Trees and Us: Learning About/From Trees and Treescapes From Primary School Children in the United Kingdom

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THINKING ABOUT TREES AND TREESCAPES WITH CHILDREN IN SCHOOLS

The contemporary literature on environmental education calls for active participation of children and young people in research (Rousell & Cutter-Mackenzie-Knowles, 2020). The goal is to embed science in children's lives rather than to implement didactic environmental learning programs and teach about climate change in the abstract (Trott & Weinberg, 2020) because it is believed that such programs are not useful in helping children understand the environmental crisis. At the same time, challenging adult-designed methods and methodologies, the focus is on emergent modes of inquiry that enable children to take the lead in producing knowledge about their environments. This child-centered approach emphasizes the embodied experiences of children to help them reimagine what science could mean to them in their daily lives (Ojala, 2012).

In our "Voices of the Future" project [NE/V021370/1] funded by the UK Research and Innovation (UKRI) funding council and the Natural Environment Research Council (NERC), we worked with young children in primary schools in the North West of England to investigate the opportunities and benefits that treescapes offer children, as well as the drawbacks of treescapes. We hypothesize that meaningful engagement with treescapes supports education and fosters a sense of belonging and hope among children (Ojala, 2012). Co-production is at the heart of the project; it involves children as co-creators of knowledge (Pahl & Pool, 2021) and offers fresh perspectives and insights into urban and rural treescapes, their importance for human and more-than-human lives, and the role that trees and treescapes can play in mitigating the climate crisis. We are inspired by developments in knowledge about children and childhood that view children as active citizens of society and the educational community (Tisdall, 2012). We view children as both being and becoming, with experiences, views, ideas, and perspectives that are worthy of studying in their own right (Christensen & Prout, 2005).

In this article, we describe our experiences of working with children in two different primary school settings. As part of the research, we were engaged with children in numerous activities to learn from the children themselves about their intra-action and lived experiences with trees, and about how trees in return are becoming sources of learning about the natural world for the children. The activities included thinking about trees, co-designing woodlands, thinking about a hopeful future for the trees, planting trees in the school woodland, and measuring carbon in trees. Here, we focus on the very first activity we did with children in their schools as part of our fieldwork: children's thinking about trees and treescapes. In listening to children and attending to their views about trees, we use Cooper and Kellet's (2017) concept of children having multiple and relational voices. Using examples from two different case studies, we explain how children expressed themselves in multiple voices and multiple communicative modes (Fielding, 2004) to share their thinking about trees and the natural environment, which was closely related to what children do and experience in their nearby surroundings. We focus on children's distinctive narrations about their experiences of being with trees outdoors in school playgrounds, neighborhood parks, backyards, or city streets, as well as in home gardens. We argue that the distinctive ways that children choose to share their perspectives about trees, and the distinctive ways in which children associate themselves with trees, explain reciprocal relations between human

and more-than-human beings. In doing so, in order to exemplify how trees can offer possibilities for experiential and place-based pedagogies in educational settings, we also look at how outdoor places offer children possibilities to think about nature in relational and multimodal ways.

CASE STUDY ONE (MAINSTREAM PRIMARY SCHOOL IN AN URBAN AREA)

We worked with 90 children in a mainstream primary school in Greater Manchester to explore children's engagement with trees and their reimagination of urban treescapes. Children in this school were 7 to 8 years old, from Year 3 Key Stage 2 (second grade in USA). From January 17–19, 2022, we worked with children from each section of Year 3 on a different day. Each session with the three sections of Year 3 lasted for 90 minutes. We received approval from the university ethics committee, as well as permission from the children, their parents, and the school, to conduct this research.

As part of the activity, children were asked to share their thinking about:

1. What trees mean to them
2. How they engage with trees in schools, homes, parks, or any other outdoor place
3. What they think about the future of trees in their city

The activity was conducted as part of routinely scheduled lessons; children sat in groups with their peers in the classroom. Three members of the university-based research team and classroom teachers were also present during these sessions. The purpose of the activity was explained to the children, and they were given flip charts, Sharpies, and voice recorders to express their views in multiple ways. They were asked to draw trees, places, and human and more-than-human elements of their environments on the flip charts; they were also asked to record their conversations using the voice recorders. Children were encouraged to interview one another or to discuss questions as a group, whichever they preferred. The purpose of this flexibility was to support the children's role as co-researchers in deciding about methods of recording their views and conversations during the project (Lang & Shelley, 2021). We did so to endorse Lang and Shelley's (2021) statement that listening to children's voices requires awareness of the communicative space (Lang & Shelley, 2021, p. 428) and of the research context in which multiple voices are used and listened to. Using multiple methods and tools, we attempted to create a space for children's voices to emerge with their full functionality, indicating the distinctive and multiple social and relational worlds around them.

Over the period of three days, children talked about trees and their engagement with trees in multiple ways. We transcribed the children's recordings and looked at drawings that the children had created as part of the listening/thinking about trees activity. When making sense of the children's engagements, we focused on much more than their narratives and conversations in order to understand how children make sense of their own experiences, engage with trees in distinctive ways, and use different modes to communicate their thoughts. We paid attention to the affective, embodied, material, and relational processes occurring during children's intra-actions with trees, with a focus on children's relations with all beings in the world.

Inviting children to showcase, talk about, and draw trees led us to explore different sets of information about children's thinking about natural environments. It also led us to see trees affording children opportunities to engage their senses and bodies and paving paths for children's enriched learning about the forms of the natural environment around them. When we looked at the children's artifacts, we noticed that children talked about and drew images showing their knowledge of nature and depicting their physical, sensual, and intergenerational engagement with trees. They also expressed views about the future of trees in their city, using oral and visual modes of communication (i.e., talking and drawing). We include children's drawings (Figure 1) and excerpts of children's conversations below.

These examples are taken from the work of a group of children and their class teacher during the listening/thinking about trees activity on day 1 of the study (January 17, 2022).
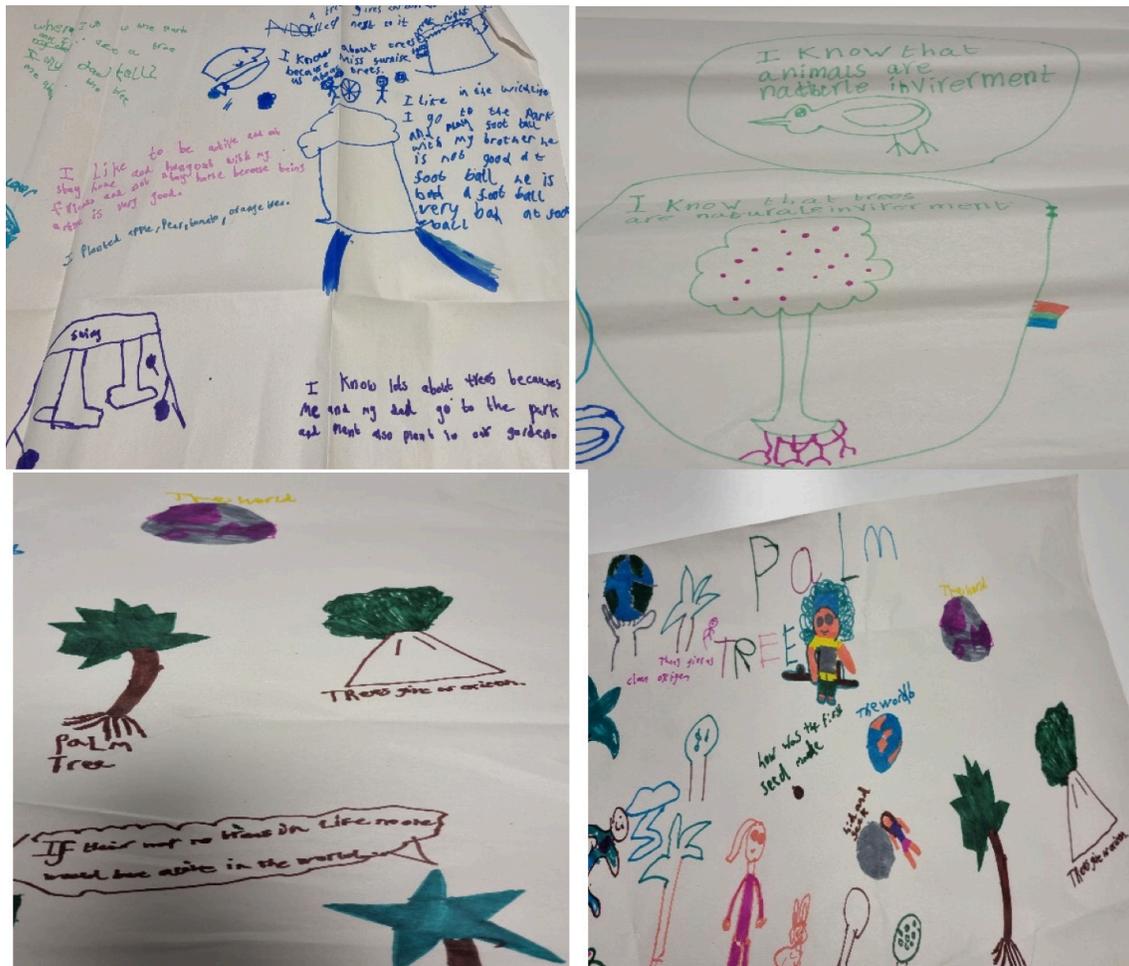

Figure 1. Drawings children made during the listening/thinking about trees activity

The children called themselves the "Palm Tree Group" during the session. In these drawings, children made pictures of themselves, their favorite trees, and birds, animals, and other wildlife that they observed around trees. They also made drawings of themselves engaging their bodies in different activities, including hide-and-seek, swinging, and playing soccer. Children spoke of siblings, parents, and other family members, as well as friends, telling them about trees. Some of the children's drawings referred to their school-based knowledge about trees. For instance, children mentioned how trees grow and why trees, as producers of oxygen and sources of elements of a healthy environment, are important for the planet.

Children in the Palm Tree Group also interviewed one another and recorded themselves and their peers talking about the natural environment and their views about trees, as in this example from day 1 of the study:

Child (to another child): What do you know about the natural environment?
Child: In the natural environment, that's where plants and trees grow. They give us oxygen, yeah,

so we can breathe, and we give them carbon dioxide so they can breathe. So, they help us breathe and we help them breathe.

Child (to another child): What do you know about the natural environment?

Child: It has lots of trees and rocks. Anything to do with natural, the place where we live is natural environment. It has a lot of … Its and it has a lot of things to do with nature.

Child (to another child): What [do] you know about the natural environment?

Child: That it helps us breathe and … it and …. and the place where most natural environment is mostly in the countryside.

Child (to another child): What do you like doing outside?

Child: I like playing with rocks and jumping on them and I like to go round the trees.

Child (to another child): What [do] you like to do outside?

Child: I like climbing trees and climbing rocks and I like … I like running around in the big field and playing hide-and-seek behind bushes.

Child (to another child): What do you like to do outside?

Child: Bird-watching because … hmm it inspires me … because … it helps me learn what types of birds there are….

Child (to another child): Do you think in future, there will be more trees in Manchester or fewer?

Child: I think it will be greener as people understand they need to plant more trees and they need to make a world of difference.

Child (to another child): Do you think in future, Manchester is gonna be greener or less green?

Child: I think it's gonna be less green because (inaudible voice) people won't do it and there gonna be less trees.

Child (to another child): Do you think in future, Manchester will be greener or less green?

Child: Less green as I think it's gonna be (inaudible)

Child: Why?

Child: Because.

Child: Why do you think it's gonna be less green?

Child: Because right, technology right now … I think it's catching up …. They gonna put more technology… more (inaudible) over the place, lights everywhere.

The analysis of children's recordings revealed that the natural environment and trees can be different things for different children at various times. In the above example, children mentioned their different experiences with trees in the present. They imagined their interaction with trees in the city in the future. They also shared their thoughts about whether the city would be greener or less green then and about the reasons (more buildings, increased technology, less tree planting) that there would be fewer trees in their city.

Children's stories about their lived experiences and encounters with trees in this case study revealed that children placed their social relations with other humans and the more-than-human world at the center of their lives (Massey, 2012).

CASE STUDY TWO (MAINSTREAM PRIMARY SCHOOL IN A SEMI-RURAL AREA)

With the agreement of the teachers in the second school, a semi-rural school in Bolton (United Kingdom), we spent a full day working with 60 children in three classes of combined sections of Years 3 and 4 (Key stage 2, which is second and third grade in the United States). We followed the normal school schedule. Our day began with an assembly in which our colleagues introduced the activity to the children.

Afterwards, the children were split into three different classes and put in groups of five and six in their normal seating arrangement. We spent 90 minutes in each class to discuss the project and the listening/

thinking about trees activity in detail. We talked about the children's roles in the study and encouraged them to think of their own research questions around the activity, in addition to these:

1. What do they know about trees?
2. How do they engage with trees in outdoor natural environments?
3. What do they think about the future of trees in their school and in nearby areas?

Children also asked us questions about the study. In each class, we first worked with "dialogic pedagogy" (Alexander, 2018) to involve children in open discussions about trees and their engagement and experiences of being with trees in outdoor natural environments. After we finished the whole-class discussion, we provided children with sharpies and flip charts for drawing their favorite trees. We also asked them to draw things they would like to do with trees. It is worth noting that this stage was conducted while the ethical approval for this research site was still under review which meant that we were not in a position to record data. Instead, what we offer here is a research reflection that summarizes what the children had created through our commentary. This commentary is guided by reflective discussions we had the with children two months later (14th April 2023). These discussions were centered around the children's drawings of their favorite trees, especially the use of shapes and colors.

Through their drawings, the children expressed different views about their favorite trees and how they engaged with them. The children portrayed trees as sources of oxygen, as helpful for wildlife and as having different parts with different functions. When we asked the children to draw their favorite trees, most children made pictures of willows and talked about their importance (coppicing) for the school's woodland. Children in this school have access to trees in its woodland, maintained by the forest schoolteacher.

At a later date (one month later) we had the ethical agreement in place and we could document the children's activities in the woodland. Children from each class went to the forest school (the woodland) once a week. During our visit one afternoon, we were accompanied by the children from one class (Year 3) to note what children do and become while they are with trees and nature in the forest school. We observed that the children learned about nature, trees, wood, and the habitats of chickens and other birds in the nearby plot of land. The children were engaged in different physical and sensual activities such as building dens, playing with mud, and hanging with the bark of trees, as shown in Figure 2.

Figure 2. Children from Years 3 and 4 in the school woodland (photos taken on March 27, 2023)

During these activities, we observed nature and trees as co-teachers (Jickling et al., 2018) that enabled children to learn different skills such as working with logs to build dens, making coppiced and woven hedges, making paths with woodchips, and collecting and preparing wood for fires.

The forest schoolteacher engaged in fostering emergent forms of skill-learning, teaching in ways not based in prescribed and fixed pedagogy. This enabled children to be involved in self-directed learning outdoors in the school woodland. Rules about the actions and activities there were not hard and fast, but negotiated and co-created between the forest schoolteacher and the children. As that occurred, we noticed the school woodland becoming an active place that afforded different forms of learning opportunities for children at different times. When thinking about trees during the listening/thinking about trees activity, children acknowledged their engagement with the outdoor space where there were trees and bushes.

During our research encounters in both settings, we encouraged children to determine whether or not to allow us access to their social and relational worlds (Atkinson, 2019, p. 199). We sat with children at their tables to create an informal space, which was useful in enabling children to actively engage in talking about our research. This also allowed children's natural, divergent, and sometimes messy discussions to occur. While observing children's engagement with trees in the school woodland, we positioned ourselves in the least adult role (Mandell, 1988), presenting ourselves as full, active members of the children's world and encouraging them to tell us about their practices, while we engaged in little or no intervention as adult researchers. Therefore, we found children freely deciding when and when not to take part in the research encounters. Some children guided us about during their forest school activities, while others refused to, either by explicitly saying no or by being intentionally quiet and ignoring our presence.

CONCLUSION

Our experience of working with children in both schools led us to think about different ways we can listen to children (Cooper & Kellett, 2017) about their encounters with natural environments. We found children skillfully communicating their perspectives about trees and sharing their experiences of being with trees in different ways, using distinct modes of communication. Listening to children's voices in multifarious ways was useful in developing a culture of valuing the different forms of knowledge (Lang & Shelley, 2021) shared by children in both research settings. We learned from children about their lived experiences of engaging with trees in different ways at different times in different situations. These experiences included children's engagement with trees in school settings with peers, in nearby parks with friends, or in their back garden with family members.

In both case studies, we see children's intra-action with trees and woodland as an assemblage (Mazzei & Jackson, 2017, p. 1092) of human beings, more-than-human beings, bodies, and words. In the first case study, in narrating their engagement with trees, children talked about being in a big field, hiding behind bushes, and bird-watching. We also noted that trees afforded spaces for children to engage their bodies and senses in activities such as swinging, climbing, and playing games like hide-and-seek. In the second case study, children particularly talked about the more-than-human worlds, such as those of birds and other animals, that they saw in the school woodland. They spoke of their engagement with trees in relation to those worlds. To the children, trees also became much more than producers of oxygen. As noted, the school woodland became a co-teacher that enabled children to learn different skills; it offered opportunities to demonstrate the importance of nature and the wild as a teacher (Jickling et al 2018) that enriched children's learning about the natural environment, and in particular, about the value and connectedness of trees in/with the everyday activities.

Attending to children's distinct social, cultural, and relational contexts, we looked at children's views and engagement with trees in relation to other bodies, people, places, and material (Rautio, 2014). In both research settings, trees were narrated, portrayed, and captured as playmates, providing homes and food to birds and animals. This became more obvious when looking at how children imagined the

future of trees in their cities, including, for example, what the affordances of trees where they live would be. In the first case study, children talked about technology and whether the future of their city would be greener or not. In the second case study, in relation to their experiences of the school woodland, children made drawings of willow trees because more willows would be needed to learn about coppiced wood in the school woodland in the future.

In both case studies, we found that children did not depend on just a single way to communicate their thoughts. Children engaged in oral stories, drawing, and interviews that they conducted themselves, helping us understand their conceptualizations of trees and the natural world as well as their engagement with trees. Children's divergent stories, drawings, and multiple dialogues highlighted the need to create an inclusive culture in the classroom that attended to multimodal and relational voices of the children and valued different forms of knowledge. Children's engagement with trees in the school woodland in the second case study, and how that engagement resulted in different and emergent forms of learning, led us to think about a new pedagogy concerning different ways of acting and being in the world. The school woodland offered novel ways of engaging children in explorative, creative, inventive, collaborative activities with trees, branches, sticks, mud, wood, and leaves. The activities in the school woodland are not predetermined or prescribed; they are carefully selected, yet still allow children's innate curiosity and affinity with the wild to flourish. Our research encounters with children in both cases reflect how educational experiences for children can become a co-created collaboration among children, university staff, and teachers. Thus, it exemplifies the need for a vision of pedagogy that privileges playful and hopeful futures through the influences of co-created joint activities in the present.

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