

Complexity in Research:

Researcher-Participant Dynamic Interactions

3 July 2025

9:00 - 16:30

University House,

LS2 9JR









# Key/Note

Navigating Complexity: Interdisciplinary Approaches to Research with Children





Research Associate, Manchester Metropolitan University



### Navigating Complexity: Interdisciplinary Approaches to Research with Children



18th Research Students' Education Conference University of Leeds, 3<sup>rd</sup> July 2025

Keynote: Dr Samyia Ambreen

Samyia.ambreen@mmu.ac.uk

Samyia.ambreen@uwe.ac.uk



#### My Research Journey

#### Doctoral Research

Exploring pupils' interactions in ability-based groups in primary classrooms (University of Leeds)

#### Voices of the Future

Collaborating with children and young people to reimagine treescapes Funded by the Natural Environment Research Council (NERC) (Manchester Metropolitan University)

https://treescapes-voices.mmu.ac.uk/

#### Children's Participation in School

Focused on teaching practices that embed young children's participative rights in lower primary education in Wales.
Funded by the Economic and Social Research Council (ESRC) (University of the West of England)

https://childrens-participation.org/





### Exploring the key purpose of being a researcher

"Education either functions as an instrument which is used to facilitate the integration of the younger generation into the logic of the present system and therefore bring about conformity to it, or it becomes the practice of freedom..."

(Freire and Ramos, 2017, p. 34)

### The Knowledge Holder (Who is the expert?)

• 'New knowledge creation (the *what*) through the shared endeavours of research and practice working together equally (the *how*)' (Parsons *et al.*, 2020, p. 3)

■ Rather than positioning one form of knowledge above another, it is important to recognise that these are diverse yet equally valid ways of knowing, some more implicit, others more explicit; each represented differently by collaborators within the research process(Guldberg et al., 2017).

#### Co-construct(ing) Research (Horner 2016)

### Everyone involved is a knowledge holder.

- Researchers bring methodological and theoretical expertise.
- Participants (including children, young people, or community members) bring lived experience, contextual insight, and unique ways of knowing.

#### Expertise is distributed, not centralized.

- Knowledge is created with participants, not about them.
- This shifts the role of the researcher from "expert" to facilitator, listener, and co-learner.



Still, co-construction is not a fixed recipe or a definitive model for addressing inherent power imbalances or social and epistemic injustices. Rather, it is an ongoing process that we continually grapple with throughout our research practice.

#### Voices of the Future

The project explored the opportunities and dis/benefits that treescapes offer to children and young people.











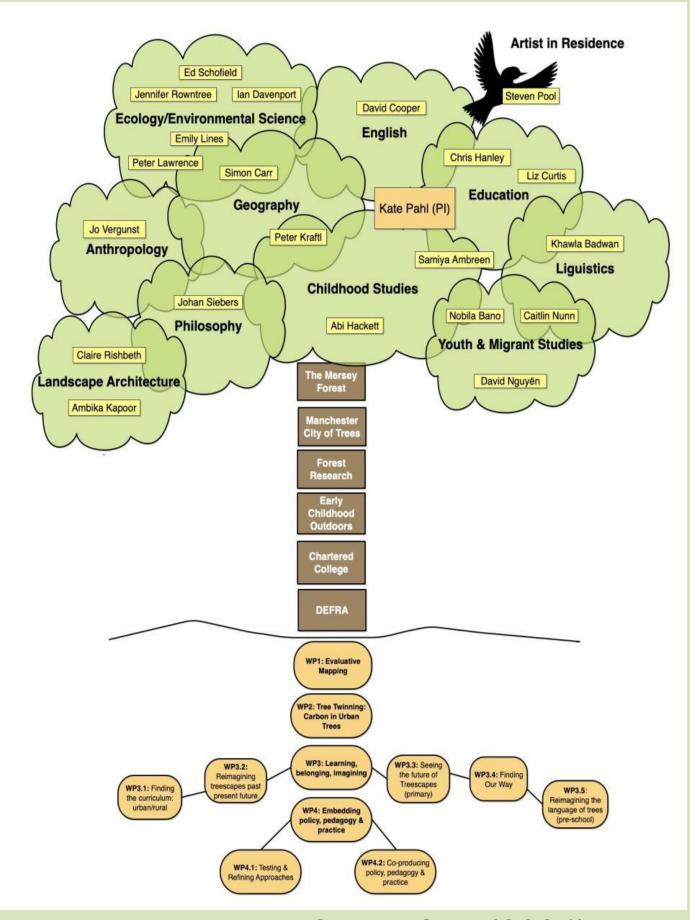


Figure credit: Dr. Simon Carr (2024)

Methodologies include film-making, walking, tree-planting, tree-measuring, sensory ethnography.

Co-production approach: in order to learn from children and young people to engage them in designing, creating and caring for Treescapes.

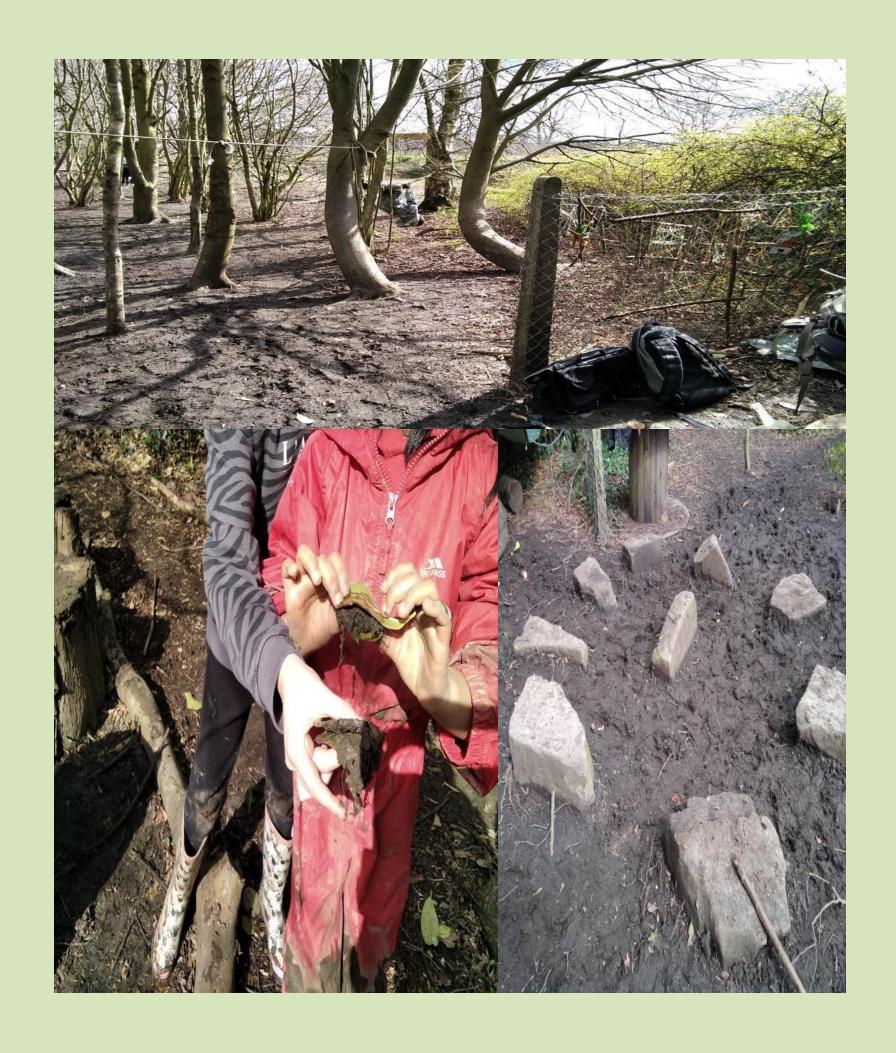
Innovative methods: to enable children and young people to evaluate the contribution of different treescapes to future climate mitigation.

Tree planting and treemeasuring documented by the children.

"Ways of seeing" (Clark, 2022, p.13)

Young children are competent meaning makers and explorers of their environment.





# Beyond words & Embracing methodological Shift

- Moving beyond the linguistic into poetic, creative and visual methodologies opens new ways of knowing.
- Encouraging cognitive, contextual, cultural, and situated approaches to meaning in multimodal worlds of children.

# Diversifying tree-child relations

- Children's relations as always connected, embedded, and embodied, dynamic and active (Ambreen et al., 2025)
- Unsettled stories (Nxumalo, 2016)
- Care, mutuality and reciprocity embedded within process (Spyrou, 2023)



#### How many ways are there to measure a tree?

- An experiment in cross-disciplinarity

There is no single, objective way to measure a tree; instead, the act of measurement is shaped by disciplinary perspectives, values, tools, and purposes.

- The epistemological diversity (how knowledge is constructed).
- The importance of dialogue between disciplines to challenge assumptions.
- The creative and ethical potential of collaborative research that values multiple ways of knowing (children, teachers, researchers, community practitioners)



https://journals.uclpress.co.uk/r4a/article/id/3406/

# Three Generational Knowledge to Action Models by (Best and Holmes, 2010)

#### Linear Model

One Way Flow
Dissemination C Communication
of Research

#### **Relationship Model**

Two Way Interaction
Building professional networks
Skills C Capacity

#### System Model

Dynamic Co-production Creating Infrastructures Strategic leadership

### Negotiating roles (who is the expert?)

- Paying attention to small things C affective moments (Massumi, 2015).
- Ethical and methodological flexibility (Spyrou, 2023).
- Children as authors.

#### **Traces of Worms**

Zoey Ashcroft

The setting was a day spent planting trees outside the school grounds. As Zoey and her classmates planted the trees, they also recorded the activity in their notebooks. The children noticed the worms that were wriggling in the ground. Zoey recorded an activity in which leaves and then worms were lifted from the earth, and the worms then explored the page where they were put. Afterward, the worms were lifted off the page and put back on the ground. The traces of the worms were left on the page. <sup>1</sup>

We were left with traces of worms.

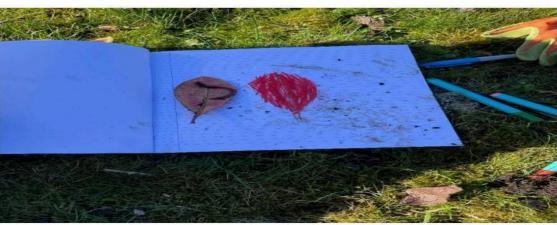


Figure 1

Ashcroft, Z. (2023). Traces of worms. *Occasional Paper Series*, (50).

DOI: <a href="https://doi.org/10.58295/2375-3668.1524">https://doi.org/10.58295/2375-3668.1524</a>

### Children as film makers and knowledge disseminator

An ethical stance requires... openness and a critical attitude towards the knowledge generation practices.

Placing children's voices in the proper interactional, institutional, and discursive contexts which produce them.

(Spyrou, 2018)



UK Data Service ReShare



Home Legal Review procedures Metrics

### Voices of the Future: Collaborating with Young People to Reimagine Treescapes, 2022-2024

Pahl, Kate (2025). Voices of the Future: Collaborating with Young People to Reimagine Treescapes, 2022-2024. [Data Collection]. Colchester, Essex: UK Data Service. 10.5255/UKDA-SN-857666

The future of treescapes belongs to children and young people. Yet there is a lack of interdisciplinary research that explores their engagement with treescapes over time. This project aims to re-imagine future treescapes with children and young people, working with local and national partners including Natural England, Forest Research and the Community Forests and Scottish stakeholders. We will identify opportunities and barriers to treescape expansion and pilot innovative child and youth-focused pathways to realising this goal. We will create curricula material which will be disseminated with the support of our project partners, Early Childhood Outdoors and the Chartered College of Teachers.

The aim of this project is to integrate children and young people's knowledge, experiences, and hopes with scientific knowledge of how trees adapt to and mitigate climate change in order to co-produce new approaches to creating and caring for resilient treescapes that benefit the environment and society. Drawing on interdisciplinary approaches and in collaboration with stakeholders, the team will produce a 'lexicon of experience' that captures the ecological identities of children and young people. An audit of existing activity in the field of activism and treescapes, with a particular focus on marginalised groups, will inform the project. In particular, the project will produce new material for use by practitioners, educators and policy makers that will inform future treescape planting and will be rolled out nationally, with the help of our project partners. Novel methods for assessing carbon storage in trees and soil will inform a 'tree-twinning' project to enable children and young people to recognise how they can relate to treescapes. Children and young people will

# Linking Research with Public Spaces & Cultural Institutions

Moss Side Library Gorton Library Manchester Museum Walks

- Research engagement with children C families
- Revolving connections, building partnerships
- Rethinking research as a place-based, community-focused, and sustainable practice

### Inclusive Educational Resource Creating spaces for diverse stories to emerge

Treescapes | Teaching Notes

Re-imagining a Hopeful Future through the storybook 'The Tree of Hope'.



what is the purpose of this activity?

This activity is designed for teachers and adults working with children aged 7-9 (Year 3 and 4, Key Stage 1). It aims to help children understand the importance of trees for the world, the benefit human beings get from trees, and how trees protect human beings. It also encourages children to think about the future and foster hope for our planet and environment.



Reading the storybook 'The Tree of Hope'.

Read the storybook 'The Tree of Hope' to the children in small groups. The storybook can be read by an adult and by any child from the group. You may decide not to just read the storybook but aim to focus on different aspects of the text (e.g. the narrative, the illustrations, the characters etc).

You may discuss the following ques Ques +ith the children:

#### What is it the activity about?

This activity is about a storybook called 'The Tree of Hope' written by Kehkashan Basu. The storybook helps children develop their understanding of the importance of trees for the planet. It also engages children in creating stories about their favourite trees. Download the storybook, The Tree of Hope, by clicking this link.



questions with the children:

How does it feel to be in the hot desert?

What are the children doing in the story?

Why is it difficult for the children to play outdoors in the afternoon in a hot desert?

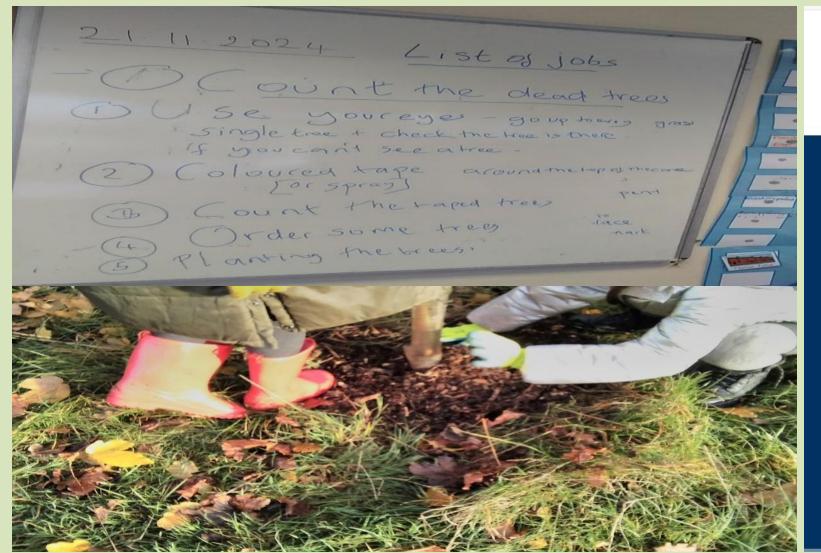
What is the tree doing for the children in the story?

How did the tree become important for children? (Refer to the storybook (page 3) and help children explore how the children in the story were unable to play outside in the hot sun, with the presence of the tree (page 0), they can now enjoy playing

under its shade, which provides

## How can we listen to children and young people to create policy change?

Postcards from the 'Voices of the Future' project (2025) Children as leaders in environmental education (Tree Care Guide) (The Mersey Forest)







# New opportunities to amplify impact

Scientific research: moving on from a very narrow, linear model to how to research with children and young people in a more open way.

Community tree planting organisations: knowing how to work with diverse, multilingual young people.

**Industry organisations:** embedding tree skills with diverse communities and more about engagement strategies.

- The Woodland Trust
- The Mersey Forest
- Department for Environment Food and Rural Affairs (DEFRA)

# Complexity is not a problem but a strength to embrace....

#### Complexity as a site of rich (authentic) knowledge production:

Educational research becomes richer when it includes multiple voices and epistemologies, integrating diversity of meaning.

Fluidity in research design is important: As an ethic, aspiration or approach, allowing us to be responsive and adaptive.

## Educational researchers are encouraged to navigate and even celebrate theoretical pluralism s tensions:

"There are murky areas between the theoretical frames... sometimes they overlap... sometimes they are in tension." (Horner, 2016, p. 39)

### Role of Institutional Support and Alignment

- Systems, values, and practices to accommodate and embrace uncertainty, diversity, and relationality in research.
- Rethinking the role of Ethics committees, Review boards and Evaluation practices
- Importance of training and mentorship
- Research environments where complexity is seen as a scholarly strength.

# Complexity is not just methodological; it is **ethical and** relational.

"The political and ethical dimensions of that process do not derive simply from the methods... but are a function of the wider social contexts in which research is conducted." (Horner, 2016, p. 33)

"Becoming with" ...humans are not separate from the world, but they are already entangled with more than human others, technologies, and ecologies. Research, then, must account for these entanglements rather than treat them as background or context (Haraway, 2016)

"Researchers must interrogate their own assumptions, the institutional frameworks they operate within, and the ways in which their presence shapes the research encounter." (Spyrou, 2011, p. 153)

#### References:

- Ambreen, S., Pahl, K., C Badwan, K. 2025. Diversifying tree-child relations: making the case for epistemological and methodological shifts in environmental education research. *Environmental Education Research*, 1-15. https://doi.org/10.1080/13504622.2025.2462793
- Best, A. and Holmes, B., 2010. Systems thinking, knowledge and action: Towards better models and methods. Evidence C Policy, 6(2), pp.145-159. https://doi.org/10.1332/174426410X502284
- Clark, A. 2022. Slow knowledge and the unhurried child: Time for slow pedagogies in early childhood education. Abingdon: Routledge.
- Freire, P. and Ramos, M.B., 2017. Pedagogy of the oppressed. London: Penguin Books.
- Guldberg, K., Parsons, S., Porayska-Pomsta, K. C Keay-Bright, W. 2017.
   Challenging the knowledge transfer orthodoxy: Knowledge co-construction in technology enhanced learning for children with autism, *British Educational Research Journal*, 43(2), 394-413.
- Haraway, D.J., 2016. Staying with the trouble: Making kin in the Chthulucene.
   Durham, NC: Duke University Press.

#### References

- Horner, L. K. 2016. *Co-Constructing Research: A Critical Literature Review*. Arts and Humanities Research Council AHRC. https://connected-communities.org/wp-content/uploads/2016/04/16019-Co-constructing-Research-Lit-Review-dev-06.pdf
- Massumi, B., 2015. Politics of Affect. Cambridge: Polity Press.
- Nxumalo, F. 2016. "Towards "Refiguring Presences" as an anti-Colonial Orientation to Research in Early Childhood Studies." *International Journal of Qualitative Studies in Education* 29 (5): 640-654. https://doi.org/10.1080/09518398.2016.1139212.
- Parsons, S., Kovshoff, H. C Ivil, K. 2020. Digital stories for transition: Co-constructing an evidence base in the early years with autistic children, families and practitioners, *Educational Review*, <a href="https://doi.org/10.1080/00131911.2020.1816909">https://doi.org/10.1080/00131911.2020.1816909</a>.
- Spyrou S. 2023. From extractivist practices and the child-as-data to an ethics of reciprocity and mutuality in empirical childhood research. Childhood, 31 (1). <a href="https://journals.sagepub.com/doi/10.1177/09075682231220158">https://journals.sagepub.com/doi/10.1177/09075682231220158</a>
- Spyrou, S. 2018. Disclosing childhoods: Research and knowledge production for a critical childhood studies. London: Palgrave Macmillan
- Spyrou, S. 2011. The limits of children's voices: From authenticity to critical, reflexive representation. Childhood, 18(2), 151-165.

We hope you found the sessions insightful and the discussions enriching. To help us improve future events, we'd really appreciate your feedback.

Email: 18rsec@leeds.ac.uk

webpage: www.18rsec.ed.uk









# Thank You for Your Participation in This Year's Conference

The Organising Committee, RSEC18 Conference...