

Climate Change Learning in Initial Teacher Education: University of Manchester Institute of Education, Jan 2025

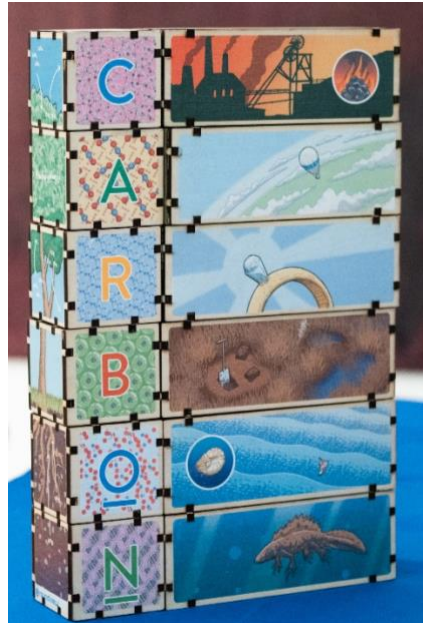
Summary and reflections from conference facilitators*

For the 4th year trainee Secondary teachers co-designed and ran a vibrant and challenging conference at Manchester Institute of Education in the University of Manchester. It was called: “Climate and Environmental Justice in Education: What’s at Stake?”

Days after the Los Angeles fires broke out, Friday 10th January saw over 150 trainees from 4 different disciplines starting the morning with a small group interactive learning event. This was based on a toolkit for sustainability thinking and learning developed from University of Manchester research, and led by Dr Joanne Tippet called “The RoundView.”



The table-top activities give each small group a set of hands-on puzzles to solve, seeing how jigsaw pieces and blocks fit together to reveal the various systems that comprise a sustainable planet, how these systems are disrupted by human activities at a fundamental level, and what we need to do to fit within the systems sustainably. It generated a lot of fun and discussion, with lively debate about the contested environmental value of electric cars and lithium batteries! Most students found they knew a great deal of the content and the science. Science postgrads delighted in naming the elements and molecules they recognised. English trainees caught sight of poems also written down the side of the blocks and began to decode them.



Solving the puzzles in groups was at times somewhat sobering, as the extent of the need for transformative change was revealed, but overwhelmingly positive. If the current system can bring about a climate crisis, then understanding that system can enable humans to design other ways to meet our needs that fit with the natural sustainable systems and reverse the destructive trend. The representation of human beings in the RoundView embeds an inclusive global perspective. Always in an equal circle, placing social justice at the centre prompts us to ponder our role and position within natural and human-driven cycles. The activity provided delegates with a powerful and clear framework to think about climate change and sustainability more broadly.



Feedback after the workshop included interest in developing new ways to use the RoundView to teach maths and literature, and interest in how it helped to create links across the curriculum. One trainee commented that they remembered being taught sustainability in school and it was the most boring lesson, but this had given them a real hope that it could be made stimulating and enjoyable instead. Others said that seeing how a sustainable world might in fact be possible generated optimism, important in a time of significant climate anxiety amongst young people.

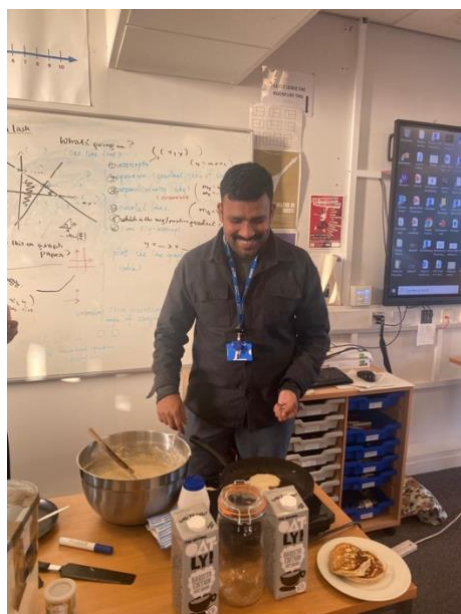
Pedagogy and curriculum workshops: planning for practice

After getting some exercise and oxygen on the way across the campus, the trainees met in three mixed Workshop groups, also co-convened by students, on planning for practice – considering pedagogy and curriculum. In pairs the trainees identified issues that represented challenges in their teaching and also possibilities. Each set was displayed on two separate walls and then the trainees took one possibility back to their table, not one they had themselves suggested. This generated a great deal of heated discussion about what might be “allowed” and what might be integrated into the curricula that they had already encountered. Part of the process enabled those with scanty knowledge of the science of Climate Change to build up the larger picture of the crisis and begin to think about how they might work with the existing knowledge of pupils in a classroom situation.

The buzz continued over the buffet vegetarian lunch, funded by the SEED Social Responsibility Fund.

Engaging activities: changing perspectives through experiences

With encouragement from alumni from previous PGCE cohorts, the afternoon was given over to a choice of activities, indoors and out. Some food was left over from lunch, so the Greener Cooking workshop that followed in the same room, had plenty of resources to talk about and work with as soup and pancakes were prepared and cooked on an induction hob. 2.5 billion tonnes of food is lost or wasted globally each year, with one third of this occurring in the food production stage. This equates to 40% of all food produced for human consumption goes to waste (2023). 9.5 million tonnes of food is wasted in a single year in the UK – even though 8.4 million people in the UK are in food poverty. We had fun looking at how we can use our creativity to repurpose food instead of wasting. We made reference to several websites while also cooking our own.



Other groups headed outside to explore Nature Metaphors in the grounds and another group to identify and study trees in the local park. The message – what difference does it make to do some practical activity – what kind of broader discussion is made possible over a saucepan or by

a living tree, with squirrels! What is the potential of an Outdoor Classroom? How can After-school clubs be shown to be a vital part of consolidating learning? What can we learn from each other? What is our role as teacher educators and role models in tackling climate crisis?



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Two other indoor workshops continued as part of this practical activity-based learning. In the trainee-led 'Making Hidden Costs Visible' activity, other trainees were introduced to some of the secondary and tertiary impacts of everyday goods and services. For example, we can look at the impact of cars beyond the impact of fuel: looking into the materials in the car, the processes used to make the vehicle, how tarmac is produced, the space roads take up, the noise of cars, and more. Trainees then worked in subject groups to create tasks to explore these hidden costs. Creativity was very much in evidence, as was a sense of how easily they could be integrated into lessons. One group created Top Trumps looking at lab equipment: its uses, cost, and sustainability. Another created a FIFA-style card game where students could select their dream team of interventions for fighting climate change. Other creative ideas included Cluedo, scrapbooking, storytelling and reading comprehension. The session gave trainees time to develop concrete learning resources and activities for their use in the classroom.



The “Power and Influence: Getting things DONE” workshop looked at the hidden power structures within schools and outside them. Participants shared their experiences of school settings, as teachers, teaching assistants and school governors. We shared stories of exciting projects, and explored who enabled them to happen despite having little formal status in the school. The informal power held by site supervisors and administrative staff was discussed as potentially positive or disruptive. The power of children in school councils or eco-committees has been highlighted by Greta Thunberg, but everywhere climate-concerned pupils are becoming empowered to ask for changes in their school buildings, and what they are taught. We learned about waste projects, energy projects with research to delivery of solar panels, water conservation projects and projects that were supported by faith groups or local neighbourhood conservation groups. The impact on the reputation of a school of an award from Eco Schools was discussed, especially now that the Department of Education has asked all education settings to have a Climate Action Plan.

Trainee teachers are in a unique position to be able to ask searching questions in schools and colleges, so the next placement is a chance to seek out what is being done to extend environmental awareness and climate action, and to contribute to it. But any recommendations from a member of staff or from school students have to be backed up by allies – outside the school and inside. The group began to discuss the important question of HOW you find your allies.

Plenary

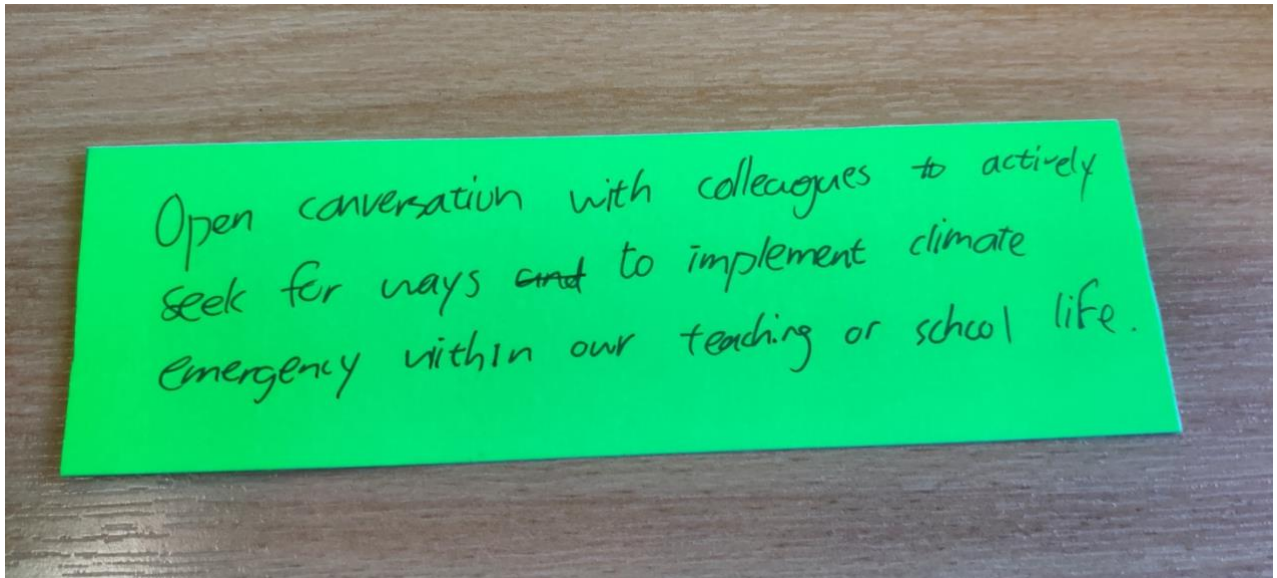
The aim of the final session was that trainees would all leave the day with some peer support in place to encourage them with commitments in relation to climate and environmental education.

Trainees were asked to find a climate buddy, to check in with as the PGCE year continued – to encourage each other in following through on the two commitments they made:

How will what you've learned today affect your practice in Placement 2?

Outside of school, what's one thing you'll go away and immediately change / do?

Write your answers, and those of your buddy, on a piece of card.



The whole day ended with applause for those trainees, allies and staff who had put the day together. It had been a collaborative effort with learning across many dimensions – practical-theoretical, emotional and contextual. The day made a clear argument for the achievability of climate justice, beginning from the RoundView proposition of a viable, logical alternative to overconsumption, environmental destruction and deepening inequality, and ending with collaborative commitment to taking action as teachers and educators.

We believe that school students and staff alike can and should know about, practice and argue for practical, communal and societal steps away from climate and environmental catastrophe and towards a positive vision of a regenerative future.

***Facilitators:** (trainees, students, colleagues from MEEN and university staff): Madeline Cooper, Abbie Whelan, Owen Greig, Mikolaj Widawski, Cora Gaffon, Poppy Bradshaw-Annand, Abigail Stock-Duerdoth, Max Tittle, Laisa Waqausa, Rai Lock, Lydia Meryll, Ryan, Joanne Tippet, Fraser How, Jamie Farrington, Keerthana Raj, Junyi Li, Siân Morgan, Rosa Archer, David Swanson, Robert Buck, Zahra Alijah, Andrew Howes, Narinder Mann, Anna Warburg