University of Reading

INSTITUTE OF EDUCATION

CLIMATE EDUCATION AND SUSTAINABILITY ITE FRAMEWORK

Developed by:

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Introduction

Climate change is one of the biggest issues facing the planet. To tackle this threat, we must work together. We must help each other understand what's happening. Only then, will we find solutions.

The University of Reading's Climate Education Summit provided a space to start thinking about how climate education could be delivered at scale. The National Action Plan provides a clear structure to support this delivery. This framework delivers on action point 2 of our National Climate Education Action Plan.

Student Teachers across all ITE programmes at the University of Reading will be supported in developing their knowledge and understanding of the climate crisis. They will graduate with a core set of skills to support young people to build resilience and become future change makers in the climate and sustainability landscape.

This framework is initially being piloted by the University of Reading and select providers, after which the intention is that it be shared widely to support other training providers to deliver on this important work.

Aims and learning outcomes
Adapted from Thew et al. (2021)

Knowledge

The causes and consequences of climate change (IPCC, 2021a, 2021b, 2021c).

Climate change's consequences on a local and global scale, with an emphasis on different aspects of the problem having different levels of confidence and certainty, e.g. it is much easier to say things at global level rather than local.

How does climate change link with other aspects of sustainability?

What solutions are available and what are the implications of choosing between these solutions for social and environmental justice?

Furthermore, what understanding of the mitigation and adaptation will be required because of climate change?

We can do something about it now but we also will need to adapt to a different climate; some of the change is here and some will happen yet (Thew et al., 2021).

Attitudes, values and behaviours

To develop affective and behavioural skills that enable engagement with climate change and its impacts, i.e. 'approaches that cultivate integrated knowledge and global citizenship, while preparing students for curious, well-informed, big-hearted lives' (UNESCO, 2017).

This should showcase examples of, and provide opportunities for, behavioural change as UK Higher Education institutions can facilitate the process of ensuring knowledge, values and affective responses translate to action (Thew et al., 2021, p. 3).

Share BERA Manifesto for education and environmental sustainability to further enhance shared values for education and sustainability (BERA, 2021; Dunlop et al.2022).

Competences and capabilities

Enabling the learner to act and work with others to solve problems.

Developing systems thinking, strategic thinking, collaborative competency, critical thinking, self-awareness and integrated problem-solving (Ojala, 2016).

Supporting learners to critically engage with new information as it emerges and assess trusted sources – how do I know that climate information and projections are realistic, and what level of confidence should I attach? (Thew et al., 2021).

Building eco-capabilities (Walshe, Moula, & Lee, 2022) to support wellbeing and live sustainable lives.

Capabilities such as 'knowledge for action, data literacy, creativity' etc are needed to enact these changes for a sustainable future (BERA, 2021, p. 2).

Session overview/aims

Session A1 (University input) and Session A2 (School input)

Teacher Positionality

Provoking thought/overview on why we are asking these questions on climate change. Use key phrases to support learners to critically engage with new information as it emerges – key questions' relating to 'What is my positioning as a teacher?'

Session B1 (University input) and Session B2 (School input)

Climate Justice

Exploring 'What is climate justice?' Examine the intersectionality of climate justice and its impact on individuals (UN, 2015).

Session C1 (University input) and Session C2 (School input)

Climate Action – personal and collective

Encouraging personal action from both ITE students and pupils. How personal action can ripple out into collective local, national, and international action. (DfE, 2021)

Example of stimulus for the taught session

We note this needs to be phase specific but the principles driving the core aims

Session A1

Video clip from David Attenborough Witness Statement

Share the meaning of Anthropocene and how this unit of geological time is framed in the context of human interaction and impact on the environment.

Climate Stripes

Video discussion from scientists – Dr Ella Gilbert's videos are excellent.

You can also draw from the resources and videos developed for the UoR Climate Education Summit.

Encourage your students to undertake this two-week OOC developed by the University of Reading.

Provide NAEE's Manifesto as pre-reading.

Students could tap into The Green Schools Project Carbon Literacy programme. Read Case Study on West Lodge Primary School (developed by Dr N Majid) to understand the impact of this programme on pupils' carbon literacy.

Session B1

This will be based on workshops developed by Liverpool World Centre (LWC) and The Consortium of Development Education Centres (CoDEC) and delivered in Reading by Reading International Solidarity Centre (RISC). The workshops were planned using Oxfam resources on Climate Justice.

Discussion of the climate emergency linked to human rights and social justice issues. (UN, 2015).

Gender issues and the climate emergency.

Issues relating to decolonisation and therefore racial justice and climate change. This is a key climate justice issue in this debate, both locally and internationally.

It is also critical to discuss local climate justice issues and develop debate around this, e.g. air pollution and the impact this has on individual health and wellbeing. These are sensitive issues; therefore, the input at University will need to reflect this to support delivery.

Resource such as these images can be used to start a conversation about human impact on the planet.

Focus on climate activists from indigenous communities such as Carlon Zackhras from the Marshall Islands.

Etchart (2017) discusses this in her paper in Nature.

Interesting blog from Canadian Associate Professor Dr Deborah McGregor.

Session C1

Share case studies from local, national and international schools on the work they have done to take action on climate change.

Draw upon the work of Walshe et al. (2022) to enable insight into eco capabilities and how these can be fostered and developed. This is linked to the framework to support action and develop eco-resilience to reduce eco-anxiety.

Discuss issues, linked to the UN SDGs (UNESCO, 2017) and how schools are using these as starting points to develop climate and sustainability education with their pupils.

Provide scenarios to debate – such as changes that will need to be made to adapt to climate change; e.g. will sports days have to be at a different time of year?

Example of stimulus for the taught session

We note this needs to be phase specific but the principles driving the core aims

Session A2

Students complete a self-directed, phase-specific activity/sequence of activities.

This exploratory activity should aim to understand what is happening in the setting, linked to climate and sustainability education.

Session B2

Students undertake an aspect of climate justice work with their class. This could focus on use of imagery to stimulate discussion and conversation about the impact of climate change on individuals.

Local, national and international-level work to be discussed. Use of Oxfam resources to develop conversations with pupils.

Discussion of local issues linked to climate justice e.g. locality and air pollution – case of Tottenham could be used as a starting point.

Session C2

Students carry out a small project (this could be an after school club) or support the development of a project already in progress at their placement school that is taking direct, local action to support climate and sustainability education.

The work will culminate in a final annual conference with a keynote and presentations from students and school partners on the work they have developed in this area.

The work developed by students and school partners would go towards schools evidencing work for gaining climate awards for schools (linked to the National Climate Education Action Plan point 5.)

Key Questions/Reflections

(BERA, 2021 2022)

Session A1

What is our positioning as teachers?

What is our responsibility as educators in developing climate education?

Why does this need coverage in schools?

How can we inform this change?

What will support us in becoming change makers?

Session A2

Students encouraged to reflect on the tasks undertaken and observations of how their setting is supporting the development of climate education.

This could be a meeting with local climate/sustainability lead.

Session B1

What is meant by climate justice?

What impact does the climate emergency have on women?

What role does education play in supporting young people to learn about the human impact of the climate crisis around the world?

How can this link to classroom activities and curriculum ideas?

What role does social action plays when working with young people?

Session C1

What do we mean by personal action?

How can this be developed in a sustained way?

Why is individual action important?

How can we measure the impact of individual action?

What do we expect from government and other public bodies?

How can we hold them accountable on climate action?

Competences for educators for education for sustainable development (ESD)

(UNECE, 2012, p. 8; UNESCO, 2017)

All aspects of this ITE framework support the competences set out by UNESCO for sustainability.

Details of this can be found in the comprehensive report developed by Advanced HE (AHE, 2021)

Systems thinking competency

Anticipatory competency (Future thinking)

Critical thinking competency

Strategic competency

Collaboration competency

Integrated problem-solving competency

Self-awareness competency

Normative competency (AHE, 2021, pp. 20-21)

A note on how ITE programmes at the University of Reading and other institutions could plan for this work.

It is hoped that individual programmes will develop their own ideas and thinking around delivery of climate education. This could be delivered through professional studies or woven in through individual subjects. However, it is hoped that the depth and breadth of work would reflect the interdisciplinary nature of climate and sustainability education.

In terms of resourcing the delivery of this work, this would depend on the department Head of School creating capacity either at a department level of one person to lead this work or build capacity within each programme budget to incorporate and develop the work. These are localised decisions that must be thought through carefully in order to deliver meaningful experiences for all trainee teachers. A word of caution: we wholeheartedly support BERA's manifesto pledge that this important work:

"Provide students with the space and time to learn about climate change and environmental sustainability that is not linked to assessment"
(BERA, 2021, p. 2).

Enquiries

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