

CIVIC APPROACHES TO CLIMATE EDUCATION

**EXPLORING UNIVERSITIES'
ROLE AS EDUCATORS IN THE
UK'S GREEN TRANSITION**

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1 Background

The National Civic Impact Accelerator (NCIA) is an ambitious three-year programme to gather evidence and intelligence of what works, share civic innovations, and provide universities across England with the framework and tools to deliver meaningful, measurable civic strategies and activities. The programme is funded by Research England, part of UK Research and Innovation (UKRI). It aims to drive collaboration and policy and practice innovation, involving universities, local government, business groups, and the community sector to inform place-based transformations.

The Institute for Community Studies at The Young Foundation is carrying out primary and secondary research activities to generate an evidence base supporting the NCIA programme. This research focuses on the role of universities in delivering impact in their places, considering the perspectives of a range of organisations, actors and communities, to develop a holistic understanding of the impact of university activities and strategies.

The evidence generation process of the Institute is guided by four co-commissioning panels, which represent a range of stakeholder perspectives. This rapid evidence review responds to the direct input of the Environment, Climate and Biodiversity Panel, made up of representatives from universities across England and third sector organisations with a stake in the issue.

The panel prioritised three lines of enquiry around the role of universities in environment, climate and biodiversity, which the Institute team developed into research questions. The aim is to ensure the evidence produced is as meaningful and useful to a range of stakeholders as possible, within the natural constraints of the project.

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Introduction

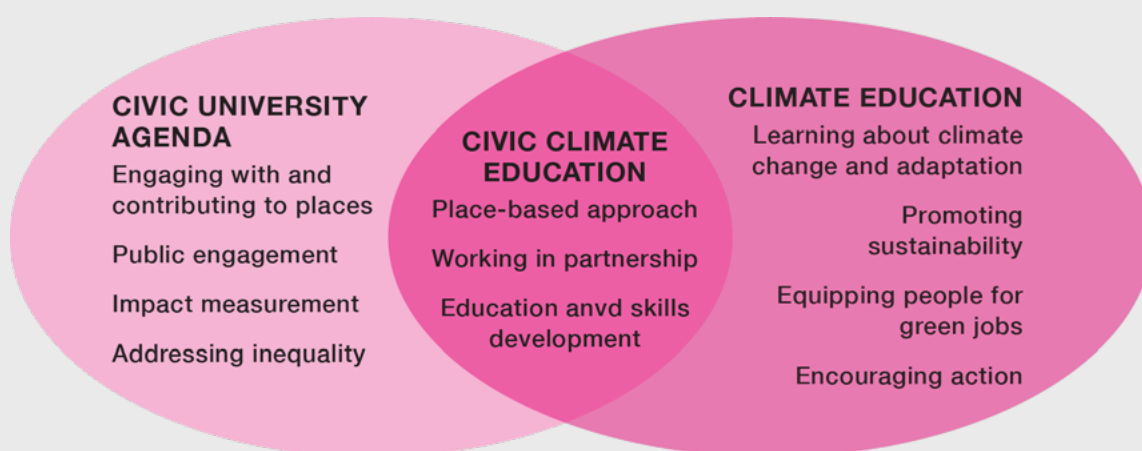
The UK has a legally binding commitment to reach net zero carbon emissions by 2050, a transition that requires the participation of all actors across society (Theminiulle, et al., 2024). Universities, as knowledge producers, holders and mobilisers, have the opportunity to play a crucial role in supporting people to gain the necessary knowledge and skills to participate in the transition, broadly referred to as ‘climate education’.

Climate education is a broad-base challenge, with many potential roles for universities to play. This might include equipping students and staff to navigate the transition to net zero, supporting skills pipelines to green jobs, and educating people of all ages in their places.

Climate education has been on universities’ agendas for decades, with a steady evolution beyond scientific, classroom-based knowledge. However, it is widely agreed that progress towards effective climate education has been insufficient, and there are growing calls for a more radical and action-orientated climate education approaches (see Pearson, 2021, Thew et al, 2021, Geer et al, 2023).

In recent years, the civic university agenda has invited universities to integrate a greater place focus into their work – which means understanding and collaboratively responding to the specific needs of local communities (CUN and NCIA, 2024). This is echoed by a general move towards working in place, with an increased number of devolution deals, funding for place-based innovation, and frameworks calling for place-sensitivity in policymaking. This creates an opportunity to hone the ambition of climate education by introducing a civic focus. The civic university agenda and evidence on climate education, reviewed in a [rapid review](#), provide initial clues on what civic climate education might look like. However, there is an opportunity to delineate the scope of climate education using what is working in practice.

Figure 1: Areas of overlap between the civic university agenda and climate education.



This report focuses on the question of what a civic climate higher education might look like, and what resources and approaches are needed for its successful delivery. To answer this question, a series of case studies are presented, which showcase different aspects of civic climate education and highlight the success factors behind each approach. The aim is to use these examples to hone what is meant by civic climate education, and to demonstrate the value and potential of this approach.

Additionally, this report looks to present examples in a way that facilitates learning, highlighting enablers, barriers and success factors. The aim is to support the proliferation of civic approaches to climate education, while recognising that each place, along with its unique assets and resources, should develop their own approach.

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Methodology

Rapid review

In January 2025, researchers at the Institute for Community Studies at The Young Foundation conducted a rapid review of literature and evidence on the state of [climate education](#) in England. The review summarised what is known about climate education, and how it is currently delivered. Although the review found evidence of advocacy for climate education dating to the early 2000s, the response from both policymakers and universities has fallen short to date.

Approaches to climate education have been dominated by a focus on fact-based and disciplinary knowledge, often approached through STEM (science, technology, engineering and mathematics) education. However, there is no evidence of the effectiveness of this approach, and no correlation has been found between scientific knowledge and pro-environmental behaviour (Rousell and Cutter-Mackenzie-Knowles, 2020). A range of alternative approaches are emerging as important, with evidence that climate education initiatives that are cooperative, interdisciplinary, participatory, place-based and experiential are most impactful in terms of learner attitudes towards climate change and pro-environmental behaviour (Rousell and Cutter-Mackenzie-Knowles, 2020). There is increasing recognition of multi- and cross-disciplinary approaches which balance values and justice as well as ‘scientific fact’, reflecting the complex nature of climate change and better equipping learners to navigate it (Reis and Ballinger, 2020; Greer and Glackin, 2021).

Universities have been identified as uniquely well positioned to deliver effective climate education, given their multidisciplinary nature and their role as local and national actors (Katehi, 2012). The rapid review, alongside the contributions of the co-commissioning panel, highlighted the opportunity posed by the multi-faceted role of universities to expand the ambition of climate education. Particularly, the review introduced the concept of civic climate education, integrating elements from the civic university agenda into climate education.

The current report follows on from the review, attempting to delineate ‘civic climate education’ through a series of best practice examples.

Call for case studies

In spring 2025, a call for case studies was launched by the Institute for Community Studies, with support from members of the co-commissioning panel. The call requested examples of ‘what is working’ when it comes to climate education. Although the definition was kept purposefully open, the call specified a particular interest in initiatives that are multi-disciplinary, place-sensitive, and/or collaborative.

‘We’re looking for examples of initiatives that prepare individuals of all ages for a green future. We are particularly interested in examples of climate education which integrate civic principles such as collaboration between institutions, place based and holistic approaches, and a focus on building skills beyond STEM. We welcome examples of climate education designed or delivered by a range of institutions and organisations.’

The call for case studies was disseminated through The Young Foundation and Institute for Community Studies social media channels, and via direct email invitation. The co-commissioning panel supported the dissemination through suggested contacts and by sharing the call for case studies. The call for case studies included information on a dedicated webpage, accompanied by an online submission form, asking participants for key information on their projects, with the process taking no longer than 20 minutes to complete. Support was offered to participants via a dedicated email address.

A total of 17 case study submissions were received, covering projects across England, Wales and India. From these, seven projects were selected, of which five completed the primary research described in the next section. The selection was based on the projects that best reflected one or more characteristic of civic climate education, while remaining mindful of maximising variation across location, project beneficiaries, and the institution leading and partnering on the projects.

The resulting case study sample covers projects across the West Midlands (Birmingham), North-west (Manchester), South Yorkshire, and North-east of England (Tees Valley). Additionally, a case study from Bangalore, India, was selected due to its potential for transferrable learning. Four of the case studies are led by universities, with two of these being led by a consortium of universities. Two of the projects are led by a civic team while others are led by academics and other university staff. Other characteristics of the selected sample are summarised in the table below.

Table 1: Overview of case study portfolio.

Case study name	Location	Lead institution	Team	Partners	Beneficiaries
Think Climate! Project in a Box	South Yorkshire	University	University civic team + Academics	Council, local schools	Children
Research England Hydrogen Innovation Project (REHIP)	Tees Valley	University consortium	Project specific (Academic)	Business sector	Children and young people
CLIMANIA: The Climate Action Game	Balsall Heath, Birmingham	University	Academic	Young people	University students
Greater Manchester Universities Green Careers Mission	Greater Manchester	University consortium	University civic teams + Academic	Green Skills Working Group (Greater Manchester Combined Authority and other civic partners)	University students
Climate Compass	Bangalore, India	Private sector	Academic/ practitioners	Young people	General public

Primary research

The shortlisted case studies were engaged through an introductory call, where the key point of contact from each project was asked how to best capture the impacts of their project. Most projects provided written information, online resources and a list of key people on the project for the researcher to engage. Key people (one to three per project) were engaged in 45-minute online interviews, which asked about the origin and set up of the project, key activities, intended impacts and observed outcomes. Using this information, a short case study was drafted for each project, with direct input and co-authorship from members of each project team. Payments were offered to individuals who took part in interviews, and a donation was made to each project in recognition of their time and work on the case studies.

Limitations and learning

The methodology was designed to be mindful of the capacity of case study projects to engage with the research, in acknowledgement of the limited resources and capacity that is observed particularly amongst university civic teams. Despite this, a challenge was the limited availability of members of projects to engage with the research. This speaks to an ongoing challenge in the area of climate education, which is the lack of capacity to capture and evaluate practices and learning. Often, the timelines or requirements of project funding, or the lack thereof, limits the ability to invest in evaluation and capture impacts. This limits the potential of universities and other institutions to learn from each other, making it difficult for practice to improve and evolve across the sector. This highlights the importance of exercises like this one, which aim to capture a snapshot of the valuable work that is happening across the country, with the ambition of facilitating cross-institutional learning.

However, the methodology put two key components in place to try to overcome challenges in capacity: incentive payments and dedicated time from a researcher at The Young Foundation. The use of payments was an important way to incentivise participants to make time for interviews and other tasks, sometimes enabling them to miss other paid work while avoiding loss of income. This was particularly important for the engagement of project beneficiaries who might otherwise be participating in projects in an unpaid capacity. Incentive payment for participation in the capture of projects is particularly important where practice is not otherwise aligned with evaluation. In the case of universities, where projects are not aligned to the Research Excellence Framework (REF), the Teaching Excellence Framework (TEF) or other outcome frameworks, there may be little incentive for project leaders to capture the value of their work, and this may interact in a vicious cycle with limited capacity to do so.

Additionally, this research put in place a researcher from The Young Foundation to take on the bulk of writing the case studies and reducing the ask on case study projects as much as possible. This shines a light on the potential of partnership models for the rapid capture of outcomes, including as a part of evaluation or as a way to rapidly capture 'what is working'. The time of researchers at one institution can be used to bridge the limited capacity of researchers and practitioners at institutions with live projects, ensuring that crucial information about projects is not lost.

It is likely that limited capacity on project teams also shaped the number and content of responses to the call for case studies, as not all institutions may have had the time and resource to respond. This is compounded by the reach of the call for case studies, which was limited to the networks of the individuals and institutions who disseminated it. The call for case studies was kept open as long as possible, offering flexibility to individuals who got in touch, and keeping the submission process as simple as possible. However, the timelines and submission processes may not have worked for all eligible projects, limiting the reach of the call for case studies.

4

Case studies

This section contains five case studies which have been co-written with members of each project team

THINK CLIMATE! PROJECT IN A BOX

A holistic and practical approach to supporting climate education in primary schools



Children take part in a climate march at SHU, holding posters they created

Project description

Think Climate! Project in a Box is a collaborative initiative that brings a practical and empowering approach to climate education in primary schools across Sheffield and South Yorkshire. Sheffield Children's University (CU) encourages children and young people to develop essential life skills by taking part in learning activities in their own time. CU has been running in Sheffield for more than 10 years, hosted by Sheffield City Council, where it tracks and rewards children and young people that take part in activities. Sheffield Hallam University (SHU) is a long-time partner of the programme.

The initiative sends Project in a Box resource kits for children over 12 years old to engage with outside school hours through a period of six-eight weeks. The practical learning resources are often focused on a specific theme and accompanied by training and support for the adults leading the activities.

In autumn 2023, the Civic Partnership team at SHU identified the opportunity to develop a Project in a Box focused on climate education, in line with the university's civic goals for environmental impact and education. They brought together a cross functional team to develop Think Climate! Project in a Box, a creative and engaging school resource that has been well received by schools.

Resourcing and approach

Academics Lee Jowett and Joelle Halliday were brought in to develop the content, leveraging their skills in creative education and climate education. They used the 'Research Informed Climate Education' approach, which is being developed and tested at SHU (Jowett and Halliday, 2025). The approach is a framework for teaching climate education by increasing agency and reducing eco-anxiety by localising climate change action.

Lee and Joelle developed eight activities for the box, which aim to engage children in a way that is fun, empowering, and focuses on actions they're able to take in their places. For instance, there's an activity on pizza ingredients that invites children to think of the carbon footprint of our diets, and an activity on making bath bombs to reflect on packaging and the pollutants surrounding everyday products.

Local business Loadhog donated crates to hold all the materials for the activities. The Civic Partnerships Team then engaged John Kirkby of the SHU's Design Futures Packaging Studio to develop sustainable packaging for each of the activities, along with a clear visual language for ease of use and storage. The team identified and procured materials for each activity that were sustainably sourced and could be used repeatedly. The team at CU then reached out to their member schools to offer the boxes, inviting a teacher or adult to attend training and collect their box. The response was an unprecedented level of interest, with 50 schools requesting a box.

The initial training day, in autumn 2024, saw teachers and adults from each school testing out the activities in the box as a form of experiential learning. They collected their boxes and got to work using them with the children at each school. In July 2025, the schools were invited back for a day of celebration, including 12 children from each school. Around 130-140 people participated in a lively day of activities hosted at SHU, which included creating placards and hosting a climate march as a way of empowering children to think of their potential role as activists. Participants received two extension activities, and the children were recognised for their participation.

"We heard that the noise could be heard on the fifth floor with the doors closed. That's good, that was the aim. Children were literally making their voices heard"
- Anonymous project team member

Long-term vision

The project team built in activities to evaluate the usefulness of the resources. The team conducted interview to collect feedback with a selection of teachers and students and requested photos and testimonies of the children making use of the resources. In parallel, the CU recognises, tracks, and rewards the children and young people for taking part in their activities. The CU has collected evidence that children who take part in CU activities do better at school, achieve higher results in SATs and GCSEs, exceed expected results, and make more progress than other children (Children's University, 2024). They also tend to have more confidence, motivation, and higher self-esteem. Although it is too early to assess the impact of the project, interviews have identified that children who took part in the activities feel more confident talking about climate change in a meaningful way, and empowered to take action, encouraging others around them.

“When we’re talking about climate change its often quite a negative subject. A seven-year-old child might think... so what? What difference can I make? We decided to spin that on its head and do it from a positive perspective. All the sessions and activities were about what difference can I make? It’s just a small difference, but if everyone made a small difference, it turns into a big difference” - Anonymous project team member

What’s special

- **Collaboration** this project involves different parts of university in its civic mission, with different teams contributing. The academics bring education experience to develop session plans and lead on the evaluation. CU = access to local schools, offering a robust structure with enough flexibility to fit different subject areas. The Futures Packaging Studio contributed creative, sustainable and reusable packaging. The civic team was the facilitator of long-term collaborative relationships inside and outside the university, identifying the resources and bringing them together. The team highlights the importance of the civic teams, as they do essential coordination that frees up the time of specialists to focus on their unique contribution.
- **Knowledge translation** this project achieves the translation of technical content into something suitable for children, with enough to empower and inform them without overwhelming them. Climate knowledge was also translated into content and training for teachers delivering the activities who may have low baseline knowledge of climate education. As the team notes, making something simple requires a lot of complexity behind the scenes.
- **Testing and learning** the project established feedback loops with teachers to improve the learning materials. This includes the initial Twilight Learning Session, a mid-year survey after testing the first three activities and in-depth interviews where they asked about what activities worked better and worse. The feedback will inform future iterations of the activities or box.
- **Building capabilities in schools** the team identified the opportunity to support teachers with climate knowledge and confidence. This is why the team engaged teachers from the start, ensuring they felt comfortable with the activities. Universities and other civic partners are well placed to work with schools and support teachers to develop knowledge, skills and confidence to engage children in climate education.
- **Action orientation** the content was developed to encourage actions, both big and small, from learners. For instance, an activity on pizza encourages learners to think about their diet and make small changes towards sustainability, while a student march with protest signs encourages children to think of how they might influence change. The team would like to continue developing activities in line with local challenges (like South Yorkshire’s heightened flood risk), local organisations and jobs.

RESEARCH ENGLAND HYDROGEN INNOVATION PROJECT (REHIP) OUTREACH ACTIVITIES

Supporting children and young people to be part of Tees Valley's transition to a hydrogen-based economy



Young people taking part in activities at the STEM Net Zero event

Project description

REHIP, funded by Research England, is exploring how Tees Valley can transition to a green, hydrogen-based industry in a way that creates opportunities for local people. The programme's outreach activities are equipping children and young people in the region with the skills and knowledge necessary to participate in current and future green jobs related to hydrogen.

The Tees Valley, in North-east England, is home to a long industrial history. Tees Valley has long been the UK's home for hydrogen, producing more than 50% of the UK's hydrogen for use in the region's chemical industry. In recent years, hydrogen has been looked to as an energy source, for instance to power vehicles and for industrial heating. There is an expectation that the region's hydrogen production will continue to boom, expanding into new areas. This creates green job opportunities across the region, presenting an opportunity for a green skills pipeline to support local people into these employment opportunities. Despite this, people in the region face high levels of unemployment and lower engagement in post-compulsory education and training. The project is a collaboration between Teesside University and Durham University, with Professor Nash Dawood and Professor Tony Roskilly as PI and CO-I, and Simon Bradshaw as project manager.

Resourcing and approach

REHIP considers how justice can be built into the transition to green industry, which is particularly important in post-industrial regions including the Tees Valley, which may have suffered unequal impacts of previous shift in industry. To achieve this, REHIP is conducting a series of outreach activities to link the careers that will be available in the region with the aspirations of local children and young people. From early on, the project has engaged local businesses and industrial partners, ensuring the focus of any research and outreach activities are closely linked to what is needed by the local industrial ecosystem. Industrial partners including RTC North, Inspiron Learning and Centre for Industry Education Collaboration (CIEC) based in York University have been key collaborators, participating in the scoping of research briefs and the training of research fellows. Outreach activities are crucial to the project, clustering around research fellowships, a school outreach programme, and broader public engagement.

"It's a pipeline for the future. We need people working in these STEM subjects. We need to help support the hydrogen economy. It's going to grow" - Anonymous project member

Research fellows REHIP has created a series of research fellow posts since 2024, funded by Research England and hosted at Teesside University and Durham University. The early-career researchers who were selected as fellows are working on industrial research projects focused on transportation, high-grade heat, smart energy, and the just transition. The research fellowships are collaborative and action orientated, with fellows focused on the region's challenges and opportunities towards reducing carbon emissions. For instance, a fellow is working with the police in Cleveland to map the activities of their fleet vehicles and identify which of them could use hydrogen fuel cells for power. Alongside industrial research activities, the research fellows collaborate on the delivery of activities for local schools, as STEM ambassadors

School outreach programme The project is delivering hydrogen related activities for children and young people in more than 20 school and colleges per year. Ellie Calin, Public Engagement Officer at Teesside University, has worked closely with STEM Ambassadors, community and industry partners, and the Centre for Industry Education Collaboration (CIEC) to develop a range of activities suitable for local schools and colleges. The aim is to build interest in the STEM jobs that will be accessible to them, establishing a pipeline of skills. Alongside this, STEM Ambassadors are supporting teachers in schools to create learning material and develop accessible terminology, supporting children to build the skills they need to pursue local careers in hydrogen.

In July 2025, the project ran a STEM Net Zero event in partnership with the STEM Hub, delivered by RTC North. The event ran for three days at Darlington ATMOS building, engaging more than 1,000 young people from across 30 schools. In partnership with 17 local businesses, the event showcased job opportunities in the renewable energy and sustainability sectors. The event hosted several interactive activities, including inviting participants to design eco-friendly schools by making decisions about energy sources within a set budget in a land area. Feedback from students showed that the event successfully sparked curiosity and interest in both every day green choices and pursuing sustainability-focused careers.

"As the UK transitions to a net zero future, it is vital to engage the young people who will be critical to the success of the green economy" - Anonymous project participant

Long-term vision

Although the work is still ongoing, and the impact of outreach activities will become clearer in the long term, early signs point to success in the project. The immediate impact is giving children and young people a better understanding of the range of training and career opportunities available to them, with the ambition of widening participation in hydrogen-related jobs in the region. The fellows' live projects have already delivered benefits to local businesses and organisations, and opportunities to extend REHIP's outreach activities have emerged. For instance, an opportunity has emerged to focus on the 16- to 19-years age group, supporting colleges and industrial partners to create a collaborative skills pipeline, informing a joint strategy for the region.

What's special

- **Place-based** the project is focused on supporting the region in its industrial transition to hydrogen. Outreach activities are focused on the skills and knowledge that local industry might require, creating a local skills pipeline and enabling local participate in green jobs.
- **Collaboration** the project is based on collaboration between two local universities, with a crucial role for local businesses. The project builds on long term relationships with industry and an investment of time and resource to bring local businesses into the project from early on. This enables the project to be grounded in the needs of regional industry and makes the project richer by drawing on the knowledge and skills of people across the partner organisations.
- **Coordination** having a dedicated person with project management skills has been crucial. The project manager acts like the glue between the two universities, navigating the internal processes of each one and making sure activities are on track.
- **Resourcing** having facilities available for fellows to conduct the research has been highly valued. Project activities are carried out at the Net Zero Industry Innovation Centre (NZIIC) hosted at Teesside University and also the facilities at Durham University. Another crucial resource has been the funding received from Research England and match funded by Teesside University and Durham University.
- **Research fellows** the project engages a cohort of early career research fellows that work across the two universities. Despite initial difficulties, they managed to recruit a great mix of people with a range of experiences. The project has supported them to develop skills in education, public engagement and collaboration with industry while they deliver value in these areas.
- **Knowledge translation** one of the key challenges and elements of success of the project is its role in translating information about hydrogen into something accessible to children and young people. The project has collaborated with CIEC to develop terminology and language suitable for use with primary school children. This is crucial to the delivery of activities and the transmission of knowledge and skills in an age-appropriate way.

CLIMATE COMPASS

A co-created story-finding and sharing game linking climate change knowledge with people and places



Project team and young people who trialled the game during Bangalore Design Week

Project description

Climate Compass aims to overcome dread and indifference towards climate change through a game focused on places and people

It was co-created by Depicentre Consulting and a handful of young people, and is based on the UNDP Climate Dictionary. The dictionary provides a series of key words around climate change and adaptation, with accessible definitions for the general public.

The Depicentre team wanted to build on the Climate Dictionary with stories of people's lives and experiences related to climate change, grounded in the places where they live. The team brainstormed and tested multiple formats and ideas, arriving at the current iteration of Climate Compass. It was created by Depicentre Consulting, a transdisciplinary design collective founded and led by academic practitioners Sudebi Thakurata and Probal Banerjee, in collaboration with young people.

Resourcing and approach

Climate Compass is a board game that invites participants to find and share narratives from their lives that correspond to the UNDP Climate Dictionary. Rather than engaging participants with factual knowledge, it is an invitation to contextualise and hyper-localise knowledge about climate change, reflecting collectively and opening avenues for dialogues.

"We are taught in schools about global warming happening but it's nothing that we see happening around us. In the place I live, I've seen the changes in temperature happening, the forest being cut down. I never thought of this as related to climate change" - Anonymous project team member

The board game has a spiral path and cards with real stories that reflect terms from the Climate Dictionary. Participants are invited to sort the cards according to levels of impact and against the terms in the dictionary, and to share stories from their own lives to grow the collection. The activity is accompanied by facilitated dialogue, supporting participants to rethink their surroundings and creating a sense of community around potential action.

"[We're] transforming climate discourses from their current state of distance and impersonality to their potential as immediate and deeply felt experiences, fostering a sense of hope and belonging rather than foreboding and apathy. By engaging with the narratives of those directly affected by climate change, we can transcend the abstract and jargon-laden nature of climate change awareness, which often feels distant and impersonal" - Anonymous project team member

The game was first trialled at Bangalore Design week, where young people Srushti Sahukar and Bhavya Ranjan led the facilitation. A mixed group of young people and adults participated in the game. The facilitator observed instant connection happening amongst participants and with the stories in the game. Participants saw themselves reflected in the stories on the cards because they are grounded in the familiar context of India. They wanted to add their own stories and keep building the game. They engaged in dialogue with each other, sharing their experiences and the range of emotions linked to them—both positive and negative.

"People started to get really into it. When they would read the stories, debate about it, they would bring in their own stories as arguments. It ended up becoming... an impromptu community of people sharing their experiences" - Anonymous project team member

Long-term vision

The game has had a profound impact on the young people involved in creating it. Bhavya describes how she started noticing things in her place and linking them to climate change. She now understands her local environment differently and her own potential for action. What started as a way of thinking about climate change turned into a seed of action, with Bhavya now thinking more about what she might do differently, even little things.

"The game gives a sense of community, makes people feel less alone. It sets the base for future collaboration on solutions. People need understanding first" - Anonymous project team member

The Depicentre team will continue to bring Climate Compass to new environments, enabling participants of different ages to engage with the game and contribute to its continuous growth.

"Small changes can act like seeds. If you plant lots of seeds at once, and they all start growing together, people start seeing green all around them, and they want to take part" - Anonymous project team member

The team acknowledges that climate action is complex, particularly in a place like India where not everyone might have the conditions to change. They share that it's the direction that matters: that's why they've named their name Climate Compass. Setting a direction and bringing people along on the journey is the most important thing. It's not about getting everything right, it's about understanding the world differently and going in the right direction.

What's special

- **Gamification** the game attempts to make something complex and difficult to grapple with (climate change) into something playful. The game provides opportunities for embodied learning, and makes systems thinking accessible to participants.
- **Connection** one of the key elements of the game is creating empathy which facilitates connection between people and with the stories in the game. Additionally, the game connects participants' day to day experiences in their places with climate change knowledge.
- **Knowledge translation** the project is based on the language of the UNDP Climate Dictionary, translating the terminology into the local context. The language of climate change can feel alienating, intimidating or foreign to people. The game encourages participants to make the language their own. Where concepts are communicated, it is done so in a way that is simple, human and nuanced.
- **Young people** since its set up, the project has been developed in collaboration with young people. The experience of participating in the project has been reported as inspiring and transformational for the young people involved. At the same time, the project has been enriched by the participation of young people, who have brought ideas, concepts and stories into the game development.
- **Action orientation** the game creates capacity for action by making space for reflection and connection. The game aims to equip participants with the knowledge to identify opportunities for action in their own places, reflecting critically on their potential role.

GREEN CAREERS MISSION

Bringing together students, universities, employers, and regional partners to co-create solutions for Greater Manchester's environmental challenges



Students from across the five universities who took part in the challenge

Project description

The Green Careers Mission is a groundbreaking initiative that brings together students, universities, employers, and regional partners to co-create solutions for Greater Manchester's environmental challenges. Developed by the Greater Manchester Civic University Agreement (GM CUA) partners, it enabled students from a range of disciplines and levels to work in interdisciplinary teams on real-world sustainability challenges set by industry partners and aligned with the Greater Manchester Combined Authority's (GMCA) Environment Plan. The Greater Manchester Civic University Agreement (GM CUA) brings together five local universities (University of Manchester, University of Greater Manchester, University of Salford, Royal Northern College of Music and Manchester Metropolitan University) and the Greater Manchester Combined Authority (GMCA) to work together to address regional challenges and work towards shared priorities.

As part of this, a Greater Manchester Civic University Green Skills Working Group has been set up which works in parallel to the GMCA's environmental aims and initiatives. The group is a cross-institutional collaboration of academics, professional services staff, and senior leaders from all five GM higher education institutions alongside GMCA and GM Colleges. The group aims to support the delivery of Greater Manchester's 2038 carbon neutral target, by coordinating teaching, research, and skills to prepare learners for green jobs and to contribute to the local transition. When GMCA published its Five-Year Environment Plan in 2025, the working group came together to mobilise student responses to the challenges laid out in the plan.

Resourcing and approach

The Green Careers Mission was a day of activities bringing together students from across five universities, academics, employers and regional partners to work on collaborative solutions to local challenges. It was organised, delivered and facilitated by academics, with an open invitation to students from all subject areas to apply. A range of students applied to take part, beyond those who usually engage with green initiatives. A bursary was made available to cover travel for those coming from further away, and lunch was provided on the day.

Hosted at Manchester Metropolitan University, the event was framed around the five pillars of the GMCA Five-Year Environment plan (GMCA, 2024). The project team engaged local employers including Siemens, Thomas Kneale, and Manchester City Council to frame challenges linked to climate change, air quality and sustainable resource use. Engagement of local businesses and reference to the GMCA Five-Year plan ensured that the challenges presented real opportunities for student action aligned to the needs of the region.

On the day, the 69 participating students were put in groups representing a mix of universities and disciplines, in line with each student's area of interest. Each group was given a concept brief outlining areal challenge and tasked with developing ideas for solutions and choosing how to present them.

At the end of the event, the groups of students shared their ideas to an audience of academics and representatives from local organisations and local government, who provided feedback. The content and format of the outputs varied greatly, with one group developing a short film to showcase their idea and another developing an app proposal. The framing of the event recognised student agency, providing space for them to approach their challenges differently and learn from each other.

The event generated momentum and made the students feel empowered and valued. Groups of students went on to showcase a selection of ideas to local business, civic and community leaders at the Greater Manchester Green Summit. Students who took part described the experience as transformative. The event and resulting activities brought into focus the role that different disciplines can play in affecting change towards greater sustainability.

"Projects like these are essential for bridging theory and practice, giving us hands-on experience in creating actionable sustainability strategies" - Anonymous project participant

The event-built relationships between academics at the different universities, creating capacity for them to work together. Although the collaboration was not without its challenges, it demonstrated how universities might work together on other civic challenges in the region. The universities will continue to collaborate with other civic partners through the Civic University Agreement. Additionally, the project showed the potential of bringing students together across universities and disciplines to learn from each other and contribute to solving the challenges of the region.

"The insights from all our universities made our ideas sharper and more actionable"
- Anonymous project participant

This project demonstrates how climate education can be a route not just to prepare students for change, but rather to enable them to lead change. The Green Careers Mission highlights the vital role students play as changemakers in Greater Manchester's journey towards a greener, fairer future.

Long-term vision

After the event, some of the students are continuing to work to bring their solutions into reality. The Green Careers Mission continues to support the dissemination of their ideas, with students set to present their work at major forums including the SOS UK Student Symposium, Advance HE Conference, and Manchester Zero Carbon Skills Group.

Many participants remain engaged through a dedicated LinkedIn group for ongoing networking, knowledge-sharing, and access to green careers opportunities. The project team hopes that alumni will return as mentors, embedding a culture of peer learning and long-term engagement. They also hope to see the methodology applied to other local challenges and supported by the civic infrastructure of the city. The initiative has been shortlisted for the Green Careers Award in the ACGAS Awards for Excellence 2025.

What's special

- **Young people** the project highlights students as a “massive potential lever for change”, with the potential to develop solutions and lead change in their places. The students engaged in the project are now taking forward local solutions that may contribute to the region's transition to net zero.
- **Action orientation** the project showcases an embedded, applied approach to civic climate education. Students were given the chance to tackle regional issues and produce proposals, contributing to local sustainability conversations.
- **Multidisciplinary approach** the project brought together students from multiple disciplines to work collaboratively. The resulting ideas come from a combination of disciplines and perspectives, and are strengthened by this multidisciplinary approach. Participants shared how the project showed them their capacity to affect real change regardless of their discipline.
- **Place-based** students were invited to connect to Greater Manchester by engaging directly with the challenges that affect the region, and with the stakeholders that shape it.
- **Collaboration** the project is a cross-institutional initiative facilitated by the existence of a Civic University Agreement for Greater Manchester. The project demonstrated the potential for more collaborative initiatives.

CLIMANIA: THE CLIMATE ACTION GAME

A board game co-developed by young people about the built environment and the climate emergency



Climania - The board game, printed at a larger scale

Project description

CLIMANIA is a board game focused on urban planning and retrofit, created by young people in collaboration with academics at Birmingham City University (BCU). It is an engagement, educational and discussion tool aimed at informing the public and practitioners on the role of the built environment in the climate emergency – specifically focusing on urban planning and retrofit. The goal of the game is to inform and provide first-hand experience of the contributions of the built environment to the climate emergency. The game encourages action, influencing and changing behaviours through serious play, supporting participation in mitigating and adapting to climate change in the built environment.

The project was coordinated by Simeon Shtebunaev, a doctoral researcher, and Claudia Carter, Professor in Environmental Governance and Planning at Birmingham City University. The project partners included local artists GAP Arts, Birmingham Architectural Association, Royal Town Planning Institute West Midlands branch and Anthropocene Architecture School. Following the 2021 global climate conference, COP26, they brought together 13 young people aged 14 to 18 from Balsall Heath, Birmingham, to co-design a boardgame about the built environment and the climate emergency. The game was developed as part of the 'Are you game for Climate Action?' research project to engage young people with climate change in the built environment. It was funded by the Arts and Humanities Research Council (AHRC).

Resourcing and approach

Simeon, Claudia and the 13 young people, alongside the external collaborators, came together over two months in a co-design process. They wanted to work with young people, in recognition of how critical climate action is for future generations. They targeted teenagers living or studying in Balsall Heath due to the ward's highly diverse demographic, high levels of deprivation and poor built environment. The young researchers were reimbursed for their participation in the project with vouchers.

The young people were engaged in nine workshops that began with understanding research and developing skills including interviewing, data collection, arts-based research methods, and writing. The project team shared information about the built environment and how it interacts with climate change, asking the young people to reflect on what is happening in their own neighbourhood. Then, the group moved into development and prototyping of games, using co-design to develop ideas, rules and the name of the game.

The young co-researchers were invited to lead the project with the academics acting as advisors in the facilitation of the process and development of the game. They were provided with the opportunity to consult experts to contribute to the game and keep building their knowledge. The academics facilitated relationships with architects, town planners and community members to inform the game. The game was prototyped by the team and tested in community play events, as well as with local activist groups such as Retrofit Balsall Heath. With the feedback, the team revised the game and produced the final version: an open access resource that anyone can print and play.

The project generated a game that can be downloaded, printed and used by different audiences to expand their knowledge of the built environment and climate change. The game focuses on the practical challenge of retrofitting a home, but invites players to reflect on the impact of retrofit and urban planning on climate change mitigation and adaptation, as well as individual and collaborative action. The game ends when time runs out, symbolising humanity's race against the catastrophic impacts of climate change and reminding players of the importance of acting now.

Additionally, the process of creating the game supported the development of skills and knowledge amongst the group of young people. They were able to build collaborative relationships with the academics and each other, with whom they shared power over decisions.

"I was impressed by how I become friends with most of the students that were participating. The most challenging part was getting the job done by creating a fun and knowledgeable game. The final game is awesome and mind blowing. The earth could be greener if we work together as we're the earth's protectors" - Anonymous young co-researcher

Long-term vision

The game remains available online for people to download, print and play. The project team continues to gather feedback and testimonials through a dedicated website. Climania has received recognition for its collaborative and creative approach. It was commended at the Thornton Educational Trust (TET) Inspire Future Generations Awards 2022, and received the Royal Town Planning Institute (RTPI) Award for Research Excellence in 2023.

What's special

- **Collaboration** this project is a collaboration between academics, subject matter experts and a group of young people. The input of these different groups ensures that the game has strong technical content while remaining accessible and attractive to players, especially young people. Collaborating on the game was a learning experience and an exchange of skills for all groups.
- **Young people** the collaboration with young people not only brought their valuable input into the game but also experiential learning for them. The experience of sharing power in the development of the game reflected the power that young people have to take climate action.
- **Gamification** the game teaches players about the built environment and climate change through a fun process. Multiple elements of the game reflect elements of climate change — for instance the race against time and the fact that players are not competing with each other and can collaborate.
- **Testing and learning** the game was prototyped, tested and refined in line with feedback. This ensures that the game works as smoothly as possible.

5

Cross-cutting findings

This section analyses what the case studies collectively tell us about the potential scope of civic climate education. It highlights characteristics across the projects that emerge as ‘touchstones’ for civic climate education, with a description of the unique value of each. The aim is to identify a scope that is both broad enough to contain a variety of approaches, while providing enough grounding to serve as guidance for other institutions looking to start or improve their practice. This is in recognition that each institution and each place have unique challenges and resources, and may therefore require a different approach. This work seeks to support the proliferation of good practice rather than its replication.

THE TOUCHSTONES OF CLIMATE EDUCATION

After collecting information on each of the case studies, comparative analysis was conducted to identify emerging crosscutting themes and insights. What emerges are characteristics in common across two or more of the projects which speak to the framing of civic climate education. These characteristics serve as touchstones of civic climate education, delineating a potential scope for this nascent area of work. Although they are presented separately, with corresponding examples, these touchstones are deeply intertwined.

The following characteristics emerged as key to civic climate education projects and initiatives:

Place-based

This refers to approaches that focus on the specific characteristics, challenges and resources of the place where a project is located. Place-based activity has become an increasing area of focus for civic universities (Goddard and Vallance, 2011) and is supported by Civic University Agreements and collaborative relationships in places. On the other hand, there is an increasing call for place-sensitivity in the transition to net zero, in recognition that places will experience a different transition based on local needs, resources and climate change risks (Middlemiss, L, et al., 2024).

The case study projects identified in this report are demonstrating a place-based approach to sustainability in different ways, including a focus on local challenges, creating a local skills pipeline, and customising knowledge to local conditions and needs.

The Green Careers Mission focuses on solving local sustainability challenges as set out by local authorities. This points to the opportunity for universities to make use of local transition plans and aims as a guide for the topics that might need to be included in climate education. This alignment creates capacity for students to become involved in tackling local challenges, and may enable them to participate in local green jobs.

Generating a ‘skills pipeline’ that is specific to a place is another way of making climate education place sensitive. REHIP’s outreach activities focus on aligning education on climate change with the industrial transition in the region, ensuring that the skills and knowledge gained by children and young people will be applicable to local green jobs. This generates a pipeline of local people who are ready to take up local job opportunities, generating benefits for both local people and businesses.

Additionally, climate education can use a place specific framing to make climate knowledge relevant and meaningful to people in places. For instance, Climate Compass is taking knowledge produced by the UNDP (through the Data Dictionary) and making it relevant to people in India by linking it to familiar, human stories. By tying concepts to local examples, climate knowledge can become more meaningful to learners and pave the way for local action.

Collaborative

One of the crucial components of the civic role of universities is building collaborative relationships in their places with a range of actors. These relationships allow stakeholders to align priorities and share resources, learn from each other and deliver coordinated action to address local needs. Collaboration is sometimes supported by Civic University Agreements, like in the case of the Greater Manchester Green Skills Working Group. In other cases, civic agreements or teams can support the delivery of collaborative projects, like in the case of Think Climate! Project in a Box.

The case study projects described in the previous section demonstrate the potential for collaborative working in the delivery of climate education, both within universities and with different external partners. Within universities, civic teams can facilitate collaboration between different teams and actors. Sheffield University's Civic Team, for instance, facilitated the collaboration of academics and practitioners from the Design Futures Packaging Studio to develop the content and packaging (respectively) for Think Climate! Project in a Box. The civic team played a convening and management role to set up and facilitate the completion of the project. Additionally, the civic team facilitated the relationship between actors within the university and Children's University Sheffield. This longstanding collaborative relationship creates a bridge between university developed content and local schools, unlocking impact across the region.

Civic teams can also facilitate collaboration with different local actors towards shared goals. In Manchester, for instance five universities are brought together under a civic university agreement, supporting the development and delivery of the Green Careers Mission, a joint initiative engaging students from across the five universities. Additionally, the relationship between the universities and the Greater Manchester Combined Authority allowed for a scope to be set based on local government priorities for the transition to net zero. Local businesses were also brought into the set up and delivery of the initiative.

Even in the absence of civic teams, universities can collaborate with other actors in places. REHIP presents an example of collaboration with local businesses on the design and delivery of climate education. The research fellows delivering REHIP outreach activities collaborate closely with local businesses to design the scope of their research projects and complementary education activities for local schools. This collaboration ensures that the skills developed amongst young people and children are relevant to the industrial needs of the region, creating a skills pipeline. REHIP's outreach activities also demonstrate the potential for collaboration between multiple levels of education in the development of a green skills pipeline in a place.

Universities are particularly well placed to support schools in their places to deliver effective and place-sensitive climate education. There is evidence that children across the UK are currently underserved when it comes to climate education, with inconsistent delivery of it across places and schools. This is partly driven by the lack of inclusion of climate education in England's national curriculum, accompanied by a lack of standardised guidelines, insufficient training for teachers and limited training resources (OVO Foundation, 2024). The team behind

Think Climate! Project in a Box reflected on this issue in their region, sharing that how the onus of delivering climate education is often placed on teachers without the appropriate level of support, including training for teachers and learning materials. Universities can contribute to overcoming this gap, drawing on their expertise in knowledge production and transmission. Think Climate! Project in a Box provides a valuable example of how universities can support schools and build capacity for climate education across their places.

Knowledge translation

One of the key challenges of effective climate education is communicating complex information in ways that are suitable to target audiences, place-specific, meaningful and action-orientated. Universities are particularly well placed to conduct knowledge translation, with capabilities in knowledge mobilisation aimed at different audiences. Knowledge translation is a core function of civic universities, promoted by frameworks like the Knowledge Exchange Framework (KEF) as a key form of impact. Effective knowledge translation can contribute to improving places in a range of ways-including policy and service improvement and innovation- and has been identified as a crucial tool for working inclusively through major transitions such as climate change (McNulty, 2024).

Climate change is a particularly complex topic, that requires substantial knowledge translation to be transmitted effectively to different audiences. The case study projects offer valuable examples of different forms of knowledge translation in the case of climate education, and the capabilities that may be required to support them. REHIP's outreach activities demonstrate how highly technical knowledge can be translated into child and young people-friendly learning materials. Different capabilities were drawn on for the generation of age-appropriate learning materials, including expertise in education and input from local industry. The project generated materials to engage children and young people in schools and colleges with the hydrogen activities of the region, in a way that promotes interest and aspiration. The project's learning materials also reflect place specificity by drawing on global language alongside concepts and skills that are linked to the region's hydrogen industry, setting learners up to participate in the local transition to a greener future.

Additionally, project teams highlighted the importance of translating knowledge into content that feels practical, and action orientated, as an antidote to feelings of distress from climate change. Think Climate! Project in a box generated activities that are not only suitable but fun and engaging for children, directing them towards climate action that is accessible to them. For instance, the learning material encouraged children to think of the impact of their dietary choices and the introduced them to climate activism, which they may choose to take forward as individual or collective environmental action. The material is practice based rather than knowledge based, which translates into a more engaging experience for young learners.

Knowledge translation can be a powerful tool for bringing global concepts related to climate change into a place specific and human-centred focus. Climate Compass tackled this challenge, taking high level language used globally and making it relevant by attaching it to local stories and language. The project team shared how this helped to make climate change concepts meaningful to people's lives. This project highlights that knowledge translation is relevant to people of all ages and can help make climate education accessible and meaningful. Additionally, the project team collaborated with young people on knowledge translation, sourcing and framing stories that feel relevant to other young people, as one of the project's target audiences.

One of the potential pitfalls of knowledge translation in this space is oversimplification, or approaches that reduce the potential for children and young people to take climate action. The case study projects demonstrate how meaningful activities can lead to a sense of empowerment, promoting action. However, more research is needed to understand what types of content translate to pro-environmental action.

ENABLERS AND CHALLENGES

The case study selection highlighted factors that can contribute to or detract from the delivery of successful civic climate education initiatives. These were identified by project teams, or through comparative analysis of the case studies.

Enablers

- **Gamification** this refers to the application of elements from game play to climate education. This was particularly important in Climate Compass and Climania, as examples of games with climate change and adaptation content. Both approaches use a boardgame format to transfer knowledge on climate change and adaptation, departing from typical education formats. However, this also came up as a key element in the design of material for children, for instance in Think Climate! Project in a Box, where activities were designed to be enjoyable and ludic while transmitting key knowledge. Several project teams reflected on the perceived importance of bringing lightness to a topic that can otherwise feel overwhelming and disengaging. Using gamification can break down barriers to engaging people of all ages in this and other complex subject areas.
- **Peer connection** several of the projects integrated relationships and connections between individuals as a part of their initiative. For instance, Climate Compass facilitates the sharing of stories between individuals and build connection through empathy. On the other hand, Green Careers Mission created connections between students through a shared challenge, which facilitated rapid collaborative relationships between students from different universities and degrees. Generating connections between learners can be a way of building potential for collective action and solutions to tackle the climate crisis. Green Careers Mission illustrates this particularly well, as students worked together on designing solutions for their shared place. Several of the students involved remain engaged in their projects, which may one day be delivered and may have a positive impact on Greater Manchester.
- **Young people** this group is particularly important in climate education, given that climate change and environmental action is expected to transform every aspect of their lives as adults. Additionally, young people have the potential to bring about transformative change by creating and enacting solutions. Several projects recognised the importance of young people as future leaders, engaging them in co-creating the civic climate education initiatives. Climate Compass, for instance, engaged a handful of university students in developing and delivering the game. This has had a profound effect on the young people engaged, but also positively impacted the content developed. The engagement of young people ensured that the game is suitable and exciting for other young people, prioritising them in the reach of the game. Climania also engaged young people in generating a game about the built environment. This project went beyond engaging young people to sharing power with them, giving them ultimate control over the content and format of the game.

The outcome is a highly engaging process where young people are educated on climate change while also becoming empowered to lead and enact change.

- **Children** this is another crucial group in climate education, equally expected to inhabit and shape a greener future. As discussed above, children are currently underserved when it comes to climate education, with evidence that climate education is not delivered consistently across places and schools. However, climate education for children is crucial, equipping children to navigate climate change, environmental action and green careers. REHIP, for instance, aims to engage children with the green careers that will be available in their region when they become adults. The projects target young children as early as primary school in recognition that aspirations must precede attainment. Member of the project team reflected on how STEM careers, which will be needed in the green industry in the region, may require decisions as early as late childhood. Early engagement is a way of broadening the opportunity, creating awareness and pointing children towards actionable steps to take part in green career paths. On the other hand, Think Climate! Project in a Box presents an example of broader green skills aimed at children. The education material generated by the project generates awareness and equips children to engage in action at an individual and collective level (for instance through environmental choices and activism). The project team shared how children can be a crucial entry point to households, as they may share the knowledge they acquire with their parents or other adults, broadening the impact of climate education aimed at children.

Challenges

- **Project management** several project teams reflected on the importance of project management capabilities to enable collaborative approaches to climate education, both within and between institutions. The project team behind Green Careers Mission, for instance, shared how complicated it can be to navigate bureaucratic processes across multiple universities, and how easily this can become a barrier to collaborative working. In their case, academic time was used flexibly to manage the delivery of the project across the institutions, however the capabilities and capacity are not always available. This can be particularly challenging at universities that don't have civic teams or roles to support with project management. The team behind REHIP outreach activities shared what is working for them: a dedicated project manager who is focused on coordinating activities between the two universities, facilitating the flow of resources and ensuring the project stays on track.
- **Resourcing** civic climate education initiatives can be resource intensive and may require both staff time and other resources. Several teams reflected on how their work was resourced, enabling them to take part in a successful initiative. However, there was recognition that resources often depended on the goodwill of leaders and institutions or piecemeal funding, which is not a sustainable model. For instance, SHU allowed academics to contribute their time in kind to the development of Think Climate! Project in a Box. The materials used for the educational content were funded partly by the university, and partly donated by a local business. This investment of resource unlocked immeasurable value for the 50 or more schools engaged and the dozens of children who benefitted from the materials at each school. The REHIP project team reflected on how valuable it has been to have a dedicated funded space to bring together fellows and conduct research and development activities. However, not all institutions may have physical spaces, funding or in-kind time to invest in civic climate education initiatives, which can become a crucial barrier to the proliferation of these approaches.

6

Conclusions and recommendations

Civic approaches to climate education have the potential to unlock value for learners and places, contributing to a greener fairer future. There are examples across the country and the world, including the five case study projects presented in this report, which point toward the huge value delivered by civic climate education initiatives. Given the rapidly changing nature of the climate emergency and environmental action, as well as the inherent difference between places, it is difficult to define a clear scope for climate education. However, touchstones for civic climate education have been identified above, which begin to delineate the scope of this emerging field. Alongside the identification of enablers and challenges, this emerging scope can serve as broad guidance and inspiration for other institutions and practitioners wanting to deliver meaningful climate education in their places.

The following opportunities emerge for institutions and funder to better support the proliferation of civic climate education:

- **Civic infrastructure** university investment in civic infrastructure, such as civic teams and civic university agreements, can support the delivery of effective climate education in places. This is because civic infrastructure can support collaborative relationships and unlock the flow of resources and capabilities between institutions. This can be particularly impactful in places where the institutions leading climate action, for instance local authorities, can be directly engaged in initiatives.
- **Combine civic and climate education capabilities for greatest impact** initiatives that combine the skills and capabilities of civic teams with climate and education knowledge have the potential to deliver the greatest impact. The combined skills can generate routes to collaborative working and place focused impact, delivering greater value to learners, universities and places.
- **Invest resources in civic climate education** civic climate education initiatives need appropriate resourcing to be successful. More investment is needed from universities, in partnership with national, research council and charitable funders. This includes the aforementioned capabilities in civic engagement, climate action, and education, as well as funding to support the development and testing of materials. Additionally, the funding of project managers is crucial, particularly to collaborative initiatives. Long-term funding is best, as it supports the ongoing improvement of civic climate education initiatives, for greater impact.
- **Invest in impact evaluation** robust evaluation is crucial to understand what is working where when it comes to civic climate education. Long-term evaluation is required to understand the impact on learners and places. This needs to be supported by appropriate resourcing, which is currently lacking. Impact evaluation may support the proliferation of civic climate education approaches, and encourage institutions to appropriately resource them.
- **Facilitate learning between institutions** to support the proliferation of civic climate education, impact evaluation and learning needs to be captured and shared between institutions. By sharing what is working where, institutions can maximise the potential impact of civic climate education initiatives. Given that climate change is a shared challenge between places, proliferation and the acceleration of impact is in the best interest of everyone.

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