "on the interactions between people, and how these interrelationships affect the integrity of the environment and its functioning." Davis (2015, 18) suggests it "offers a vision of education that seeks to empower" families and communities to act. Gray and MacBlain (2015, 124) drew further parallels with Bronfenbrenner's proposed two way process of "bi-directional influences" which emphasised that although the child is influenced by culture, actions, family and setting, the child also influences the family and setting too, highlighting this time of possibility and transformation, as these "bi-directional influences" are relational. Relationships between the child and the community are an intrinsic part of the ECEfS framework

(Boyd, Hirst and McNeill 2017) prompting practitioners to utilise their locality to enrich the experiences, making connections. This relationship is evident in the ECEfS framework through a contextual web of interconnectedness of place in self, centring the child within their locality. Waite (2013, 415) however cautions that this is not always an easy process stating "conceptualisation of place itself is highly contested."



"Contextual Interconnected Web"

W

a

Morgan and Waite (2018, 52) suggests that when a child is sheltered within their safe place there is a degree of "nesting" or "akin to snuggling" which translates into a "settling into one's existence as a participant in the world". Corsaro (1997) opined that children are constantly interacting with their world and "actively interpreting their cultural practices" (Gray and MacBlain 2012, 128). This "significance of place and community in shaping human identity

and subjectivity, (McInerney, Smyth and Down 2011, 5) advocates for a certain type of practice, as Ärlemalam-Hagsér and Pramling Samuelsson (2018, 14) argue for "meaningmaking" as this will offer opportunities for agentic practices and for children to "explore cultural domination, identity, difference and diversity" resonating with the views of Heft (2010). The exploration of critical themes around culture must always be considered sensitively. Cunningham (1995) extended this notion stating that as foundational qualities are developed in early childhood, there was then a perceived hope of redemption for adults and ultimately society. Waite (2013, 416) however stresses that this is reliant upon the adult partaking in this action, as she states "this affordance is frequently complicated by adults alternative cultural overlays." The importance of drawing upon and embracing cultural diversity and significance to their locality is stressed by Lewicka (2005), who opines that cultural capital has firm links with emotional attachment to place and heritage, and the roots which are deeply embedded into the community. Casey (2001, 684) argues passionately that there is and must be a deep connection between place and self, saying "there is no place without self and no self without place" resonating with figure one, the contextual interconnected web. Early Childhood must challenge the notion of "the deeply distracted self" which is "correlated with the disarray of place", Casey (2001, 684) reflecting what Heidegger (1962) calls the "deficient mode". The contextual interconnected web allows early childhood practitioners to draw upon the ECEfS framework (Boyd, Hirst and McNeill, 452017) and emphasise the interconnection between self and place, which are mutually supportive.

The image of the child

The Kindergarten is recognised internationally as a physical "place" that early childhood is situated, however, literature has different perceived views of the child dominating both policy and discourse. Lesnik-Oberstein (1994) recognised the romantic view of early childhood as a time of innocence, emphasising children should not discuss or consider sensitive or complex issues, which Duhn (2012, 19) suggests continually encourages a passive view of the kindergarten, "where innocent children grow and shape" whilst Malone (2007) notes that children today are "bubble-wrapped" by parents and society, shielded from sensitive issues. Elliott and McCrea (2016) argue that by romantising childhood in such a way consolidates a deficit view of the child in need of protection rather than one of

rich potential. This "bubble wrapping" (Malone, 2007) could potentially lead to Montessori's "devalued" child, which she articulated led to weak adults or forgotten citizens who do not have the capacity to challenge or question (Anthony, 2007) and resonates with Cunningham's (1995) concern for the redemption for adults. Pramling Samuelsson and Kaga (2008, 11) see "the child as a rights holder, who is an active participant and has his or her contribution to make to society's present and future, and not an invisible, marginal worthless being." Willan (2017, 194) argues that children are "social actors with agency and power to define themselves," whilst Mayall (2002) notes a possible tension, suggesting that adults may be alarmed by children having rights, threatened by the possible challenge to traditional hierarchy within early childhood. In contrast, Nsamenang (2004) suggests other cultures believe that collective rights of the community should come before individual rights, resonating with Gabriel (2010) who highlights children's collective obligations rather than rights.

Pramling Samuelsson and Kaga (2008, 4) remind practitioners that early childhood is "where the foundation for lifelong learning and development is laid" shaping views and values in line with Dodd -Nufrio (2011, 236) who cite that children should be an "architect of their own learning". This however, contrasts with the Office of the High Commissioner for Human Rights (2016, 4) who note that "children are particularly vulnerable, due to their evolving physical and mental development and status within society" reminding us again of the complexities and different cultural lens of childhood.

Critical pedagogy within place in early childhood

This "romantising" of early childhood McInerney, Smyth and Down (2011) believe, continually supports the dominant truth of history and place. Gruenewald and Smith (2007, xiii) aligns the values and principles of Education for Sustainable Development more towards political activism, labelling it "new localism" with a "strong political flavour". (McInerney, Smyth and Down)(2011, 5) urge practitioners to reflect a more "critical pedagogy of place" which suggests the kindergarten should offer a chance to utilise different cultural and political lens for dialogue and discussion. McInerney, Smyth and Down felt that it provided opportunities for discussions about the "environmental problems confronting humanity and oppressive social and economic factors that contribute to poverty, exploitation and oppression" (2011, 6) resonating with Gruenewald (2003, 3) who argued that early childhood has the potential to "challenge the assumptions, practices and outcomes which are taken for granted in dominant culture and in conventional education". Waite (2013, 419) however suggests that "place based learning" could potentially be thwarted if the "culturally dense place is at odds with the individual or local habitus and imported individual and social norms". Waite (2013) states that children from the dominant Western middle class, white backgrounds that correspond to educational institutions and embedded heritage, could be perceived to be at an advantage over children from sociodemographic backgrounds. Interestingly Fletcher (2017) opines the "perceived" disconnection from nature and place, "nature deficit disorder" (Louv, 2005), is specifically cultural rather than global. Packer (2017) argues for practice to embrace both biological dualism of ecological relationships and systemic reasoning to develop ecological thinking placing high expectations upon the adult. Gibson (2015) contests that all early childhood organisations should develop this culture of sustainability, as noted by Sergiovanni (2003, 17) advocating for an ethos which "provides the foundation for the development of social, intellectual, and other forms of human capital which then enriches the lifeworld itself." Theoretically, these ideas are linked to John Dewey's idea of "participative democracy" (1916) where children should have a "voice in shaping" (Berding 2016, 51) the community and institutions they are part of. This pedagogy reflected an immersion in experience and action which when teamed with the

shared vision of democracy afforded a "dual nature of transaction" (Berding 2016, 50). By linking to the three pillars of education for sustainability children would have connections to political and social notions of participation (Dewey 1916) which (Berding 2016, 51) suggests is a "way that children can acquire a place of their own in the community" through meaningful activities. Education for Sustainable Development aligns opportunities for practitioners to discuss sensitive and complex issues with children, families and the community in the democratic space as Dewey envisaged. Interestingly this politicism is reflected by the Office of the High Commissioner for Human Rights (2016, 5) as "the growing movement of child activists from around the world who have started providing their own responses by getting involved in nature conservation, developing ideas for sustainable lifestyles and raising their voice".

Moss, an advocate for quality early childhood, argues that practitioners must move away from this "protector discourse" stating that the early years are a time for the "unknown and the unknowable potentiality" (Moss 2017). Maria Montessori (2012, 52) stressed during the absorbent mind period (3-6 years) children should have no restrictions in the wider world, as it is the "why" period of development, stating "the only thing the absorbent mind needs is the life of the individual; give him life and an environment and he will absorb all that it is." Early childhood offers multiple ways of being within the environment, which contradicts the English Early Years Foundation Stage DfE 2017, 10) which requires children to "listen attentively" and "answer how and why questions," which will encourage a negative attitude towards critical pedagogical opportunities. Early childhood needs to "provoke" dialogue and "disrupt" the misconceptions and stereotypes to enable children to engage in critical discussions, for example, Hammond, Hesterman and Knaus (2015, 1) cite "wicked" problems as those that seem hard or difficult to resolve or when solutions "seem complex or even elusive". In their evaluations they recognised that young children are capable of discussing wealth and poverty. The ethos of the kindergarten must promote a critical pedagogical lens to disrupt these developing biases, to utilise all aspects of place, community and locality, to enhance critical thinking and open dialogue with children, parents and community, with leadership that provides opportunities that can and must support not restrain (Davis 2012). This notion of critical pedagogy could be a seen as a perceived challenge for the educator if the Government and policy makers see the child

only "as a unit of capital" (Moss 2017) and the kindergarten as a market driven "investment place" for the future. Duhn (2012, 27) argues that education for sustainability must disrupt or challenge this view of the unit capital child, suggesting policy and Government "focused on the economic discourse only" as the crucial component of early childhood education. The ECEfS framework (Boyd, Hirst, McNeill 2016) offers early childhood such an opportunity to open up possibilities, meaning making and challenge stereotyping and bias.

Connections with place

Globalisation is an increasingly common word within education for sustainability. John Siraj-Blatchford (2008) considers migration between continents and ethnic diversity are products of it and suggests that globalisation has both positive and negative aspects. Winter (2013, 534) negatively reflected that globalisation was "liquifying existing social structures and detaching people from place" whereas Siraj-Blatchford (2008) suggests the world has opened up to new dialogues and become more transparent, with a clear emphasis upon environmental concerns, rights and protection. Chomsky (2004) suggested however, that large corporations have continued to build upon their imperialist and colonial domination to advance their own wealth, with little regard for the minority countries that are supplying their labour. Siraj-Blatchford (2008, 17) further articulates that there are concerns about this "cultural imperialism" with the advent of the internet, as there is greater dominance of early childhood materials, policies, reports and practices written in English, therefore ensuring the English language is seen as the "new lingua franca" and therefore a perceived "truth". Moss (2017, 12) contests that democracy is an important part of sustainability and citizenship, and that early childhood should resist the dominant power of regulatory discourse which stifles them and instead "it is time for the resistance movement to envision alternative futures". Power is deemed as a truth, the dominant discourse that policy makers and Governments use freely and as a consequence that "truth is authoritative" MacNaugthon (2005, 23). These truths, which MacNaugthon (2005, 26) calls "officially sanctioned truths" become normalised into frameworks, policy, culture and heritage as a "regime of truth" (Foucault 1980). Tharoor (2017, 0:01) queries why in English education there is collective "historical amnesia" around the colonialism, concealing "truth" from children to question the "real awareness of the atrocities" (Tharoor 2017, 0:14). Tayler and Price (2016, 21) push early childhood educators to "search" for the real truth and to challenge the ideas of "fixed truths" and power unbalances. Utilising place offers such opportunities to challenge, question fixed truths about culture, heritage and meaning as Moss (2017) reminds early childhood educators that there are "no absolute truths, but different ways of telling stories." In the past Western ethics has tended to focus upon human life rather than all bioecological systems, and Paxton, Hakala and Hammell (2016, 145) noted that it has only become a recent Western "concern" to worry about the "moral worth" of other humans and non-humans. Ethically early childhood offers such opportunities to challenge diversity, bias and social justice as Wilson (n.d) suggests "many children are not taught much about ethics and honesty at home", whilst Nucci (2001) opines that it is through experiences and social interactions that children develop their own understanding of morals and empathy towards others. Winter (2013, 534) negatively noted that globalisation has destabilised and redefined "relationships between past and present," whilst Hoelschner and Alderman (2004, 347) maintain society is a "combination of rapid socialisation and a search for roots," acknowledging that memory has a crucial part to play in this unpicking of truth and identity. Hoelschner and Alderman (2004) argue that "memory and place are conjoined" resonating with Said (2000, 179) who stated that people look to give themselves a "coherent identity, a national narrative, a place in the world." Baldwin et al (2013, 9) suggests that places are "mirrored reflections of history, values, interests, power relations and meanings." Nora (1989) argued that memories are both physical and concrete places or "sites" such as museums, cathedrals, castles, parks or non – material "sites", such as festivals, celebrations and traditions. The conjoining of memory and place could be collectively remembered attitudes and values, but Nora (1989) stresses these must not be memories of a culture of "mass whiteness", resonating again with Chomsky's (2004) and Tharoor (2017) idea of colonialism and imperialism. This culture of dominance must be challenged, new values or attitudes developed and an ethically minded early childhood education for sustainability championed. Within the ECEfS framework (Boyd, Hirst and McNeill, 2016) there is an emphasis placed upon humanistic and ecological values rather than a link to radicalisation through British Fundamental Values (EYFS) (DfE 2017). It is imperative that both place and memory must connect communities and reflect not one dominant truth of history that to others could be seen as a constant reminder of control and dominance. Thomashow (1995, 3) identified the concept of an ecological identity as the "person's connection to the earth, their perception of the ecosystem and their direct experience of nature." Horvath (2016) stated that childhood memories of place are emotional memories, highlighting the emotional values as a concept associated with place and memory, contrasting with a childhood of virtual places which disconnects and desensitises. Newell (2015, 14) however, suggests that these memories of place and experience "are now affected by economic development" and these "special places" are being changed or eroded. Lyle (n.d, 11) calls this connection being "soulfully connected", which has connotations with the spiritual aspect of indigenous people referring to their connection to country. Lyle (n.d, 11) likens it to the connection that "is born of the same irreducible chemistry that leads people to fall in love". This deep connection ensures an empathy for the planet, for others, both human and non –human and is born out of a critical pedagogy of place, "it restores hope".

Methodology

The research underpinning the ECEfS framework (Boyd, Hirst and McNeill 2016) represents a fluid and rhizomatic way of being and becoming, as it constantly moves depending upon the ideas and actions. The research embraces Dewey's notion of a dualism of both action and knowledge merging together, as "being in a flux, constantly changing and contextually situated" (Sellers 2013, 33). This qualitative research embraces different theoretical ideas and invites educators to consider "nomadic" thinking (Deleuze and Guatarri 1987) and to "blur" (Sellers 2013, 33) the lines of content and child. This fluidity and blurring allows opportunities for new ways of thinking and new meanings to emerge.

Deleuze and Guatarri (1987) likens this to a rhizomatic way of becoming, "ceaseless interrelational movements" (Sellers 2013, 11) metaphorically resonating with Meadows (2000) who notes the complexity of interacting root systems under a forest and Moore-Lappe (2007) who describes roots like mats of cooperation, recognising theoretically both the biocentric and ecocentric rights perceptive of Davis (2014).

Young children engaging with locally relevant community and environmental driven initiatives is becoming more prevalent. Research in the field of early childhood education for sustainability (Davis & Elliott 2014) is gaining in momentum. These varied case studies

offer a range of interesting geographical, pedagogical and philosophical opportunities for educators to consider, as innovative

ways to approach work *with* not for, young children demonstrating their rich capabilities. Ethically researching with young children the child's carer or parent can be give 'consent' to a child's involvement in a project. This was the case in this action research. However, Coady (2001:66) notes the importance of a child giving assent themselves, in line with the UNCRC and all children in these case studies were asked to participate voluntarily.

All settings are anonymous to maintain confidentiality in accordance with ethics approvals for the respective case studies. This research took place over a year when the researcher utilised ethnographic methods of observations, field notes, questionnaires and semi-structured interviews to gather information around the context of place based learning in early childhood. By utilising a diverse range of data collection supported triangulation of the process by offering different perspectives and vantage points.

Within ECEfS (Boyd, Hirst and McNeill 2016) there is clear reference to this concept of "action based" place based learning as crucial pedagogical practice. It also reiterates the importance of children connecting and wallowing over a prolonged period in their locality. In some cases the children visited the places regularly every week either all year long or over a period of time, (Bush, beach). Other settings were physically situated within the "place" full time all day and every week (Allotment, zoo, farm). The majority of the case studies reflected a traditional Forest School Philosophy of a "long term process with frequent and regular sessions" (Knight 2013, 5) which provided multiple opportunities to recognise similarities and differences, to utilise the correct terminology and to develop or re-establish connections to place. The philosophy of Dewey (1943) further embraced this idea of action based learning, interweaving the what (content) and the how (the action) together, woven inescapably.

There were some perceived barriers of practicality, such as staff ratios, staff knowledge and attitudes to embed the place based learning approach deeply, which the findings reflected. Additionally, the supporting adults tended, but not in all cases, to have a diverse range of experiences and qualifications that actively cultivated the children's curiosity and investigations of their specific place which affected upon the findings. There was an expectation that wherever the "place" was situated, the surrounding community was also

part of the contextual interconnecting web of place in self (Figure 1) to be used explicitly too.

Thematic analysis

The research utilised an interpretivist approach to evaluate the research findings that emerged organically and naturally out of the process. The researcher through critical reflection and "sound thinking" (MacNaughton, 2009) revealed several coding frames in the evaluations from both the observations and the open ended interviews which included an awareness of and interacting with seasonal rhythms, the quality of the supporting adult, the notion of an ecological identity and the emergence of political activism through critical thinking. 'Sound thinking' as a basis of critical theory provided the researcher with opportunities to highlight possible avenues of education for sustainability in practice.

The research was conducted in several locations over a period of a year and there was no analysis of any of the data until after all the visits were completed. MacNaughton and Hughes (2009, 186) suggest that thematic analysis in the context of this research study could provide a "big picture" or overview of place based learning in early childhood.

The findings are supported by a mixture of quotations (in italics) from both the children and the supporting adults within the context thus creating a strong foundation for the conclusion. As this research will support the underpinning of the ECEfS Framework (Boyd, Hirst and McNeill 2016) there is a strong indication it will feed back directly into practice, a crucial element of the cycle of enquiry in action research. (Denscombe 2014)

Awareness of Seasonal rhythms and memories through interacting in their world

In the majority of nurseries there was a growing awareness and love for the place they were attached to, resonating with the ideas of Fröebel as the kindergarten as a safe emotionally secure place and the interconnecting web (Boyd, et al, 2016). However, it was apparent in some cases of an awareness or relational attachment emerging to both animate and non-animate aspects of their community resonating with Davis (2014) revisioning of rights. These attachments ranged from sandstone walls, bees, glimpses of giraffes through the window and a feeling of spiritual connection with the earth itself.

Attachment and relational learning also tends to link to memories of these and previous experiences too. Parents and practitioners reflected that they tended to choose a nursery based upon their own experiences or childhood, as they hoped to recreate childhood memories for their own children living in such a virtual society today. They acknowledged deep memories of particular places, of living things and sensorial learning, hoping to choose a place that would provide similar opportunities for their children .For example -

"I grew up in the country side and I wanted them to enjoy the same experiences I had, without the restrictions that society places on them now." (Beach Parent)

The forest school philosophy advocates for a constant and consistent relationship with place as children cannot form attachments with nature if they are not truly immersed in it and because of this emersion, learn to understand of how biodiversity works and how they could help the environment. For example,

"Here we aim to provide first hand experiences of traditional, timeless activities and having an allotment fits within this well." (Allotment Practitioner)

Steiner advocated for an early childhood pedagogy that reflected the rhythms of seasons and as a consequence children notice casual changes and aspects of biodiversity, as Avison and Rawson (2016, 239) noted that everything has a "direct and moral relationship to the farm and garden". This is apparent in the attitudes and behaviour of the children when discussing compost and understanding what it is. "It (the peels) turns into soil. The bugs eat it to turn it into soil." (5 year old).

Children are capable of recognising all 'biological species' and their value (Davis, 2015) as they develop a consistent and regular relationship with their place, with an emphasis upon tranquillity and peace through an unhurried approach, rather as a learning outcome. These regular visits will develop not only relational attachments, but an emerging awareness of scientific or seasonal changes that support education for sustainability as without them, there cannot be care or empathy for the environment.

"This is our place of belonging". (Bush Practitioner)

Role of the Adult

Rather than the practitioner focusing on a 'needs' approach and with an aim of protection rather than empowerment, the UNESCO Sustainable Development Goal (SDG) 4 highlights the importance of "all learners having the knowledge and skills", to consistently develop through real life contexts. Practitioners need to feel confident to use their locality regularly and consistently with a co constructing approach. This opportunity for co-constructing as advocated by Malaguzzi was apparent at the end of the research project with a practitioner who had initially felt threatened by her perceived lack of knowledge now highlighting to children the importance of and the sensorial capacities of non-animate aspects of their environment.

"I never noticed that before- a real sandstone wall "(feeling it and running her hands over the contours) (Beach Practitioner.)

It is also essential that adults introduce the correct terminology and concepts rather than use language they consider appropriate or less sensitive. It also stresses the need for quality practitioners to scaffold and support their development, as Von Glasersfeld (1989, 14) said, it is key that the practitioners need to possess an "understanding of the child's understanding." This could be perceived as contradicting the passive aspects of a statutory framework in England (EYFS))(DfE, 2017) as adults choose how they frame concepts for children when they are capable of using and understanding terminologies, as well as complex or even sensitive topic. The transformative nature of Education for Sustainable Development will ensure a transfer of knowledge from children to families. For example, parents noted that children when visiting the zoo at the weekends with family and friends were; "Able to spurt out knowledge and information after soaking it up at nursery". (Zoo Parent)

Additionally, knowledgeable adults within the nursery and place were able to support children's understanding of their world. At the zoo, the language utilised reflected an ecological understanding of the supporting systems and biodiversity. At the Meerkat enclosure, the children used the terminology for a Meerkat noting he was "a sentry" whose purpose was "to watch out for dangers". When asked about these 'dangers' they easily articulated and demonstrated their knowledge recalling "snakes, black backed jackals and marshal Eagles" emphasising their understanding of the dangers the Meerkats face. It also

emphasised their developing awareness of life and possible death situations. Children do not need to be 'bubble wrapped' (Malone, 2007) but through both sensitivity and knowledge of the adult were starting to appreciate and understand these sensitive situations. The practitioner noted that by bringing them twice daily out into the zoo and to their focus animal (over 5 weeks) children learn "to notice and make connections," which was apparent with their conversations and developing knowledge. She further stated she wanted them "to get excited by animal behaviour and to understand it and recognise the varieties of life", reflecting an environmental attitude and ethos. This was then developed in the inside space with movement games and behaviour boxes (small world play) to consolidate the knowledge further. For example, the movement games reflected Meerkat "mob actions" stamping feet in a group to scare away snakes, going up high and stretching to reflect the "sentry Meerkats" and making alarm calls to recognise the "urgency of predators". This use of scientific vocabulary was understood by all of the very young children as a consequence of this active construct pedagogy. However, this quality of knowledge or coconstruction was not apparent in all cases observed as it appeared there was some reluctance for some adults to engage in developing their own understanding (and therefore the children's too) about the locality they were in.

For example, when asked about the egg colour from the chickens, one practitioner on the farm could not articulate an awareness of the breed of chicken or the colour egg they would produce. Significantly, rather than focusing on sustainability, health and safety policies seemed to dominate the ethos, limiting the lack of physical interaction with the animals.

The Nutbrown review (2012, 8) emphasised the importance of the adult in "enhancing the quality of young children's experiences" but this is dependent on the both 'quality' and 'skill 'of the practitioner using their locality and their confidence to try. It is also important how the practitioner 'sees' the child in their care, with the zoo practitioners seeing them as a strong protagonists as advocated in Reggio Emilia, rather than the deficit 'in need' child advocated by the farm. This view was apparent with some practitioners not truly recognising all children's potentials and abilities (Boyd and Hirst, 2017). Initially the adults stressed 'you won't get much out of them' (Beach practitioner) considering their ages of three /four, as a negative factor in participating effectively. They also highlighted to the researchers particular children they felt could offer appropriate answers 'ask A or B as they

are the only capable ones here'. (Beach practitioner) This attitude does not promote either creativity or critical thinking, but all practitioners need to recognise that all children can and should participate and be empowered as a result.

The development of an Ecological identity

Davis 2014) recognised that children are capable of understanding the concept of caring for themselves and others but this idea of empathy and otherness must reflect the true ethos of the setting, as without this the development of an ecological identity could be lost. This deeply connected ethos was very apparent at the zoo kindy. Practitioners revealed a:

Family community ethos which underpinned everything. This ethos means caring for the environment, each other. This empathy recognises we are all here together and for each other." (Zoo Practitioner)

This resonates with the importance of leadership in a setting as Gibson (2015, 73) reminds leaders and practitioners not to ignore "the critical issue of sustainability". The zoo setting placed a strong emphasis upon attachment, emotions and relationships. The zoo practitioners highlighted that by being embedded into "an openly public place" meant that children would always be surrounded by people reflecting difference. These differences "some are in wheelchairs, some with sticks" or it was "very busy, full on" and they have to learn to "navigate" around in a patient manner, allowing children to see "others" in a sympathetic light. This is reflected in how the children approach both animals and their peers in the setting in both their communication and attitude. The children had become part of the zoo and recognised how a truly inclusive and diverse environment works for all people and things. Additionally, by placing such a strong emphasis upon relationships parents reflected that it allowed children to go home able "to label their feelings" (Zoo parent) which them to consider new and alternative strategies of dealing with sensitive situations.

The zoo practitioner noted this as "otherness" as a core value underpinning the nursery, demonstrating true Education for Sustainable Development human and ecological values. This "otherness" was demonstrated by highlighting how they supported their children transitioning to the nursery from home in September. They recognised how emotional and difficult it was for the children, so the practitioners used Norbert the pygmy hippo to help in

this transition process. Wendy and Oliver (Pygmy hippos) had just given birth to Norbert in September and every day the children wanted to see how Norbert was coping and managing. The zoo practitioner noted "this was real for them" highlighting real experiential learning advocated by Dewey in his dualism of pedagogy (1934). The children noted both excitement (Hope he's ok!!) and unease (do you think he's still with his mummy?) as they anxiously approached the pen, demonstrating an awareness that transition for Norbert was an equally emotional experience, as it was for them .The zoo practitioner noted that the children could identify by watching consistently over time how "he (Norbert) moved away from Wendy and Oliver until he was able to "play" independently."

Practitioners used this daily occurrence to link to the children's own developing independence, but it highlighted the children's developing empathy and care for others, which Piaget had said children as young as 3 and 4 years old were not capable of doing.

An awareness and connection to country was very apparent in Australia within the bush kindy or "connection to country" as the bush practitioners advocated, as Kindergarten is a colonial word with links to dominant Western discourse resonating with Tharoor (2017). This connection has deep ecological and spiritual attachment to indigenous people and the use of 'country' resonated with both their avoidance of using 'white language' but also a sense of belonging. The spiritual connection was noted with the burning of red yew leaves on the fire before going "into country to cleanse the body" (Bush practitioner) and everyone participated willingly. There was also a reluctance to 'take' from the earth, with an aversion to any form of unnecessary damage, contrasting with aspects of the forest school pedagogy noted in England.

Siraj-Blatchford (2008, 10) notes the importance of everyone understanding indigenous knowledge, proclaiming everyone should possess it and if you "don't recognise your own indigenous knowledge, then it is highly unlikely that you will ever come to fully respect the indigenous knowledge of others." Indigenous knowledge is born from intergenerational narratives and stories about the locality or country, and by utilising local community spaces offers practitioners and children chances to generate new stories building upon old.

Emerging 'political' activism?

By allowing children time to reflect, to think about issues and to offer solutions to these problems allows them to start to develop political activism. Political activism ensures children ask questions, challenge adults with why questions and become the strong capable children that Loris Malaguzzi advocated within his Reggio Emilia approach to learning. Malaguzzi advocated that education is a political tool and schools democratic spaces to challenge and offer opportunities for questioning. Education for Sustainable Development is transformative, as it has the potential to make life long changes to attitudes and beliefs. Children start to recognise empathy, respect, tolerance and fairness when they develop an ecological identity and empathy for the whole world.

Children facing the complexities of the 21st century need creativity and criticality of thinking and opportunities to develop entrepreneurial mind-sets, a crucial aspect of Education for Sustainability. For children to be able to articulate ideas, pose questions, challenge adults thinking and sensitive issues, they need opportunities for this to emerge. Children's ethical rights to participate are clearly embedded within

Education for Sustainability and they must be active in being able to shape their own lives, this however, is again dependent upon the adult and ethos of their nursery. Hart (1997) recognised the importance of the adult to empower and facilitate, whilst Shier (2001) wanted children's place to be clearly embedded in decision-making potentialities. However, when the preschool children in conversations six months later a "need" for more beach bins to try and stop people "who did not care" dropping rubbish on the beach and the need to save paper in the setting to conserve trees around the world, it highlighted that children are capable of criticality and problem-solving. It also contradicted the adult's earlier passive expectations of some of the children's capabilities at the beach.

The adults were amazed at the children's ability to recall memories and experiences from the research six months earlier, reflecting their deep level learning and their developing empathy for their local place. The research impacted on both the children and adults in a positive way, for example, beach practitioners who had never really seen their locality clearly, noted now the "beautiful red sandstone walls" and the children were now able to identify different wading birds by the shapes of their beaks "to help them reach the worms buried in the sand". As Boyd (2018) noted, in the past adults were "passing by unseeing,"

but now their "new" eyes were opened to the potentials of their community and place. Additionally at the beach kindy the children became really upset when they realised that trees are the source of their paper, as they had not made this connection before. They seemed to understand the significance of how they need to conserve paper "and use both sides" and how they must try to encourage adults, parents and the community to "plant more trees" to ensure we always have them as "they are nice". They recognised that if they "used less paper" as a group they could start to make a small difference. The adults were amazed at the level of care and compassion about the trees and their local beach in this conversation six months after the research had been completed. Equally at the allotment the children were keen to help save the bees and plant wildflowers to help them, stating "we have to save the bee's coz they need our help" (4 year old) and that bees are important to us "we need them as much as they need us". Thus demonstrating the ability of young children to recognise problems and to offer solutions. One solution the children posed was to make banners to highlight to their parents the value and importance of bees environmentally. These two examples highlight that children are not only capable but are willing to voice their own thoughts on what are usually perceived as 'adult topics' and to take action.

Next steps

The UNESCO Global Education Monitoring report (2016) highlighted three key aspects that need addressing over the next fifteen years (2015-30) to support the successful implementation of sustainable development goals globally. Irina Bokovo, Director – General of UNESCO (2016, i) stressed the importance of adopting new approaches and challenging the "political will, the policies, the innovation" utilising "resources to buck this trend." The ECEfS framework (Boyd, Hirst and McNeill, 2016) constitutes a new resource, drawing together key elements of the English statutory framework, whilst highlighting for practitioners and leaders the importance of truly listening to the child, reflecting upon their practice and challenging bias through humanistic/ecological values ,whilst promoting critical place based learning. However practitioners need to understand how and why education for sustainability through place based learning is important but this is a challenge for all involved in early childhood, not just practitioners and leaders. Higher Education also needs to embed education for sustainability throughout every early childhood degree, as it

is explicitly noted in their benchmark standards. Their very principles reflect an "advocacy" approach within an "ecological context" (QAA) (2014, 8) crucially noting, that this context embraces "both time and geographical space and encompassing the contexts of family and community and the children's and family services." This is not a "new" approach but a "revisioning of old philosophical and pedagogical ideas" to move forward 21st century recognising and acting with a "sense of heightened urgency and with long-term into the commitment (UNESCO 2016, i). Everyone has a role to play in supporting both children and adults understanding of their local community.

References

Anthony, M. 2007. Perspectives on children's spiritual formation. Nashville: B and H Academic.

Ärlemalam-Hagsér, E and Pramling-Samuelsson, I. 2018. Historical Context and current challenges (p13-27) In *Early Childhood Education and Care for Sustainability* .*International Perspectives*. London: Routledge.

Avison, K and Rawson, M. 2016. The Tasks and Content of the Steiner-Waldorf Curriculum. Edinburgh: Floris Books

Baldwin, L., Block, T., Cooke, L., Crawford, I., Kim, N., Ratsoy, G., and Waldichuk, T. 2013.

Affective Teaching: The place of place in interdisciplinary teaching. *Transformative Dialogues: Teaching and Learning Journal*, 6(3), 1-20. 46.

Boyd, D, Hirst, H and McNeill, C. 2016. Early Childhood Education for Sustainable Framework 48

(ECEfS) Available at https://www.foundationyears.org.uk/2017/09/environmental-sustainability-resources/

Berding, J. 2016. John Dewey. In David, T Gooch, K and Powell, S. *The Routledge International*

Handbook of Philosophies and Theories of Early Childhood Education and Care. London: Routledge (p 49-56).

Bronfenbrenner, U. 1979. *The Ecology of Human Development*. Mass: Harvard University Press.

Brundtland, G. 1987. *Our Common Future: The World Commission on Environment and Development.* Oxford: Oxford University Press.

Coady, M.M. (2001) Ethics in Early Childhood ,In MacNaughton ,G.,Rolfe,S., and Siraj-Blatchford ,I. (eds) *Doing Early Childhood Research in International Perspectives on Theory and Practice*. Sydney: Unwin Press (p 64-72)

Chomsky, N. 2004. *Hegemony or Survival: America's quest for Global Domination* (The America Empire Project): Owl Books

Corsaro, W. 1997. *The Sociology of Childhood*. Thousand Oaks, CA: Pine Forge Press Dahlberg, G., Moss, P., and Pence, A.R. 1999. *Beyond Quality in early childhood education and care: Languages of evaluation*. New York: Routledge.

Davis, J. 2012. Young Children and the Environment. Early Education for sustainability. Melbourne: Cambridge University Press.

Davis, J. 2014. Examing early childhood education through the lens of education for Sustainability Revisioning Rights. In Davis, J and Elliott, S 2014 Research in Early Childhood Education for Sustainability: International Perspectives and Provocations (p.21-37) London: Routledge.

Davis, J and Elliott, S. 2014. *Research in Early Childhood Education for Sustainability*. *International perspectives and provocations*. London: Routledge.

Deleuze, G and Guattari, F. 1987. A Thousand Plateaus: Capitalism and Schizophrenia .London: Continuum.

Denscombe, M. 2014. *The Good Research Guide. For small scale research projects*. Maidenhead: McGraw Hill Education.

Department for Education. 2017. Statutory Framework for the Early Years Foundation Stage: setting the standards for learning, development and care for children from birth to five. Runcorn: Department for Education.

Dewey, J. 1916. *Democracy and education. In The Middle Works* .Carbondale and Edwardsville: Southern Illinois University Press. (P3-370).

Dewey, J. 1934. *The Child and the Curriculum, and the School and Society* .Chicago: University of Chicago Press.

Dodd - Nufrio, A.T. 2011. Reggio Emilia, Maria Montessori, and John Dewey: Dispelling teachers" misconceptions and understanding theoretical foundations.

Early Childhood Journal, 39 (4). https://doi.org/10.1007/s10643-011-0451-3.

Duhn. I. 2012. Making "place" for ecological sustainability in early childhood education. *Environmental Education Research*, 18 (1), 19-29 https://doi.org/10.1080/13504622.2011.572162

Fletcher, R. 2017. Connection with nature is an oxymoron: A political ecology of "nature-deficit disorder", *The Journal of Environmental Education*, 48:4, 226-233, DOI10.1080/00958964.2016.1139534

Foucault, M. 1980. *Power/Knowledge: Selected Interviews and Other Writings*. 1972-1977. New York: Pantheon.

Gabriel, N. 2010. "Adults" conceptions of childhood (p 137- 151). In Parker Rees, R, Leeson, C. Willan, J and Savage, J. 2010. *Early Childhood Studies* Exeter: Learning Matters.

Gray, C and MacBlain S. 2012. Learning Theories in Childhood. London: Sage.

Gruenewald, D. 2003. The Best of Both Worlds: A Critical Pedagogy of Place. *Educational Researcher*, Vol 32, No 4, 3-12.

Gruenewald, D., and Smith, G. (Eds). 2007. *Place based education in the global age: Local diversity*. Mahwah, NJ: Lawrence Erlbaum

Gibson, M, 2015. Leadership for creating sustainability. In Davis, J (2015) *Young Children and the Environment. Early Education for sustainability.* (p 55-75) Melbourne: Cambridge University Press.

Hammond, L.L., Hesterman, S. and Knaus, M. 2015. What's in your refrigerator? Children's view on equality, work, Money and access to food. *International Journal of Early Childhood*

[online], v.47 (3), p.367-384.https://doi.org/10.1080/0305764X.2013.792787 Available at: https://link.springer.com/article/10.1007/s13158-015-0150-0

Heft, H. 2010. Affordances and the perception of landscape: an enquiry into environmental perception and aesthetics. In C. Ward-Thompson, P. Aspinall, & S. Bell (Eds.), *Innovative approaches to researching landscape and health*. London: Taylor & Francis. (pp. 9–32).

Heidegger, M. 1962. *Being and time*. Translated by J. Macquarrie and E. Robinson. New York: Harper &Row.

Hoelschner, S and Alderman, D. 2004. Memory and Place: geographies of a critical relationship. *Social and Cultural Geography*,5:3.347-355. https://doi.org/10.1080/1464936042000252769

Horvath, J. 2016. Educating Young Children through Natural Water. How to use coastlines, rivers and lakes to promote learning and development. London: David Fulton

Joyce, R (2012) Outdoor Learning Past and Present .London: Sage

Knight, S. 2013. International Perspectives on Forest School. Natural places to Play and Learn. London: Sage

Lang, J. 2007. How to Succeed with Education for Sustainability. Melbourne: Curriculum Corporation.

Louv, R. 2005. *Last Child In the Woods*. Chapel Hill, NC: Algonquin Books of Chapel Hill Lyle, E. n.d. Pedagogies of Place/Geographies of Experience.

Available at -

http://www.academia.edu/11939597/Pedagogies of place geographies of experience MacNaughton, G and Hughes, P. 2009. *Doing Action Research in Early Childhood Studies*. Maidenhead: McGraw Hill Education.

Malone, K 2007 The bubble wrap generation: Children growing up in walled gardens. *Environmental Education Researcher*, 13; 513-5628

Moore Lappe, F. 2007. Thinking like an Ecosystem

Available at - https://www.ecoliteracy.org/article/thinking-ecosystem

Morgan, A, and Waite, S. 2018. Nestling into the World. The importance of place and mutuality in the early years. In *Early Childhood Education and Care for Sustainability*. *International Perspectives*. (p 551-66) Routledge: London.

MacNaugthon, G. 2005. *Doing Foucault in Early Childhood Studies .Applying Post Structural ideas*. London: Routledge.

Mayall, B. 2002. Towards a Sociology of Childhood. Buckingham: Open University Press.

McInerney, P, Smyth, J and Down, B. 2011. Coming to a place near you? The politics and possibilities of a critical pedagogy of place-based education. *Asia Pacific Journal of Teacher Education*, 39:1, 3-16. https://doi.org/10.1080/1359866X.2010.540894

Meadows. D, H. 2000. The Global Citizen: The Forest is More Than a Collection of Trees

Available at

https://www.alternet.org/story/1441/the_global_citizen%3A_the_forest_is_more_than_a_c ollection_of_trees

Montessori, M. 2012. *Maria Montessori .The 1946 London Lectures* .Amsterdam: Montessori-Pierson Publishing.

Moss, P. 2017. Power and resistance in early childhood education: From dominant discourse to democratic experimentation. In *Journal of Pedagogy* 8(1):11-32 DOI 10.1515/jped-2017-0001

Moss, P. 2017. Lecture to students at LJMU November, 2017.

Moss, P. 2017. Contesting Readying: Early Childhood Education as a Strong and Equal Protagonist in TH OMEP World Assembly and the Renewal of Public Education. 69th 24th June International Conference, Croatia

Newell, M. 2015. *The Imperative for place based learning*. Practical Literacy. 20 (2), June 2015:14-15. ISSN: 1324-5961.

Nsamenang, A, B. 2004. *Cultures of Human Development and Education: Challenge to Growing up African*. New York: Nova Science Publishers.

Nutbrown, C. 2012. Foundations for Quality. The Independent Review of Early Education and Childcare Qualifications. Final Report [online] Available at https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/175463/Nutbrown-Review.pdf

Office of the High Commissioner for Human Rights. 2016. *Children's Rights and the Environment: Report of the 2016 Day of General Discussion* [online] Available at: http://www.ohchr.org/Documents/HRBodies/CRC/Discussions/2016/DGDoutcomereport-May2017.pdf

The Office for Standards in Education, Children's Services and Skills (OFSTED) Available at - https://www.gov.uk/government/organisations/ofsted

Packer, M. 2017. Child Development. Understanding a Cultural Perspective. London: Sage

Paxton, B, Hakala, I and Hammell, S. 2016. An Ethics Based Pedagogy In Winograd, K (2016) 28 Education in Times Of Environmental Crisis. Teaching Children to Be Agents of Change. New York: Routledge. (p. 143-154)

QAA. Subject Benchmark Standards Early Childhood Studies.

Available at http://www.qaa.ac.uk/en/Publications/Documents/SBS-early-childhood-studies-14.pdf

Sergiovanni, T.J. 2003. The Lifeworld at the Center: Values and action in educational leadership. In Bennett, N, Crawford, M and Cartwright, M (eds) *Effective educational Leadership*. London: Open University Press.

Sellers, M. 2013. Young Children Becoming Curriculum. Deleuze, Te Whariki and Curricular Understandings. London: Routledge.

Siraj-Blatchford, J. 2008. Editorial; Education for Sustainable Development in Early Childhood (p 9-21). In the *International Journal of Early Childhood*. OMEP: Paris

Tayler, K and Price, D. 2016. *Gender Diversity and Inclusion in Early Years Education* London: David Fulton Books

Tharoor, S. 2017. Interviewed by Jon Snow. *Channel 4 News* [online], Available at: https://www.channel4.com/news/mp-shashi-tharoor-on-the-consequences-of-britains- imperial-past.

Thomashow, M. 1995. *Ecological Identity: Becoming a reflective environmentalist*. Cambridge: Mass MIT Press

UNESCO. 2016. Global Education Monitoring Report. Education for the People and Planet: Creating Sustainable Futures for all.

Available at - http://unesdoc.unesco.org/images/0024/002457/245752e.pdf

Von Glasersfeld, E. 1989. *Learning as a Constructive activity* (P 135-46). In Murphy, P and Moon, R (eds). 1989. Developments in Learning and Assessment, 5-18. Sevenoaks: Hodder and Stoughton.

Waite, S. 2013. "Knowing your place in the world": how place and culture support and obstruct educational aims, *Cambridge Journal of Education*, 43:4, 413-433. https://doi.org/10.1080/0305764X.2013.792787

1