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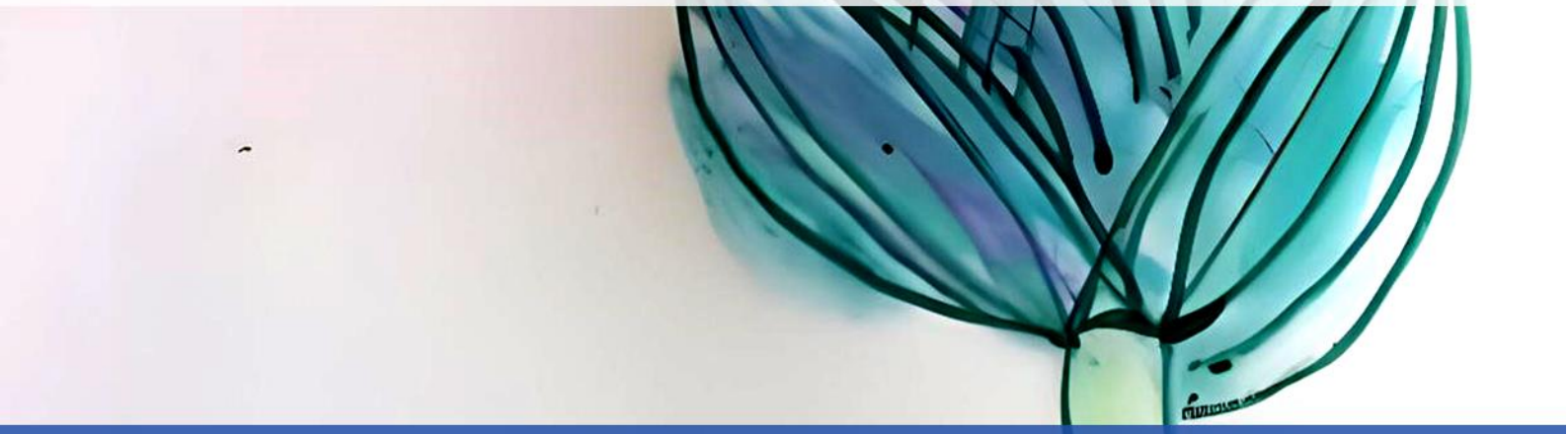

Transformative Learning for a Sustainable Future

Cathy d'Abreu, Clive Belgeonne, Douglas Bourn & Jenny Hatley

2025

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Background to report

This report has been produced by Cathy d'Abreu, Oxford Brookes University, Clive Belgeonne, Development Education Centre, South Yorkshire, Douglas Bourn, Development Education Research Centre at UCL and Jenny Hatley from Bath Spa University, on behalf of the Our Shared World Coalition of organisations.

Our Shared World is a large coalition of 183 member and 381 associate NGOs, organisations and individuals, seeking to advocate for and support the successful realisation of SDG 4.7 across England by 2030, equipping our society to create a more sustainable, fairer, peaceful and resilient world.

This report addresses the value of the term transformative learning in promoting a sustainable future. It reviews the literature relevant to this area and identifies models of practice that are relevant for schools in England.

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Acronyms

CICs	Community Investment Companies
DFE	Department for Education
ESD	Education for Sustainable Development
GCED	Global Citizenship Education
GLP	Global Learning Programme
NAEE	National Association for Environmental Education
OWOF	Our World Our Futures
P4C	Philosophy for Children
SDGs	Sustainable Development Goals
SMSC	Spiritual, Moral, Social and Cultural
TL	Transformative learning
UNESCO	United Nations Education, Science and Cultural Organisation
UNICEF	United Nations Children Fund
WWF	Worldwide Fund for Nature

Executive Summary

The purpose of learning has been interrogated in a number of international policy initiatives in education, including the UNESCO 2023 Recommendation[1], the European Declaration on Global Education to 2050[2] policy statement, and the UN Sustainable Development Goals. In England there has been renewed interest by successive governments in climate change education.

A key theme in these and other policy initiatives is that education needs to be *transformative*, but what does this mean?

This report addresses literature on the term *transformative learning*, models of practice that relate to the term, and case studies from organisations, professional bodies and schools.

Within the many interpretations of transformative learning, the work of Jack Mezirow is suggested as being influential, with him seeing the term as incorporating critical reflection, questioning assumptions, reflecting on one's own frames of reference, and being a process of learning.

There has been a considerable body of literature in recent years developing the discourses in and around sustainable development, global citizenship, and global learning, much of which refers to learning for personal and social transformation. A key figure is Stephen Sterling, who writes about the need to move from transmissive to transformative learning; to a deeper form of learning that involves looking at the world from different viewpoints.

A theme in this report is the need to recognise the emotional dimension in learning, going beyond the mere accumulation of knowledge, and to recognise the contextual factors that influence a young person's education.

A feature of the literature, and of policy initiatives and practices, is the emphasis on changing perceptions, feelings, and habits of mind. These can be seen in a number of relevant models such as 'Through Other Eyes'; 'Hands, Heart, Head and Soul'. There are numerous examples of practice and initiatives by civil society organisations and professional bodies that demonstrate that making connections to the global, and to sustainability, can make a contribution towards transformative approaches to learning.

Evidence from a range of professional development programmes for teachers, such as those from WWF and the Global Learning Programme, demonstrate how a process of learning can be transformative.

From nine case studies identified from organisations, there was evidence of common approaches to transformative learning which centred around values and competencies, self-awareness and critical reflection, collaboration, nurturing agency and action learning. Aspects of these approaches could also be seen in the 'Vision Statements' of schools.

What was less evident in the case studies was reference to emotions, an important theme in the literature on transformative learning.

[1] The Recommendation on Education for Peace and Human Rights, International Understanding, Cooperation, Fundamental Freedoms, Global Citizenship and Sustainable Development, 2023: https://www.unesco.org/en/global-citizenship-peace-education/recommendation

[2] European Declaration on Global Education to 2050, or 'Dublin Declaration'. https://www.gene.eu/declaration

1. Introduction

> "We face an existential choice between continuing on an unsustainable path or radically changing course...Education is crucial to this change of course…Yet education itself must be transformed." (UNESCO, 2024)

Around the world there has been increasing focus on how education can be a force for social and environmental change. UNESCO has been one of the leading bodies calling for a more visionary approach to education that embraces consideration of the needs of the future, as well as of today. At the United Nations General Assembly in September 2025, UNESCO presented a roadmap for education for sustainable development that stated:

> "Transformative education and learning at all levels and in all settings (formal, non-formal and informal), for people and the planet, are key to addressing interrelated global challenges." (UNESCO, 2025)

In Europe, a network of policymakers called Global Education Network Europe (GENE), has produced a European Declaration on Global Education to 2050 (GENE, 2022). We are two-thirds of the way towards the end of the Sustainable Development Goals programme, and discussions are commencing on what should follow.

Within England there has also been renewed engagement with sustainability and climate change themes within formal education through the Department for Education. Many educational organisations, charities and CICs have been advocating for a reappraisal of the purpose of education and the appropriate pedagogies needed for teaching and learning.

This research report has the potential to enrich the developments and activities taking place within England that are striving towards a 'future-fit' education. It also questions if there is a need for UK government to more closely align its plans and activities with international policy goals - be they the Sustainable Development Goals (SDGs), the UNESCO 2023 Recommendation[3] , other successful and related initiatives within Europe, and other sustainability-aligned educational endeavours.

At a time of heightened concern about the future of the planet, the re-emergence of war in Europe, and threats to democracy in many countries, there is an urgent need for educationalists to come together to discuss how to build a vision for education that is based on creating a new approach to learning, that relates education explicitly to issues of social and environmental justice, and that places sustainable development at the heart of this transformation.

In recognition of these challenges and opportunities, the Our Shared World network [4] has produced this research report to encourage and progress debate on these important questions.

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[3] Full title: The Recommendation on Education for Peace and Human Rights, International Understanding, Cooperation, Fundamental Freedoms, Global Citizenship and Sustainable Development, 2023: https://www.unesco.org/en/global-citizenship-peace-education/recommendation

[4] Our Shared World is a large coalition of 183 member and 381 associate NGOs, organisations and individuals, seeking to advocate for and support the successful realisation of SDG 4.7 across England by 2030, equipping our society to create a more sustainable, fairer, peaceful and resilient world.

The aims of this research report are to:

- To summarise the key international debates on what is meant by transformative learning, embracing a plurality of views and their relevance to educational practice within schools in England.
- To identify the relevance and importance of international initiatives that foreground transformative learning to policy developments within education in England.
- To discuss key academic, policy, and practice related literature on transformative learning and its relevance to Target 4.7 of the SDGs, and the aims of Our Shared World.
- To demonstrate the relevance of the UNESCO 2023 Recommendation.
- To identify models of good practice, including case studies from formal and informal education settings, that demonstrate and apply the principles of transformative learning; thus providing handrails and key 'compass pointers' for educators.
- To enable organisations within Our Shared World (and similar networks) to identify and promote to educators what elements of transformative learning they can offer through training.

Central to the themes of this report is the term 'transformative learning'. This term has become increasingly popular in recent years within a range of international policy initiatives and bodies of practice. Whilst the authors of this report welcome the inclusion of this term, there is concern that it is being used without discussion or clarification as to its meaning. There are dangers of the term becoming meaningless – 'transformation wishing' at best and 'transformation washing' at worst - unless there is some debate as to what is meant by transformative learning, its differing interpretations, and authentic ways it can be designed for and enabled within formal education policy initiatives.

For the last fifteen years, education in England has become increasingly commodified, and dominated by performance and measurement. This has had demotivating consequences on many educationalists. Many young people feel anxious and increasingly concerned that the current climate crisis, and the need to put sustainable development principles at the heart of their learning, is not being addressed by education policymakers, institutions or governments (Hickman et al., 2021). It is when teachers and educationalists more generally can see the social value of their work, and when learners become motivated with a sense of hope, that transformation within the profession can and does take place. For sustainable development to have meaning within education, there is a need to go beyond just making minor alterations to the curriculum - to a new approach that honours both the purpose and potential of education for creating a more sustainable world (Bourn, 2022; Hantzopoulous and Bajaj, 2021; Sterling, 2024; Wals, 2009).

In this paper, transformative learning will be interpreted in a pluralistic sense, opening educational debates to a range of voices and perspectives towards a sustainable future, and not an attempt to provide a blueprint or specific toolkit. It links personal development and change to societal change, with learning seen as a social endeavour and a social purpose. The approach in this paper builds on a range of initiatives that have taken place within the UK - and internationally - in areas such as environmental education, global citizenship, peace and human rights education and others that explicitly link education with social change (Bourn, 2022; Sterling, 2024; Hantzopoulous and Bajaj, 2021). Transformative learning should include posing questions about educational mindset shifts, how to move from passive to active learning positions, and from competitive to collaborative approaches. Above all, it recognises that there are many challenges to achieving change, and that there is a need to recognise and embrace different modes of learning and forms of both individual and collective social action.

2. Changing Global Context

The UN Sustainable Development Goals, launched in 2015, have been the basis for many education policies since that date. All countries must report on progress on the goals and, in many countries, programmes on sustainable development have been framed chiefly by these goals. They remain an important reference point, as will be shown in this report, but the international context has moved forward quite dramatically since 2015.

The world is in a much more fragile place than 2015 and concerns about the impact of climate change have led to major international campaigns to protect the planet. Young people have become increasingly anxious about their future, as one sixteen-year-old has stated:

> "It's different for young people - for us, the destruction of the planet is personal." (Harrabin, 2021)

Emerging research shows that many young people are anxious about their future (Chaaraoui, 2023; Childline n.d.). What the evidence also shows is that what makes this even more painful and frustrating for them is that those in power (adults, governments, big business) are failing to act. Young people 'feel betrayal, abandonment and a lack of care, so there is a double distress' (Hickmann et.al, 2021).

These concerns reflect the awareness that we are living in a biodiversity crisis. As David Attenborough has stated in his foreword to *The Economics of Biodiversity: The Dasgupta Review*:

> "We are facing a global crisis. We are totally dependent upon the natural world. It supplies us with every oxygen-laden breath we take and every mouthful of food we eat. But we are currently damaging it so profoundly that many of its natural systems are now on the verge of breakdown." (Dasgupta,2021: p.1)

Meanwhile, the re-emergence of wars in Europe and continual denial of human rights in many countries have led to many educationalists calling for increased emphasis on peace education and rights-based education to have a more central role within the curriculum. The election of President Trump and the rise in popularity of far-right movements in several regions of the world have led to proponents of sustainability education having to defend the scientific evidence around climate change, and to challenge attacks on human rights and xenophobia. What is meant by 'global' has become a subject of debate, and attempts at securing international agreements on climate change have become difficult.

Education has become central to these ideological debates. In the United States there have been attacks on equality and diversity initiatives within both schools and universities. In Europe there has been a resurgence of far-right ideology - and education has been one of the major targets of these groups (Giudici, et.al. 2024). Berg et.al.'s (2023) analysis of far-right political parties' education policies shows an emphasis on national identity and traditional practical skills, with teachers playing an authoritarian role.

Despite these challenges, bodies such as UNESCO have remained committed to progressing its Agenda 2030 for Sustainable Development. It has added a new benchmark in its indicators for the SDGs around embedding environment, sustainability and climate change in national curricula. This benchmark is however framed within a process of transformative education, "that nurtures among learners from the youngest age an awareness of human interdependence with nature and encourages action to protect it." (UNESCO, 2025:13).

3. Recent International Policy Initiatives

There is evidence that more and more international policymakers are conscious of these challenges and the need for urgent, radical action. In 2023, UNESCO published *The Recommendation on Education for Peace and Human Rights, International Understanding, Cooperation, Fundamental Freedoms, Global Citizenship and Sustainable Development*. It is an updating of its '1974 Recommendation' on International Education and headlines the following aims:

> "ensuring all people, throughout their life, are equipped and empowered with the knowledge, skills, including socio-emotional skills, values, attitudes and behaviours needed for effective participation in democratic decision-making processes, economic empowerment, awareness-raising and individual and collective actions at community, local, national, regional and global levels that advance peace and promote international understanding, cooperation, poverty eradication and tolerance, in order to ensure the full enjoyment of human rights, fundamental freedoms, global citizenship and sustainable development through education." (UNESCO, 2023a)

What is significant about the Recommendation is that not only does it bring together the themes of sustainable development, peace, global citizenship and human rights from the SDGs, it also adds a new pedagogical dimension, including knowledge, socio-emotional skills, and values that reflect an empowering, participatory and reflective approach to learning. Central to this is the call that 'education should be transformative', fostering the 'analytical and critical thinking skills' to understand power dynamics at all levels, and develop the skills to 'act as agents of change' and have "the capacity to evaluate and understand emerging and future opportunities and threats and to adapt to new possibilities with a view to promoting a peaceful, just, equal, equitable, inclusive, healthy and sustainable future for all". The ability to deal with conflict and seek mediation and resolution are included as peacebuilding skills. More broadly, decision-making, and creative and collaborative skills are seen as part of this new approach to learning – that 'achieves its aim by transforming society' (UNESCO, 2017).

The Recommendation also recognises the importance of respecting diversity, including knowledge systems and learning activities. Values are recognised as important, including to feel and show empathy and respect for others. This also means recognising that one is part of a global community, and having a sense of connectedness with all peoples across the planet.

Reflecting the importance of transformative learning for social change, the Recommendation emphasises themes such as "empowerment, agency and resilience: the motivation, confidence and ability to act and respond effectively, proactively, consciously and responsibly to challenges at local, national, regional and global level". This echoes the UK Department of Education's Sustainability & Climate Change Strategy 2022, that notes that the formidable challenges of climate change need children and young people to meet it "with determination, and not despair". They not only need a truthful, knowledge-rich education, but importantly "they must be given hope that they can be agents of change." (DFE, 2022).

Finally, the Recommendation notes the opportunities and challenges created by information technology and the need to be able to address disinformation and misinformation (CAAD, 2023; Government Office for Science, 2023; OECD, n.d.) and forms of hate speech (UNESCO, 2022).

This Recommendation clearly then provides a valuable pedagogical rationale for a transformative approach to learning as part of an educational strategy for sustainable development. It builds on several initiatives, particularly in Europe, that champion a more visionary, transformative approach.

In 2022, Global Education Network Europe (GENE), a network of policymakers across Europe, published the European Declaration on Global Education to 2050. It stated that:

> "Our Vision is of a world of greater social and climate justice, peace, solidarity, equity and equality, planetary sustainability, international understanding, respect for diversity, inclusion, and the realisation of all human rights for all peoples and a decent life for all, particularly the most vulnerable and excluded, locally and globally. Quality Global Education for all can play an important role in the realisation of such a world. A Europe where all people have access to quality Global Education, as a right; and in which there is a shared understanding of quality education, including Global Education, as a human right, a global public good and a transformative learning process." (GENE, 2022)

Similar themes were seen in a report published in the same year by the European Commission (2022) who state that:

> "Education for sustainable development and global citizenship has considerable transformative potential on our societies, wellbeing, economies and consumption patterns and is therefore indispensable to achieving a more sustainable EU and world. As such, it stresses its pivotal role for the realisation of the 2030 Agenda as a whole, being an integral part of SDG4 and a key enabler of all other SDGs as well as a driver for innovation, recovery, resilience and transformative action." (European Commission, 2022)

Reference to transformative learning is not new in international policy circles. UNESCO had begun to use the term a decade or so earlier in its attempts to bring together its strategies on education for sustainable development and global citizenship.

> "Transformative Education (ESD and GCED together), is an element of quality education and a crucial enabler for sustainable development. It empowers learners of all ages with the knowledge, skills, values and attitudes to address the interconnected global challenges we are facing, including climate change, environmental degradation, loss of biodiversity, poverty and inequality. It builds a sense of belonging to a common humanity and helps them become responsible and active global citizens in building inclusive, peaceful and sustainable societies." (UNESCO, n.d).

4. Changing National Context

England has a proud and strong tradition of promoting education for sustainable development. There was strong support for the field between 1997 and 2010 by the Labour government, and elements of this support continued under the Coalition government and later Conservative government. But it was only in 2022 that the Department for Education, in response to the UK government hosting the UN Climate Change Conference (COP26) in Glasgow, developed a new strategy with a focus on environmental issues and outdoor learning. The DFE Curriculum and Assessment Review document, *Building a World-Class Curriculum for All,* published in November 2025, does recognise the importance of building climate change more fully into the curriculum. However, there is no mention of wider global and sustainability issues. The terms 'sustainable development' and 'global citizenship' that were central themes of the previous Labour government's education programme, and which are important features of the Scottish Curriculum, are not mentioned once in the document, or in the government's response (Curriculum and Assessment Review, 2025; DFE, 2025).

It has been civil society organisations, professional associations, and academics who have led the call for a more radical approach to education for sustainable development - one that is transformative and goes beyond just adding content to the curriculum. In recent years there have been a number of studies that demonstrate this.

A report by Catallo, Lee and Vare (2022) called for a systematic approach to the curriculum that not only embedded sustainability, but had as its guiding principles:

- Linking thinking in a systematic way and recognising its ethical and moral dimensions and its transdisciplinary nature.
- Working towards positive futures through addressing eco-anxiety and support learners with developing the capabilities and dispositions for action.
- Promoting transformative learning that encourages systematic, creative and critical thinking, that learning in, for, and through sustainability can be transformed, and the need to encourage community engagement.

An influential report on the state of environmental, sustainability and climate change education, produced by the National Association for Environmental Education, suggested that teachers were, despite the policies of governments:

> "Addressing the social dimensions of environmental challenges, including issues of justice, equity, and power dynamics, to empower students to design equitable solutions." (NAEE, 2024:5)

The report went further and suggested there was a need for environmental educationalists to go beyond traditional teaching practices:

> "Educators must navigate tensions between conventional instructional models that emphasise knowledge transmission and reform-oriented, transformative pedagogies that emphasise personal and social transformation through environmental education. While imparting foundational scientific concepts remains important, pedagogy in climate and sustainability education must go beyond this to develop systems thinking and action competence." (Ibid.25, Salinas, 2023)

Within England, climate change education has begun to have significant influence, not only because of the policies of the Department for Education, but because an increasing number of academics are addressing this field as a potential starting point for a more transformative approach to education.

One of the most influential papers relating to this approach is by Glackin and Greer (2025:2), who suggest the following approaches as the basis for an alternative vision of education: “accepting and embracing complexity, incorporating multiple types of knowledge, reorienting towards justice, developing ecological worldviews and supporting students to bring about systematic change.”

A coalition of organisations in the UK have recently produced *The Case for Global Learning* (Global Learning Network & Development Education Research Centre, 2024). This document called for a transformational approach to education that builds on the work undertaken by many civil society organisations and professional bodies. A major focus of this document is to call on the UK government to more closely align its educational objectives with the widely accepted frameworks developed recently by bodies such as UNESCO and GENE.

The Department for Education (DFE) has continued to support and develop its strategy on climate change and sustainability, and there are elements within it that refer to transformation, hope and change. However, its main focus is on climate change and green skills. Where DfE refers to transforming learning, as with the Secretary of States’ speech at the BETT conference in 2025, it tends to be relating to the potential of technology (Phillipson, 2025). The Curriculum Review document (DFE, 2025) calls for increased emphasis on climate change in science, citizenship, geography, and design and technology, but these subjects had in the past referred to sustainable development.

From all sectors of the education community in England, be it teachers, professional bodies or researchers, there have been calls not for evolution, but for a radical rethink of the purposes of education - and to make it more relevant to the challenges of the world today.

5. Transformative Learning: Gathering momentum

At a global level, there have been consistent calls that indicate that a transformatory approach is needed in order to address the current social and environmental challenges of today. Arjen Wals, UNESCO Chair of Social Learning and Sustainable Development, notes the "avalanche of propositions currently taking root in education across the globe" that are working towards more holistic, regenerative, fundamental, and systemic change approaches, that call for deep engagement from the "worlds of education, research, governance, business and civil society." (Wals, 2021:1)

There are bodies of educational practice around the world that demonstrate elements of this desire for a more transformative approach. They can be seen in aspects of Education for Sustainable Development (ESD) and Global Citizenship Education (GCED) that promote learner-driven, real-world, community-based, action-oriented, hope based approaches (Wals, 2009; Gaudelli, 2016; Sterling, 2024; Sharma, 2018).

Wals (2021) suggests that, for learning to be transformative, dominant modes of unsustainable thinking, being, and doing need to be identified and challenged - and replaced with embedding values of social justice, environmental stewardship, and economic integrity. This involves not only exploring the factual data of world challenges, but also engaging the socio-emotional elements in education that are necessary to 'be ready, willing and able' to do something about them (Project Everyone, 2024). Identifying and reframing normalised, accepted dominant behaviour patterns requires a difficult and often painful process, creating a discomforting disjoint or as Mezirow (2009) terms it, a 'cognitive dissonance' between what we know, new information learned, and our potential responses to this.

If enabling TL is pivotal to fast tracking these efforts, effective policy making and educational practice needs not only to draw on the significant breadth of theoretical knowledge accrued from research, but also the lessons gleaned by those trying to operationalise these in practice. Unlike traditional educational approaches, TL is not simply 'done' or taught directly; it requires the facilitation of the right conditions, connections, curation and compassion to flourish. Fundamentally, this begs reflection on what it is we wish to transform, and what it is we wish to preserve, and then to act towards those ends. In this respect, TL might best be understood as a meta-theory (Hogan and Higgins, 2023). So how then can we best design for it and how can it be applied in practice?

More insight is needed into the processes of transformative learning and the steps through which individuals, groups and societies can move towards sustainability, to inform both effective policy and practice (Grund et al. 2023). From a policy perspective, the interim report of the DfE's curriculum and assessment review (November 2024) emphasised "the present failure to prepare pupils for work and life" (Phillipson, 2024), and called for evidence-based recommendations for an education that equips young people "to respond to the challenges of our changing world". Young people themselves are demanding change, not only in terms of individual behaviours, but in institutional and policy reforms, as evidenced by repeated student surveys (SOS-UK Sustainability Skills Survey 2023/2024; Neas, Ward & Bowman, 2022; Thomas et al., 2022; Jones et al., 2023). Teachers also report woefully inadequate training and support to teach issues around climate change and sustainability issues (UNESCO, 2023; Greer at al., 2023). Rising levels of student anxiety around climate change and related global challenges (Hickman et al, 2021) also point to a gap in addressing considerations around the necessary acknowledgment and emotional support for 'learning in dangerous times' (Sterling 2024). Transformative learning is gaining momentum – but how it is understood, and how it can be applied, needs urgent development.

6. Interpretations and debates on Transformative Learning

The concept of transformative learning has been well developed since the 1970s (Singer-Browdowski, 2022), with the term historically emerging from the field of adult education. Jack Mezirow, often dubbed 'the father of transformative learning', and recognised as one of the leading figures in developing TL, defined it as:

> "The process by which we transform our taken for granted frames of reference (meaning, perspectives, habits of mind, mind-sets) to make them more inclusive, discriminating, open, emotionally capable of change, and reflective so that they may generate beliefs and opinions that will prove more true or justified to guide action". (Mezirow, 2000:7-8)

From this engagement, Mezirow suggests: "Transformative learning involves participation in constructive discourse to use the experience of others to assess reasons justifying these assumptions, and making an action decision based on the resulting insight".

This approach to transformative learning implies that both individual and collective engagement are necessary, to encourage "a reconstruction of narratives and one's frames of reference, to be critically reflective and challenge one's own assumptions" (ibid., 19–20). From this, Mezirow argues that transformative learning can take different forms; from developing new ideas and thinking to processes of reflection, and questioning one's own and others' assumptions.

There has been criticism of Mezirow's work for being too individually focused and not recognising the importance of the relational, social factors (Colland and Law 1989; Brookfield 2000). This critique could also be levelled at the overfocus on consumer choice and behavioural approaches often seen in sustainability education that fail to address the social, cultural and political considerations that need challenging and changing. Mezirow argued that the individual comes first. Illeris, who developed Mezirow's ideas, saw the relationship of the individual to society and transformation through a 'sense of identity' lens (Illeris, 2014:40). Mezirow, (2009) in his later writings, gave more emphasis to experiential learning and the power of emotions. O'Sullivan, on the other hand, in his approach to transformative learning, emphasises the spiritual focus and its linkages with the environment and the planet (O'Sullivan, Morrell and O'Connor 2002), noting that "transformative education fundamentally questions the wisdom of our current educational ventures." (O'Sullivan, 2002:8).

Taylor (2009) has noted the recurrence within the literature on TL of the themes of experience, dialogue, holistic thinking, context and relationships. Transformative learning, and education more broadly here, is understood as a social, relational endeavour. What is also evident from the discourse is a recognition that transformative change is not linear, but messy and iterative - it may be incremental and take many different forms. Transformative learning can therefore be seen as the "potential to transform students' thinking and acting" (Seatter and Ceulemans, 2017, p. 47).

7. Transformative Learning and Education for Sustainable Development

> "Education can play a much more profound role in societal transformation as it is fundamental to building a society with the knowledge, skills and wherewithal to boldly tackle the environmental and un-sustainability crisis." (Greer, et.al.2024)

Despite recent research showing an increasing use of the term transformative learning in sustainable development circles (Rodríguez Aboytes and Barth, 2020), a review of the literature reveals 'transformation' has all too often been used as no more than a buzzword with little depth of engagement with its true meaning and application. Where there is evidence of deeper understanding and engagement, TL is seen as highlighting the need to move beyond current knowledge-focused and transmissive approaches to engaging transformative sustainability education.

The problematic term 'sustainable development' has its own inherent cognitive dissonance. Its goal is 'transforming society' (through the SDGs and ESD competencies), yet the SDGs' 197 targets are underpinned by GDP measurements, a contested 'economic growth narrative' and reductive, instrumentalist mapping and metrics approaches to embedding ESD. This can often be a transmissive approach in essence, as it is top-down and management led, with TL merely as a rousing soundbite. As Wals and others point out, a tension exists between radical/revolutionary transformation versus reformist transformation within existing systems. This raises the question: how transformative can transformative learning really be, given the systems it is constrained by? Some scholars outline the need to actively embrace transgressive pedagogy (Wals, 2021), or disruptive learning/pedagogy of discomfort (Boler, 1999; Zembylas, 2003), suggesting more radical action is necessary to avoid what might be termed as 'transformation washing' or 'transformation wishing' that merely rides the wave of the popularity of the term, without deeper engagement with its process and purpose.

These questions are central to education for sustainable development. If there is a need for transformational changes within existing social structures and education systems, then to what extent is transformation personal or collective and systemic? This also raises important questions around 'agency' and 'agentive power' which Campbell (2021) notes are distinct. Agency reflects the ability to act freely, which can bring about change in the individual, whereas agentive power refers to the ability to act in the face of structural constraints, thereby bringing about change in society. Vare asserts that "students in mainstream schools dominated by high stakes academic examinations have scant opportunity, power or expectation upon them to effect societal change" (Vare, 2021) - which begs further exploration of how educators approach the 'action-oriented learning' focus promoted in the sustainability education and TL literature.

While much of the literature focuses on personal change (Birdman, Barth and Lang, 2022; Redman and Redman, 2017; Shephard et al, 2015, 2021), there are others who hope and suggest that such an approach to learning can lead to systemic change (Holdsworth et al, 2020). However, as noted by Rodríguez Aboytes & Barth (2020), using the term *transformative* as a way of describing ESD can be very challenging to achieve and risks being little more than rhetoric. As Shepherd, Rieckmann and Barth (2019) have commented, there are dangers within more instrumental approaches to ESD of minimising the importance of creative and innovative forms of learning.

Several studies emphasise that the aims of ESD and transformative education are interwoven (Moore 2005; Bell, 2016; Sarabhai, 2013; Wahr, Underwood, Adams & Prideaux, 2013). As transformative learning facilitates action and social change, it can help ESD to reach its goal to educate responsible global citizens. UNESCO (2016b: 288) emphasises that embedding ESD is

thought to provide double-purpose learning. In this type of learning, students will have both the required subject knowledge and skills and will learn how to contribute to a sustainable transformation of society by living together with a deep respect for the environment and dignity for all humans.

Elements of some of these ideas can be identified in ESD as 'action-oriented learning', as mentioned above (Leicht, Heiss and Byun, 2018). In this approach, learners should be active in their learning and reflect on their own experiences to construct their own knowledge. Their experiences may be gathered from engaging in or implementing a project. To provide this, educators should create learning environments that promote learners' experiences and give them agency in their learning process. Transformative ESD aims here to:

> "…nurture in students those qualities that enable them to thrive under deeply unsettled conditions and so make productive and meaningful contributions to solving wicked sustainability problems. First, such pedagogies facilitate personal characteristics of self-awareness, self-reliance and self-confidence to act purposefully in the face of uncertainty, and dispositions of openness and adaptability to cope with complexity. Second, cognitive, functional and affective competencies are developed through practical, reflective, problem-based learning experiences in interactive, collaborative and paradigm-challenging creative learning spaces." (Davidson, Prahalad & Harwood, 2020).

Deep learning and change

One of the most influential contributors to these debates, and whose ideas inform much of the thinking in this report, is Professor Stephen Sterling. He talked about the need to move from transmissive towards transformative learning. He lists parallels between the social response and educational response to the challenges of sustainability, both of which may show progressive levels of learning as follows (Sterling 2001, p11):

- **No response** (ignorance/denial/no learning)
- **Accommodatory response** (adaptive learning, paradigm unchanged)
- **Reformatory response** (reflective adaptive learning, paradigm modified)
- **Transformative response** (critical and creative learning, changing paradigm)

In Sterling's chapter on 'Deep learning and change' he develops this theme, noting:

> "The possibility of a 'new educational paradigm' is based upon a very important distinction, between 'first order' change and 'second order' change, or between first order learning and second order learning."

First order change and learning - '*doing things better*' - take place within accepted boundaries; it is adaptive learning that leaves basic values unexamined and unchanged. We all experience this from day to day: learning how to settle household budgets, for example, does not require us to examine or change our values and beliefs. Most learning institutions are primarily engaged in this functional, first order learning where the stress is on 'information'. By contrast, "second order change and learning involve critically reflective learning, when we examine the assumptions that influence first order learning". This is sometimes called 'learning about learning 'or 'thinking about thinking', which Sterling describes as "*doing better things*".

Orders of Learning	Seeks/leads to	Can be labelled as
First order change Cognition	Effectiveness/efficiency	'Doing things better' **Conformative learning**
Second order change Meta cognition	Examining and changing assumptions	'Doing better things' **Reformative learning**
Third order change Epistemic learning	Paradigm change	'Seeing things differently' **Transformative learning**

Figure: Drawing on Sterling's work: Orders of learning

At a deeper level still, 'third-order learning' happens when we can see things differently. It is creative and involves a deep awareness of alternative worldviews and ways of doing things. He refers to this as "a change in the way the learner sees the world" - involving a paradigm change or epistemological shift. It is, as Einstein suggests, a shift of consciousness, and it is this transformative level of learning, both at individual and whole society levels, that radical movement toward sustainability urgently requires.

> "In any crisis situation, people may be 'stuck' in first order learning, continuing to do 'more of the same' which is likely to lead to breakdown; or alternatively may achieve breakthrough, which is dependent on reflective, intentional learning which gives rise to new perspectives." (Sterling, 2001 p15).

8. Transformative Learning: The educational process

Mindsets, Emotions and Messy learning

Sterling's third order learning is transformative and is suggested here to be conceived as an approach or meta theory (Brookfield, 2000). The question is: how do we design for this, and what are the essential principles of application?

A key starting point in this debate is the emphasis in both the literature and policies on mindsets - the 'meaning perspectives' or 'habits of mind' (Mezirow, 2009) that are often invisible or beneath our conscious awareness. Taking this approach, transformative learning can be seen as posing probing questions about both our individual and collective mindsets, how to move from harmful to healing, competitive to cooperative, individual to collective, and passive to active responses. Some argue this requires an 'inside out approach'; starting with self-awareness. Self-reflection is pivotal, as these moves require that we uncover, identify and consciously grapple with cognitive dissonance and the discomfort this necessarily engages. As outlined in UNESCOs 'Teaching and learning transformative engagement' (2019):

> "For transformative engagement to take place, there has to be a moment where the learner perceives a gap, is awakened to a new reality and to facts/situations that were formerly part of their lives and about which they were not aware. The learner may then undergo an internalization process, working on an observed gap. When such processes combine with a learner's understanding of how the others are experiencing that gap and there is a connection made both cognitively and emotionally, a learner may be brought closer to undertaking action and/or behavioural change. In many cases, undertaking transformative action requires a tipping moment(s), when the learner sees the need for action to bridge a specific gap" (UNESCO, 2019).

The value of this approach means that it starts to address what is often missing from the subject led, fact based, cognitive dimension of sustainability learning and global citizenship. The liminal or discomfort state is neatly captured in the model below.

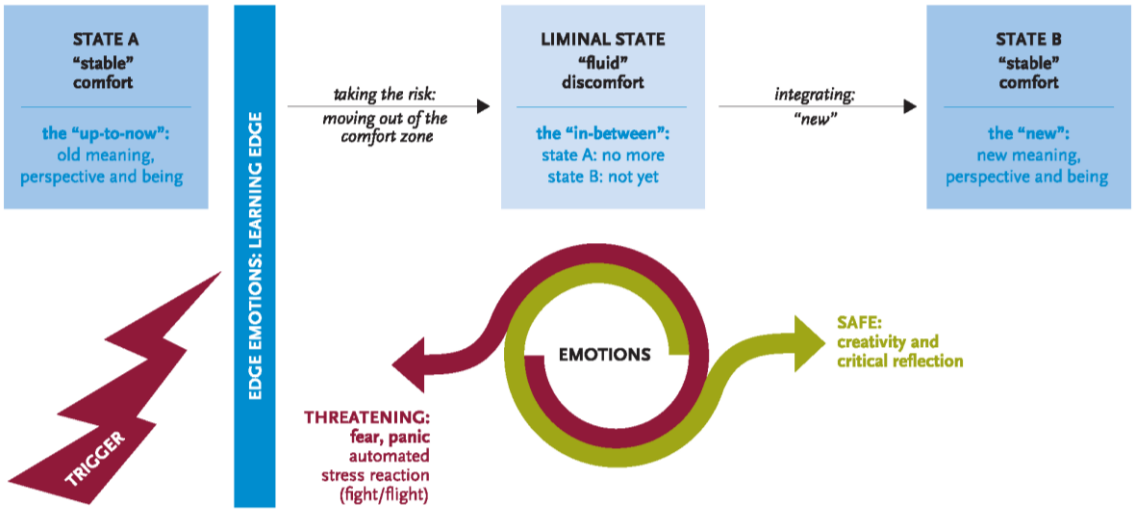

Figure: A model of transformative learning including liminality and emotions.[5]

[5] Figure from article in GAiA magazine by Förster R., Zimmermann, A. Mader, C. (2019), published under CC BY 4.0

Understandings of the interrelationships between emotions, learning, and action are complex and contested. So perhaps unsurprisingly, little concrete support and guidance for educators has yet filtered through to classroom practice. Whilst there is recognition of the need to engage with emotions in transformative learning as this paper is suggesting, it is often ignored. Mainstream education has traditionally separated the cognitive and the affective dimensions of learning - favouring logic, neutrality and 'balance' in the pursuit of scientific knowledge. Knowledge silos, educational hierarchies, and diverging disciplinary views on the role of emotions further problematise acknowledging, addressing and reflectively engaging with emotions in transformative learning processes. Including emotions within sustainability education and global citizenship for example can therefore be seen as being challenging terrain and teachers can often feel unsupported.

The transformative process is necessarily a holistic one, not merely a rational cognitive set of steps an individual takes. The long-standing assumption that cognition and thought are brain-based, computational, disembodied processes that occur separately from emotion and affect are deeply embedded in educational provisions (Maiese, 2015). Considering emotional dimensions are therefore of great relevance when designing TL opportunities. Firstly, from a duty of care perspective, as established research shows, it is essential to acknowledge, validate and support learners' emotions around existentially challenging themes and realities to support their mental health and wellbeing (Ojala, 2023; Pihkala, 2020; Singer-Brodowski et al., 2022; Grund et al., 2024; Walshe et al., 2025; Climate Mental Health Network, 2024). Secondly, emotions are integral to the deep learning processes required; through questioning current individual, collective, and structural norms and mindsets. How these emotions are approached can lead to action oriented, constructive responses if managed well, but equally can disengage, disempower and create despair (Climate Mental Health Network, n.d.; Ojala, 2012, 2017).

Criticisms can be made about the emotional element: it is too individualistic, emphasising personal wellbeing and personal behaviour changes (Singer-Brodowski et al., 2022). On the other hand, emotions are socially, culturally, and politically situated and are shaped by collective identities, social interactions and cultural narratives and norms. What is also increasingly emergent in the current literature is that further debate and research is needed. How do social media narratives around climate and sustainability impact emotions and action in learners? What is the impact of perceived powerlessness in the face of a climate emergency? How can TL approaches help or hinder emotional responses?

Engaging in a transformative learning approach for sustainable development and global citizenship therefore raises many questions, is challenging, and requires an understanding of the tensions and complexities that exist in seeking social transformation. This means, as already suggested in this paper, understanding the processes of learning and recognising that TL is messy, iterative, and part of a lifelong learning approach (UNESCO, 2020). It also demands thinking critically and looking at issues from multiple perspectives. For these processes to be effective, learning opportunities need to be conducted and developed in 'safe enough spaces' (Hamilton, 2020), where learners are supported, challenged and empowered. The learning also needs to be built on experience, opportunities, a sense of agency, and a vision of hope for the future (Ojala, 2017; Bourn, 2021; Finnegan and d'Abreu, 2024).

9. Theoretical models

There are several significant theoretical models which encapsulate many of these TL approaches. In turn, this report will discuss *Learning to Read the World through Other Eyes* (Andreotti and de Souza, 2009), *Heads, Heart, Hands and Soul* (Sipos et al, 2018), *Philosophy for Children* (P4C) (SAPERE, 2022) and *Heads UP* (Andreotti, 2012) which also emphasises the importance of critical literacy. Following this, Clive Belgeonne, former trainer for the WWF *Reaching Out* programme and former National Leader for the Global Learning Programme, provides his personal reflections on some of these principles in practice.

Learning to Read the World through Other Eyes

Learning to Read the World through Other Eyes is an open access online study programme focusing on engagements with indigenous perceptions of global issues. (Andreotti and de Souza, 2009). Below is the conceptual framework:

Figure: Through Other Eyes Conceptual Framework[6]

This model provides opportunities and spaces for questioning assumptions, thinking about issues from different perspectives, looking at the interrelationships of individual and collective forms of engagement, and ways to motivate collective social change. It foregrounds the deconstruction of current perceptions, understanding alternative framings of 'reality', critically evaluating these and seeing the nested nature of worldviews with the aim of "putting this learning into practice".

[6] Reproduced from Through Other Eyes by Global Education Derby, under CC BY-NC-SA 2.0

Heads, Heart, Hands and Soul (Sipos et al, 2018).

In the Native American notion of the Medicine Wheel, the Learning Self is seen in a permanent state of tension between the mental, the physical, the emotional, and the spiritual. All four need to be kept in balance.

Western education has traditionally prioritised the mental and the physical and has only in recent years begun to address the emotional. It could be argued that, whilst this element is undervalued, the spiritual is even more so.

Although schools are supposed to promote SMSC (Spiritual, Moral, Social and Cultural) learning across the curriculum, many teachers struggle with the spiritual, thinking it is about religion and belief systems. It can be seen as connection – connection to each other and nature, feeling part of something collective and bigger than self - a challenge in our materialistic and individualistic society.

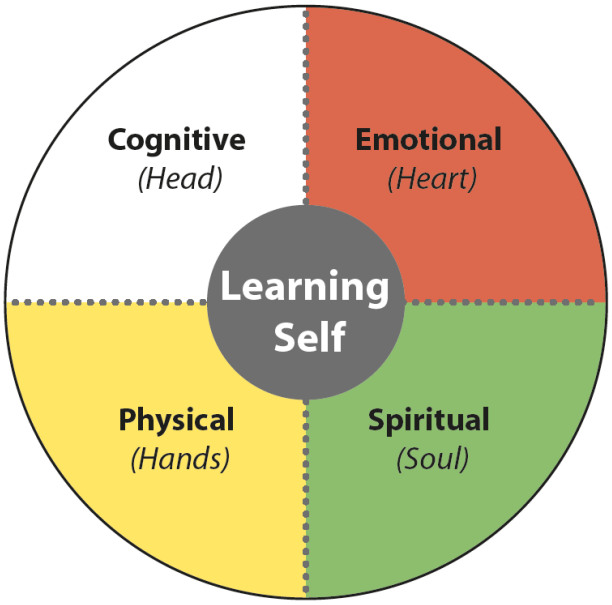

Figure: Adaptation of the 'Medicine Wheel' used by many indigenous cultures[7]

Philosophy for Children

Philosophy for Children (P4C) is a training programme for educators, devised by SAPERE, which provides reflexive space as well as enabling engagement with multiple perspectives and critical reflection - which can also lead to professional and in some cases personal transformation. Teachers are also encouraged to develop a community of practice. The teacher moves from being a leader of learning from the front (the 'sage on the stage') to a facilitator of dialogue (the 'guide on the side'). As the pupils gain confidence in developing their community of enquiry, they increasingly lead the process. Hodges illustrates the impact she saw: "Pedagogically, P4C changed how I taught, informed why I taught, and improved every aspect of teaching" (SAPERE, 2022).

[7] Reproduced from SEAL and the Global Dimension with the permission of Development Education Centre South Yorkshire

Heads Up (Andreotti, 2012)

Another dimension that may enable transformative learning is the concept of critical literacy. This has been described as “an approach that encourages students to analyse power relationships, attitudes, bias, discrimination, representation, justice, and values communicated through texts (...any form of communication such as print, audio, visual etc.). By looking at language, concepts, and images, and uncovering the ideas behind them, students can start to uncover attitudes that may otherwise be invisible.” (Diversity in Mind, 2022). A useful tool for developing critical literacy and to engage more critically with global issues is *HEADS UP*. This model addresses seven common problems (i.e. hegemony, ethnocentrism, ahistoricism, depoliticisation, uncomplicated solutions, and paternalism) and is “based on the principles that if we want to work towards ideals of justice, we need to understand better the social and historical forces that connect us to each other.” (Andreotti, 2012). Andreotti further explains:

> “HEADS UP can work as a possible entry point to these questions. It proposes that if education is to prepare people to engage with the complexity, plurality, inequality and uncertainty of our inter-dependent lives in a finite planet, we need to 'raise our game' and expand the legacy of possibilities that we have inherited: we need to understand and learn from repeated historical patterns of mistakes, in order to open the possibilities for new mistakes to be made. We need more complex social analyses acknowledging that if we understand the problems and the reasons behind them in simplistic ways, we may do more harm than good. We need to recognize how we are implicated or complicit in the problems we are trying to address: how we are all both part of the problem and the solution (in different ways). We need to remember that the paralysis and guilt we may feel when we start to engage with the complexity of issues of inequality are just temporary as they may come from our own education/socialization in protected/sheltered environments, which create the desire for things to be simple, easy, happy, ordered and under control.” (Andreotti, 2012).

HEADS UP can be used to start conversations about local/global initiatives (documentaries, campaigns, teaching resources, etc.) that may inadvertently reproduce seven problematic historical patterns of thinking and relationships.

The seven common problems are detailed in the table overleaf, and are captured in the project title: **h**egemony, **e**thnocentrism, **a**historicism, **d**epoliticization, **s**alvationism, **u**ncomplicated solutions and **p**aternalism.

HEADS UP in Practice

The research project *Teaching about ethical global issues* used the HEADS UP tool in workshops with secondary teachers in England, Finland, and Sweden to explore difficult questions about the profound inequalities at the heart of unsustainable development.

The research findings concluded that teachers are eager and willing to take a more critical approach to the teaching of global issues. Further, they find their students appreciate both being challenged by complex ideas and deeply engaging in ethical considerations around global issues.

Hegemony (justifying superiority and supporting domination)	a)does this initiative promote the idea that one group of people could design and implement the ultimate solution that will solve all problems?	b) does this initiative invite people to analyze things from different perspectives, including complicities in the making of the problems being addressed?
Ethnocentrism (projecting one view as universal)	a) does this initiative imply that anyone who disagrees with what is proposed is completely wrong or immoral?	b) does this initiative acknowledge that there are other logical ways of looking at the same issue framed by different understandings of reality?
Ahistoricism (forgetting historical legacies and complicities)	a) does this initiative introduce a problem in the present without reference to why this problem exists and how 'we' are connected to the making of that?	b) does this initiative offer a complex historical analysis of the issue?
Depoliticization (disregarding power inequalities and ideological roots of analyses and proposals)	a) does this initiative present the problem/solution as disconnected from power and ideology?	b) does this initiative acknowledge its own ideological location and offer an analysis of power relations?
Salvationism (framing help as the burden of the fittest)	a) does this initiative present helpers or adopters as the chosen 'global' people on a mission to save the world and lead humanity towards its destiny of order, progress and harmony?	b) does this initiative acknowledge that the self-centered desire to be better than/superior to others and the imposition of aspirations for singular ideas of progress and development have historically been part of what creates injustice?
Un- complicated solutions (offering easy and simple solutions that do not require systemic change)	a) does this initiative offer simplistic analyses and answers that do not invite people to engage with complexity or think more deeply?	b)does this initiative offer a complex analysis of the problem acknowledging the possible adverse effects of proposed solutions?
Paternalism (seeking affirmation of authority/ superiority through the provision of help and the infantilization of recipients)	a) does this initiative portray people in need as people who lack education, resources, maturity or civilization and who would and should be very grateful for your help?	b)does this initiative portray people in need as people who are entitled to disagree with their saviors and to legitimately want to implement different solutions to what their helpers have in mind?

Figure: HEADS UP tool: Common problems.[8]

A thematic analysis of the data identified three key findings:

- teachers are both enabled and constrained by curriculum, and many find strategic ways to take a critical approach.
- teachers see the role of colonialism in global issues as both important to acknowledge and challenging in practice, and they could use further support and resourcing.
- teachers face an overwhelming number of relevant materials and want resources that can be adapted to current teaching in order to deepen engagement. (Pashby et.al., 2019)

Some key principles from the models in this section include important signposting for engaging transformative learning. Firstly, the need to intentionally challenge dominant systems and related assumptions, through openness and engagement with multiple perspectives and worldviews. This requires a dialogic approach that engages co-inquiry and collaborative pedagogies to provide opportunities for reflective analysis and practical engagement. Secondly, a holistic learning approach that nurtures and balances the 'head, heart, hands and soul' to support both critical and emotional engagement, enabling supportive structures for 'thinking otherwise' (Andreotti, 2015).

[8] From the open access journal Critical Literacy: Theories and Practices.

Personal reflections: Two training and professional development programmes for transformative learning (Clive Belgeonne, DECSY)

There are considerable bodies of evidence from many programmes run by civil society organisations. Two however are highlighted here as examples: the World Wildlife Fund (WWF) *Reaching Out Programme* and the *Global Learning Programme* (GLP). These move from initial awareness raising to not only challenging existing preconceptions, but recognising the need for systemic change and taking steps towards enacting it. This aligns with Sterling's notion of 'Third order change' or 'Transformative learning' (Sterling 2001).

WWF 'Reaching Out' teacher training programme

I took part as a trainer in the WWF 'Reaching Out' teacher training programme. I do believe a significant number of those attending reached 'third order change', as it was an immersive residential experience. They arrived on Friday evening where the initial session challenged a lot of issues around the status quo, making them think about stark choices facing humanity. They then had a day and a half of critically reflective learning around sustainability, with supportive trainers, which helped them to make sense of the initial challenges they had been exposed to and make some sense of it all for their own educational context. They went back to their educational setting and had three months to carry out a sustainability education intervention - and then come back for a weekend of sharing and reflection. I think many were personally as well as professionally transformed.

Global Learning Programme (GLP 2013-2018)

The GLP was a national programme that aimed to give teachers the confidence to engage in global learning through setting up learning hubs (Expert Centres and Partner schools). Expert Centre Coordinators went on a two-day residential training to think about what sort of competences the young people they are teaching will need to survive and thrive in the 21st century and beyond - and whether our current education system enables the development of these competencies. They engaged with global learning issues in depth and were made familiar with a range of training materials to use with their networks. Teachers reported being keen to attend these network training sessions to get inspiration from like-minded colleagues. The GLP noted the level of motivation that teachers felt before engaging meaningfully with global learning to how they felt afterwards (Bentall & Hunt, 2018).
I developed these points further in a blog (Belgeonne, 2023) - summarised in the figure below:

Describing day to day context and before GLP	Describing global learning / GLP
Downtrodden Downhill spiral Bogged down Disheartened Bored A jumble, a mess Pressures Lose sight of teaching Rut Teaching the same thing	Best year of my teaching career Exciting Given me another dimension Made a difference Given me a new boost I really enjoy it Passionate Inspired me I'm much more enthusiastic Life mission *Something I have waited all my life to arrive* it's like a bright spark

10. Case study evidence: Examples of practice

The following case studies present examples of transformative education in practice—spanning primary to adult learning, across formal and informal settings, in local and global contexts. Despite their diversity, they share common characteristics that align with transformative learning theory and Sustainable Development Goal 4.7 (Quality Education for Sustainable Development and Global Citizenship). The case studies were submitted to Our Shared World in response to a call for evidence from organisations within the network that believed their practice to have been transformative. They were therefore identified by leading educators, researchers, educational charities, NGOs and CICs in sustainability education fields[9] and are discussed here in relation to:

- What transformative learning looks like on practice
- What key commonalities are shared
- What challenges/areas for development are signposted

Key themes in Transformative Learning practice and core approaches

From the case studies, several themes emerged that point to core approaches for designing transformative learning (TL) processes, which align with the theoretical research on TL discussed earlier in this report (see Section 9).

Collectively, the case studies reveal important commonalities in the educational design and delivery of TL. They do not present chronological steps but rather highlight key ingredients that emerged as transformative in their distinct contexts. Many of the identified themes overlap, have interdependencies, and serve to reinforce each other.

Commonalities in Transformative Learning processes

1. **Enabling self-awareness and critical reflection**
2. **Engaging sustainability values and competencies**
3. **Fostering collaboration: moving from individual to collective, relational learning**
4. **Nurturing agency through authentic, real-world action-oriented learning**

[9] Global Action Plan, The Museum of Climate Hope Oxford University, Thoughtbox Education CIC, the Country Trust, SEEd (Sustainability and Environmental Education charity) Changemakers and Young Changemakers programmes, Catalyse Change CIC, Our World Our Futures Project, P4C Jan Hedge, WWF Reaching Out Programme

1. Enabling self-awareness and critical reflection

> "Self-awareness is regarded as essential in relation to sustainability" (UNESCO, 2017, Brundiers et. al., 2021)

One of the most significant features across all case studies was the focus on enabling critical reflection and self-awareness as a key step towards exploring the 'meaning perspectives' or 'habits of mind' that drive current normative and unsustainable behaviours.

One example of this is Global Action Plan's (GAP) *Good Life Schools* programme. GAP's programme advocates taking action on "the systems that harm us and our planet" through reflection on consumerism, as one aspect of unsustainable lifestyles. The project saw 75 students, guided by teachers, using the Good Life Schools changemaking process "to encourage self-awareness and self-reflection on normalised consumer lifestyles", enabling young people to "build resilience to consumerist pressures and take action to create wellbeing-centric, low-consumption communities." Together, they explored the harms of consumer culture on human and planetary health and reflected on "what actually makes a good life". Each group then worked collaboratively to create a Good Life Charter – a set of published commitments – for their school. GAP describes the impacts of the project as having had "a transformative impact on young people's perceptions" through enabling them to reflect on "who they are and what they value in life."

A further example of working with self-awareness can be seen in the work of the CIC Catalyse Change, who run a sustainability empowerment and green careers programme for young women and non-binary changemakers aged 18-30. Their *Catalyst Bootcamp*, run over three days at Bristol University, supports young people to identify and set goals for their sustainability career journey. They embrace a personal and career development focus that "actively combines and prioritises the Inner Development Goals (IDGs) as much as the Sustainable Development Goals (SDG) work", the first goal of which is 'relationship to self' (IDGs, 2025). Their transformative learning approach explicitly acknowledges "the power of inner development to impact global challenges faced by humanity". This 'working from the inside out' process identified transformations in the areas of "sustainability skills, knowledge, confidence, and wellbeing".

Thoughtbox Education's *Triple WellBeing*® model introduces the "core practices of self-care, people-care and earth-care". Thoughtbox reinforces the importance of self-awareness by directly linking personal change to social change. They highlight the importance of "cultivating the inner foundations of self-awareness and self-compassion" alongside strengthening inner resilience and agency. Delegates noted "the significant impact it had on their mindset and behaviours".

Finally, The Country Trust encourages "a change in self-perception". Their *Discovery visits* to a working farm for primary age groups from areas of disadvantage, host activities and experiences developed to support curriculum learning and/or the social and emotional needs of the group. They report the visits "can impact children's belief in themselves as participants in the world, and agents of their own lives as learners". Through this development of self-awareness, they report that "children's worldviews can be transformed".

Across all case studies, self-awareness and critical reflection are consistently positioned as core enablers of transformative learning. This reinforces the assertion that transforming mindsets and worldviews requires not only external knowledge, but also inner development, intentionally creating space for reflection, personal value clarification and emotional engagement.

2. Engaging sustainability values and competencies

Sustainability values and competencies frequently emerged in the case studies as highly relevant when designing TL opportunities. As UNESCO state:

> "There is general agreement that sustainability citizens need to have certain key competencies that allow them to engage constructively and responsibly with today's world. Competencies describe the specific attributes individuals need for action and self-organization in various complex contexts and situations. They include cognitive, affective, volitional and motivational elements; hence they are an interplay of knowledge, capacities and skills, motives and affective dispositions. Competencies cannot be taught, but have to be developed by the learners themselves. They are acquired during action, on the basis of experience and reflection." (UNESCO, 2017, p10)

Frameworks such as Global Citizenship skills and sustainability competencies have gained prominence. UNESCO's (2017) ESD competencies emphasise the cognitive, affective and behavioural aspects of sustainability learning (Sposab and Rieckmann, 2024) and can be seen in figure 1.

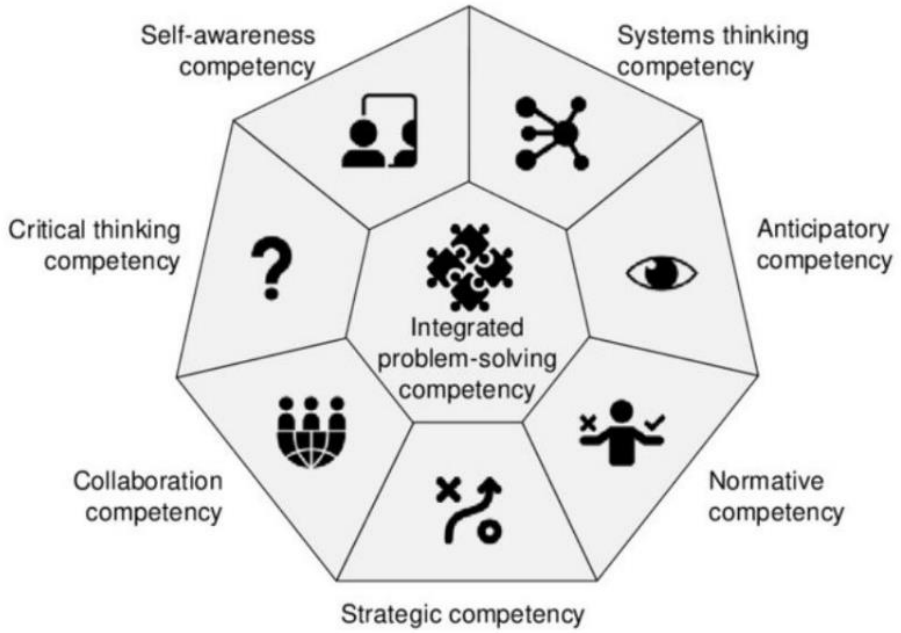

Figure: Schematic illustration of the UNESCO key competencies framework.[10]

Developing sustainability competencies is seen as an integral part of the process of going beyond merely acquiring knowledge to developing an environment that enables the "ability and willingness to take action." (Vare, 2021).

In 2018, PISA developed the Global Competence assessment that helpfully illustrates holistic links between sustainability knowledge, values, skills and attitudes - vital to enabling transformative learning experiences.

[10] Figured reproduced under Creative Commons licence CC BY-NC-ND 4.0 - from Rosén, A., Edström, K., Gumaelius, L. et al. (2019). Mapping the CDIO syllabus to the UNESCO key competencies for sustainability. In *Proceedings of the 15th International CDIO Conference*, Aarhus University.

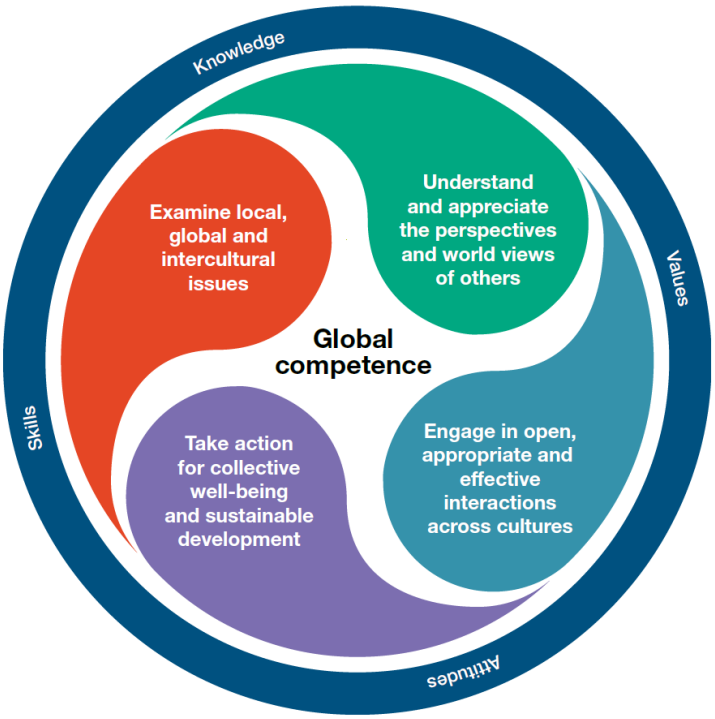

Figure: The dimensions of global competence[11]

These are acquired through the application of knowledge in meaningful situations and help deepen learning and turn knowledge into action. They require the development of the right attitudes to apply the knowledge (Curriculum Foundation, n.d.). Some ESD competencies are more recognised in traditional educational arenas, such as critical thinking and collaboration skills, others are an 'ongoing blindspot'- systems thinking literacies for example (Demirci et.al., 2024) and normative competencies that invite challenge and critique of systemic issues outlined earlier.

Some case studies are particularly explicit in naming and developing a comprehensive set of sustainability competencies, while others demonstrate the development of many of these through their transformative learning approaches, even if not explicitly labelled as such. These are just two of the many frameworks that have been developed and engaged within educational circles and are used to provide a helpful visual framework of reference here.

Examples of holistic sustainability competency development

The Sustainability and Environmental Education charity SEEd run an adult *Changemaker* course that explicitly foregrounds competencies "underpinned by a Learning for Sustainability (LfS) educational framework, that includes exploring worldviews, systems thinking, futures thinking, socially critical thinking, participatory approaches, and developing understandings and competencies around change – changing others, behaviours, places, systems". They explain how these are enabled: collaboration skills through group working within and beyond organisations, strategic thinking and integrated problem solving explore "the system in which their institution sits" to open up transformative spaces for "ideas and possible areas to work on for the change needed". Normative competency is encouraged through "reflecting on worldviews and the ethical dimensions of sustainability".

[11] Figure reproduced from Organization for Economic Co-operation and Development. (2020). *PISA (2018) Full Results volume VI, Are Students Ready to Thrive in an Interconnected World*. OECD.

On a similar basis, SEEd's *Young Changemakers Programme* worked with Dr Paul Vare of Gloucestershire University to develop a set of Sustainability Competencies against which students could be assessed - to establish the specifics of their learning and the 'soft skills' they developed. SEEd note that "for each student the impacts will be seen for themselves as they compare their initial competency survey to their final one". This assessment evaluation provided a rich data set allowing the programme to record, analyse and evidence the impacts of competency development work with learners.

Thoughtbox's *Triple WellBeing*® framework also reports that it models professional, organisational and systemic transformation specifically through a '9 core competency-based' approach employing "a Head, Heart, Hands model of learning" (the knowledge, attitudes, and skills model outlined previously). They see these competencies as essential; "nourishing the connections between ourselves, others and the rest of the natural world, we can transform education into a nourishing, empowering, relational place which equips educators and learners with the knowledge, skills, practices and mindsets for a flourishing and thriving future". The competencies they focus on are self-awareness, self-care, resilience and agency; social awareness, compassion and citizenship; and environmental awareness, compassion for nature, rewilding and regenerating are the competencies they focus on, noting these are interconnected practices - a core message of competency models in general.

Catalyse Change further highlights the benefits of blending cognitive, affective and behavioural aspects of their transformative approach, noting "significant transformations were identified in the areas of sustainability skills, knowledge, confidence, and wellbeing". The Country Trust also headlines the sustainability competencies: "anticipatory skills, self-awareness, empowerment and agency" which they aim to develop through their Farm Visits. These are structured through developing some basic capabilities (sensory observation, questioning, assessing risk) and supporting children to explore the world through scaffolded experiences giving them "the space and time to make their own connections".

Finally, *The Museum of Climate Hope*, a museum trail and digital learning experience across the University of Oxford's gardens, libraries and museums, implicitly engages the sustainability competencies of critical, futures thinking, systems thinking and creative problem solving approach by engaging 'interdisciplinary', 'creative' and 'solution-focused learning experiences' that encourage constructive engagment with the uncertainty and change related to nature and the climate crises.

These case studies identify that designing for and developing these values, attitudes, and mindsets alongside subject knowledge is a critical part of a TL process.

3. Fostering collaboration: moving from individual to collective, relational learning

Central to all the case study examples was the relational dimension of transformative learning, emphasizing relationships, connection, and collaboration with others headlined in the literature, where learning is understood as a co-constructed, dialogic and collective process that transforms both individuals and their communities (Sterling, 2011; Wals, 2015; Walshe, 2020; VanWynsberghe, 2022). Moving from a focus on individual actions, to those that are developed through relationships with others and the more-than-human world, was presented as a key vector for transformative learning educational design. Collective, relational learning is reflected in the 'Whole School Approach' ethos, a central ESD theme since the early 90's (Tilbury, 2022) that champions engaging all members of a learning organisation and the wider community in which it operates.

SEEd's *Young Changemaker Programme* embeds a relational approach that connects secondary school students with a range of community stakeholders, including environmental and community organisations, businesses, and local authorities, on action learning projects they design and develop themselves. SEEd reported that the transformative learning impact was that "students realised how solutions and projects were often to do with people rather than technological solutions". SEEd's *Adult Changemaker Programme* similarly deliberately engages a broad range of participants from teachers, lecturers, educators, NGOs, and small businesses through participatory, collaborative action learning projects they see as foundational to TL. The process of exploring 'how change happens' and 'what works and what does not' through relationship building and co-creation with others is a key transformative element. This, they note, is enabled through the process of co-learning and collaborating with others, not the production of a successful project outcome. They note that modelling collaborative, participatory co-created approaches is essential to successful TL.

GAP also explicitly champions relational learning through their 'whole-school community approach'. Here, partnership with the London Borough of Hammersmith and Fulham and a cohort of five west London secondary schools illustrates the importance of engaging educators and learners with community outside the formal curriculum and classroom. The collaborative co-creation of 'a good life charter' reflects the importance of scaling up self-awareness of the individual, outlined above, to collective action taking.

Oxford University's *Museum of Climate Hope* (MOCH) provides an illustration of what relationship building with the wider community can achieve when connecting museum educators and curators, researchers in the Environmental Change Institute, and teachers and students from schools in Oxford. It illustrates the role culture and cultural institutions can play in fostering transformative learning opportunities in the community through reframing stories related to sustainability and global citizenship in a non-formal educational setting.

Our World Our Futures (OWOF), a cross-curricular Environmental Education and Global Citizenship project, connects researchers, primary school teachers, and children from seven schools across the UK and the Maldives, to work on a shared environmental art project. They report that connecting children and building global relationships has had a transformative impact through sharing understanding of varied contexts and worldviews. They found "the children learned about the others' environments, and also gained a new appreciation of their own - they had previously taken woodland animals or mangrove swamps for granted, not realising they were unique and special ecosystems. They also gained understanding of the interconnectedness of the world." (OWOF, 2024)

Strongly connected to the theme of collaborative relational learning, a few studies outline the importance of mentors and mentorship for TL, noting that these ongoing relationships amplify connections and help develop ongoing support networks where connections and relational learning can flourish and develop. *Catalyse Change* for example reported their Bootcamp nurtured "strong sustainability support networks, both peer and intergenerational" noting that "many are still friends and actively support and advocate for each other".

Integral to all the TL case studies therefore was the importance of connectedness, collaboration, communication, and community, both within and beyond school environments. Learning is a relational endeavour and moves sustainability learning beyond individual actions and personal behaviour change to a relational learning environment where understanding the worldviews, realities and mindsets of others can be calibrated, reflected on, and drive transformative learning experiences.

4. Nurturing agency through authentic, real-world action-oriented learning

Another recurring thread common to the studies submitted was the case for empowering learners through developing their sense of agency and both the 'ability and willingness' (Vare, 2019) to take action. A key question which might help frame our thinking in this area is Biesta's question for educators and learners "What is the world asking of us?" (Biesta, 2025). Building on Freire (1970) and hooks' (1994) work on emancipatory education, authentic, real-world action-oriented learning forwards the idea that learning needs to be context based, theory informed and critically, and enable real world 'response-ability' (Sterling and Martin, 2019) on the part of the learner. As pointed out in Section 3, the recent UN Recommendation (2023:5) defines TL as a process that "involves co-created teaching and learning that …motivates and empowers [learners] to reflect critically, become agents of change and protagonists of their own future, enabling… actions at the individual, community, local, national, regional and global levels". The scaling up of individual to collective agency is described as pivotal, and intersects visibly with the theme of collaborative, critical, relational learning discussed above.

Learner *and* educator agency

The learning processes described in the case studies challenge the more traditional roles of teacher as sage, leader, or expert. Traditional didactic approaches, with the teacher at the front of the classroom, 'delivering' information, limits the engagement of learners seen as necessary for deep learning. Enabling agency brings together the key ingredients mentioned above for TL and is a pedagogical approach which engages learners with their own, others, and the wider human and non-human world, as a key enabler of transformation.

Multiple case studies reference the importance of learner agency, advocating 'learner/student led' (GAP), 'child-driven' (OWOF), 'student directed/led' (SEEd) learning processes, promoting the 'learner as agent' who can take "ownership of their learning" (The Country Trust). GAP summarises that "student-led, project-based and regenerative learning pedagogies (that sit at the heart of Good Life Schools Project) have had a transformative impact".

Broadening this theme to educator perspectives, OWOF teacher feedback reported this more learner centred approach to teaching was "liberating for them, and engaging and empowering for the children". One teacher reports: "The freedom has been amazing - what was really nice for me actually, for my practice, was acknowledging 'What are the kids telling me that they want from this?'". OWOF's TL process engages a model of environmental education that mobilises and "foregrounds children's knowledge, concerns, future thinking and activism". Through digital sharing of art and other texts, children communicate their knowledge and ideas around the following four themes: 'Where we live'; 'Something we'd like to change'; 'Our future space' and 'Making a change'. OWOF outlines the transformative impact of empowering children by foregrounding their agency, noting "the children learned they can make a difference in the world and that their voice can have 'transformative power'". An enabling factor was continued curiosity from the teacher, which resonates with Biesta's key question: What does the world want from us?

Jan Hedge, utilising the *P4C* framework introduced above, states the vital importance of a teacher "adopting the role of co-inquirer" in reflections on her teaching practice. This highlights that the TL process is not confined to the learner alone. Philosophy for Children (P4C) outlines "an educational process that engages children and young people in dialogue about things that matter to them". Jan describes how the teacher acts as facilitator to enable learner agency noting the "P4C gave me a framework in which I could hold open and inquisitive and curious space for my pupils, I could cast aside the role of 'having to be expert', and continue to be both learner and co-inquirer".

Examples of agency building can be seen in SEEd's *Changemaker* programmes that report that individuals feel empowered through the process of designing, developing, and delivering their own

action learning projects. “Given the right design, philosophy, support and sources of information, young people are able to devise creative and innovative responses to the issues that particularly concern them”. They also encourage the co-inquiry role of educators, commenting that “the teachers and facilitators learn alongside the students.” (SEEd, Young Changemakers).

Catalyse Change similarly guides participants in their Bootcamp to actively identify and set action-oriented goals for their green or climate career journey. OWOF sets students creative art tasks that allow them to envision more sustainable futures. Thoughtbox’s ‘Making a Change’ asks each of their attendees to make a pledge at the end of the three-day Summit, to take back into their work and their personal lives and enact. Follow-ups a month later showed these action approaches “had created ripples of transformation and connection”.

Case studies consistently revealed that learners gained a sense of agency when they were actively supported to initiate and lead change within their own contexts (OECD Learning Framework, 2030). Multiple studies showcase how the specific dimension of action-oriented learning through personally relevant, place-based, real-world engagement enhances TL and is an element that all ESD competence frameworks appear to have in common (Corres et.al., 2020).

It would seem then that encouraging agency and empowerment through real world learning is not an optional, but rather an intrinsic element of the TL process:

> “Research shows that a participatory, democratic approach to learning is key to encouraging students to act on the knowledge they acquire. This kind of education is not about concepts and facts, but rather about stimulating reflection on the causes and effects of climate change through exchanges with peers. Participatory learning helps students develop critical and independent thinking skills and increases their sense of political agency, allowing them to imagine a different future and take action towards it.” (Malala Fund, 2021)

Key takeaways on the case study commonalities

These themes reveal that transformative education is not a specific method, but instead a mindset or approach - one grounded in developing wide sustainability values, competencies and the willingness to put these into action. Enabling self-awareness and critical reflection, fostering collaborative, relational learning and nurturing agency through authentic, real-world active learning opportunities surface as central to TL processes in the case studies.

Ways in Which Schools are Making Reference to Transformative Learning

Schools are conscious of the importance of their role in equipping their pupils to increase their knowledge and understanding about the world, to develop skills to make sense of the challenges they face, to have a values base that is rooted in compassion, hope and social justice, and to equip them to be active participants in society. They face challenges in terms of the constraints of the national curriculum, forms of assessment, and inspection, but many teachers come into the profession because they want to make a difference. Many schools have promoted and used the SDGs

as ways to introduce global and sustainable themes. This can be seen at Silloth Primary School[12] in Cumbria where children:

> "learn about the connections we have with people around the world, observing the similarities and differences and celebrating the diversity the world has to offer. As we live in a geographically isolated, rural area, many of our children have little experience of the diversity of Britain and beyond. Children are taught that they can make a difference and make change in the world and are encouraged to 'THINK GLOBAL, ACT LOCAL'."

Stockport Grammar School[13] sees the SDGs as a way of linking environmental themes such as biodiversity, water and waste to global citizenship. "Global citizenship is embedded in the day-to-day life" of the school.

An indicator of the importance schools give to global and sustainability themes can be seen if it is included in their mission statement. Belmont Primary School[14] in Derbyshire is a good example of this with their values and mission statement includes:

- *To develop an understanding of the world and a tolerance of other cultures, religions and ways of life.*
- *To help pupils to be responsible and caring citizens capable of contributing to the wider community.*

One of the most effective ways of encouraging a transformative learning experience is to give pupils a "greater understanding of both natural and human systems through a range of immediate environmental experiences which engage their senses, emotions, and thinking". This can be seen at Canon Burrows Primary[15] school in Tameside which aims to:

> "enable pupils to develop a life ethic which values all people and the natural environment, and to become aware of the actions that they ought to pursue in order to live more a more sustainable life both now and in the future."

For this school, like many others, this sustainability journey started with engagement in a particular local issue. In this case it was in the 1980s, when pupils raised concerns about the state of the brook nearby which led to the establishment of Taunton Brook Nature Reserve - which the pupils now help to maintain.

Similar approaches can be seen in Sheffield at Hunters Bar Infant School[16] where a request from a pupil for more flowers in the playground led to a community project, supported by Sheffield University, to plant a 'green screen' to shield the school from the air pollution of a busy roundabout nearby. This has led to the establishment of a network of schools in the area to raise awareness of and mitigate the effects of air pollution.

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[12] https://www.silloth.cumbria.sch.uk/curriculum/global-learning

[13] https://stockportgrammar.co.uk/senior-school/beyond-the-classroom/eco-schools/global-citizenship/

[14] https://www.belmont.derbyshire.sch.uk/global-learning/

[15] https://www.canonburrows.co.uk/page/eco-school/110873
https://www.canonburrows.co.uk/serve_file/331988
https://www.sos-uk.org/project/green-schools-revolution
https://www.greenschoolsproject.org.uk/about-us/

[16] https://www.scesy.org.uk/day2-morning-session/

Pupils, as can be seen from these examples, are often the drivers for change. At Wales High School[17] in Rotherham, the school's Eco Committee was able to have input into the design of the new school building. This included ensuring that the new school was based on energy-efficient designs, with high sustainability standards, and net-zero in operation. Features include green roofs, solar panels and car sharing schemes for staff.

Many schools have benefitted from engagement in national initiatives, be they the former *Global Learning Programme*, or UNICEF UK's *Rights Respecting School Award* programme. One example of this is Ratherfern Primary School[18] in South London. The school states that it builds its curriculum around global learning principles, which are to:

- *help young people understand their role in a globally interdependent world and explore strategies by which they can make it more just and sustainable*
- *familiarise pupils with the ideas of interdependence, development, globalisation and sustainability*
- *enable teachers to help pupils think in terms of social justice rather than charity*
- *stimulate critical thinking about global issues, for each pupil and the whole school*
- *help promote greater awareness of poverty and sustainability and to explore these in the classroom*

Children at Rathfern are encouraged to become critical, active and engaged learners, who understand their responsibilities as citizens to promote equality, social justice and change.

[17] https://www.waleshigh.com/public-forum-state-of-the-art-60m-new-school-rebuild/

[18] https://www.rathfern.lewisham.sch.uk/Curriculum/Global-learning/

11. Areas of focus and development: Challenges revealed by the case studies

Whilst the OSW case studies signpost the potential of the commonalities outlined above to achieve transformation, there are significant challenges that must be addressed if such transformative practices are to be encouraged, sustained and scaled. A central tension is the dominant neoliberal paradigm of formal education, which emphasises testing, siloed curricula, and transmission of knowledge by the expert teacher. This contrasts sharply with the participatory, learner-centred and reflexive approaches signposted above for engaging transformative ESD. Stephen Sterling describes this as an educational crisis point, with the current "reductive, mechanistic, deterministic paradigm" directly at odds with the "ecological, relational and holistic worldview" needed to transform societies. He urges "a radical change in the way we see ourselves, others and the natural world - 'our seeing, knowing and doing'." (Sterling, OSW Learning Lunch, 2025).

Key challenges include the difficulty of fostering agency at both individual and systemic levels, and the demands this places on educators and learners when engaging in deep, transformative processes (Singer-Brodowski et.al., 2022; Grund et.al., 2024). Teachers must negotiate shifting professional identities, as they move from the position of authoritative expert to co-inquirer with students (Ojala, 2023; Pihkala, 2020). There is also the complexity of addressing challenging emotions relating to sustainability and global issues, coupled with the urgent need to acknowledge, support, and respond to emotional wellbeing considerations within the transformative learning process. Systemic barriers such as limited professional development, time, resources, and institutional support compound these issues (Rushton and Walshe, 2025). Finally, the current absence of clear evaluation frameworks, and the challenge of assessing the complex nature of TL, makes it difficult to evidence, measure, and legitimise transformative outcomes, limiting both accountability and replicability of efforts (Singer-Brodowski et.al., 2022; Grund et.al., 2024; Walshe et.al., 2025).

The process of TL, as previously explored, is an iterative, often messy, non-linear process where 'failure' may evidence a critically valuable step in the transformative learning process and trigger longer term transformations, beyond a course or traditional educational setting, which may not be visible, easily measurable or recorded.

Recognising and actively responding to these tensions is a necessary step required to move transformative sustainability education efforts beyond isolated 'pockets of excellent practice' to being an educational direction of travel. These challenges call for both micro-level innovation in classroom practice, as well as macro-level policy reform. Some are within the teacher's sphere of influence, others are governance and policy based, requiring deep systemic change.

Chief challenges include, but are not limited to:

Challenge	Description	Linked Commonalities mentioned in Chapter 10
Agency & Agentive Power	Shift from individual to collective systems change.	1 & 3
Emotions & Affective Learning	Emotional labour for teachers and learners, alongside the need to acknowledge, support, and respond to emotional wellbeing considerations in the transformative learning process.	1, 2, 3, 4
Shifting Teacher Identity & Practice	Transition from expert to co-inquirer.	1 & 4
Teacher Support & Resources	Limited PD, confidence, time, curriculum space, and funding.	1, 2, 3, 4
Evaluation Frameworks	Absence of tools to evidence, legitimise and scale transformative outcomes.	1, 2, 3, 4

Table: Challenges for focus and development in transformative ESD

Emotions and Affective Learning

> "sound theoretical references to theories of emotion and transformative learning are rare" (Grund et al, 2023)

Reflections across the case studies highlight a pressing need to expand understanding of how educators can engage with emotions, particularly in the context of ESD. By its very nature, TL requires engagement with the emotional dimensions of learning. Yet the issues most in need of transformation - environmental sustainability, social justice, inequality, and climate change - are existential in scope, challenging and emotionally charged. With alarming rates of climate anxiety and declining youth mental health (Hickman et.al., 2021; Pihkala, 2020; Clayton, 2020), a critical pedagogical question emerges: how can educators respond effectively to the emotional wellbeing considerations and support "the journey from anxiety into agency" (Climate Majority Project, 2025).

Mezirow (2009) identifies 'cognitive dissonance' as a liminal stage in which established worldviews are disrupted and deconstructed. This stage, although often uncomfortable and painful, is a

prerequisite for transforming “problematic frames of reference” (Cranton, 2016). Yet in the context of ‘global wicked problems’ and the polycrises, freshly transformed perspectives often generate new problematic emotions rather than a stable return to equilibrium (Zimmermann & Mader, 2019).

The literature and case studies reveal a gap in theory and practice around how to navigate this terrain. A few case studies explicitly reference emotional engagement: the Museum of Climate Hope adopts “emotionally responsive approaches”; Jan Hedge recounts how a teacher’s visible tears catalysed transformative learning; and organisations such as SEEd and ThoughtBox stress the importance of wellbeing and self-care. Hamilton’s (2020) call for “brave enough spaces” captures the need for pedagogies that support learners through discomfort while legitimising the range of emotional responses.

Research suggests that ignoring or suppressing emotional responses to climate change such as fear, grief, or anger risks leading to denial, apathy, or disengagement, particularly among young people; conversely, educational practices that help learners acknowledge and work through these emotions can foster agency, hope, and sustained engagement (Ojala, 2016; Finnegan and d’Abreu, 2024). Strategies recommended for teachers here include: setting ground rules sensitive to learners’ lived experiences, offering clear trigger warnings, building in wellbeing breaks, and providing post-session support (Singer-Brodowski et.al., 2022). Acknowledging the full spectrum of climate emotions such as those identified in Pikhala’s Climate Emotions wheel (2022) for example, in a supportive, non-judgemental way, is seen as critical. Yet, although “human emotions often arise during confrontation with sustainability issues, no substantial, theorized understanding of the role of emotions within sustainability-related transformative learning exists to date.” (Grund et al, 2024). This points to an important gap for the development of transformative learning. Less understood still is the area of collective emotions, and the drivers and impacts that accompany them.

There are also deeper psychological implications posed for transformative learning for ESD. Bednarek (2022) insightfully probes what it means to be “well adapted to an ailing culture”, noting that “good mental health is mostly regarded as being the ability to function symptom free within the current system”. A system Weintrobe calls “a culture of uncare” (2021) that legitimises individualism, normalises social and environmental exploitation, and ignores spiralling inequity and injustices. The suggestion here is that the growing emotional responses we are witnessing among young people are “not a tsunami of mental illness, but a long overdue outbreak of sanity.” (Lawson, 2019).

Current curricula, however, privileges scientific facts and cognitive understanding over social and emotional dimensions (Bath, n.d.), leaving educators underprepared to respond to climate and sustainability related emotional needs. This gap reflects a wider challenge: TL remains a “living theory” (Anand et al., 2020), conceptualised and practised differently depending on context, culture, and purpose. The OSW Case studies identified pragmatic barriers such as workload considerations, networking demands, and funding pressures (e.g. Catalyse Change; Museum of Climate Hope), but the deeper challenge lies in building pedagogies and professional development that enable educators to engage honestly and supportively with their own and learners’ emotions.

This systemic gap is echoed beyond the OSW case studies. The recent UKHSA report linking young people’s emotional responses to climate change with wider mental-health outcomes notes “a growing need to understand how best to prepare and adapt for increased psychosocial resilience” in relation to climate change (UKHSA, 2025, p.6). Yet it gives little strategic attention to education as a mechanism for building this resilience. It observes that climate change awareness-raising can inadvertently intensify anxiety - a perspective challenged by research into relational, action-oriented and hope-based pedagogies (Ojala, 2012; Finnegan & d’Abreu, 2024) which suggest that threat-framed, information-heavy content can leave young people feeling overwhelmed and powerless. The report’s limited exploration of education reflects the broader pattern noted above: climate change is framed as a content problem rather than a holistic, pedagogical and emotional learning challenge,

leaving curriculum, pedagogy and teacher development underexplored for transformative sustainability learning.

The UKHSA report does, however, identify a number of promising initiatives - such as ClimatEdPsych's Climate Staffroom, Eco-Emotions Workshops and climate-psychology webinars (ClimatEdPsych, 2025); The Sustainable Academy's climate–mental health curriculum resource (Sustainables Academy CIC, 2025); Imperial Climate Cares' guided reflection activities (Climate Cares, 2025); youth social-action projects (Youth Social Action Partnership, 2025); and Force of Nature's 'From Anxiety to Agency' programme (Force of Nature, 2025). While small scale and yet to be integrated into mainstream curriculum or teacher education, these educational initiatives illustrate important directions for emotionally attuned climate and sustainability learning.

Beyond these examples, a broader ecosystem of UK initiatives - such as The Climate Majority Project (Climate Majority Project, 2025), Teach the Future (Teach the Future, 2025), The Centre for Climate Psychology (Centre for Climate Psychology, 2025) and ThoughtBox (ThoughtBox Education, 2025)—offers further support for emotionally responsive, participatory and transformative climate education. These initiatives align strongly with TL by centering emotional processing, collective reflection, agency-building and meaningful action—dimensions notably absent from national policy and formal teacher professional development'.

As Grund et.al. (2023) argue, there is a need for "a better understanding of deep transformation, the transformational processes through which individuals, groups and societies move towards sustainability." For TL in ESD, this means developing robust theory, pedagogy, and teacher support to address emotional wellbeing as a central, not peripheral, dimension of transformative change.

Educator questions

The following section offers questions for educators who may be considering the design and delivery of TL in their own settings. Our purpose is to provide some easy starting points through these broad prompts, and to signpost helpful resources to enable educator development.

Questions for educators:

- How do you enable self-reflective learning opportunities for learners?
- Where do you already develop sustainability knowledge, values, skills and attitudes for your learners?
- How are you raising learners' awareness of their own assumptions?
- How are you enabling learners to explore 'disorienting dilemmas'?
- How are learners encouraged to identify, critique and reimagine current unsustainable norms and assumptions?
- Which sustainability educator competencies could you develop further?
- Who in your local and wider community is connected to the issue being worked on or studied by learners?
- How are learners enabled to select, direct and develop ownership of their learning?
- How am I developing a co-inquirer, facilitator role as opposed to a teacher led role?

Questions for Policy-Makers, Researchers and Practitioners

- How can education systems and educational frameworks more effectively recognise, integrate and develop the emotional and relational dimensions of transformative learning, supporting educators to engage with its inherent discomfort, uncertainty, and potential for 'constructive hope'? (Ojala, 2024).
- What policy levers and institutional capacities can actively advance and sustain transformative approaches to sustainability education across curricula, organisations, and governance structures?
- How can evaluation and research methodologies be developed to capture the complexity and challenge of transformative learning, including its affective, relational and action-oriented efforts?
- How can education policy and practice ensure that core values are authentically enacted, 'animated rather than laminated' through leadership, pedagogy, and institutional culture?
- What strategies and frameworks can ensure that competence development in sustainability education goes beyond subject knowledge to include cognitive, practical, and ethical dimensions?
- What concrete, manageable tips for teachers can be shared that can be the building blocks for TL, and how can collaborative, participatory action-oriented learning practices be enabled for educators?

12. Conclusion

A significant critique of TL is that "the theory is used to refer to almost any kind of learning outcomes and therefore has strayed from its theoretical foundations and no longer serves as a coherent theory." (Hoggan, 2016, p58)

One of the difficulties, outlined in the earlier stages of this report, is the diverse use of the term 'transformative learning' and the accompanying lack of clarity regarding its use. This has risked devaluing its purpose, losing elements of good practice required for learners to experience transformation. As noted, there is a danger that the field engages with 'transformation wishing' at best, and 'transformation washing' at worst.

Through examination of several case studies from organisations and schools which engage in education programmes aimed at transformation, this report has identified several principles that are central to the achievement of this aim. These are:

- The need to enable learners to become self-aware and critical in their reflections
- The importance of engaging sustainability values and competencies
- Teaching that fosters collaboration, taking learning from an individual to a collective, relational process
- Nurturing agency through action learning

For both educationalists and learners, this requires a change of mindset and the transformation of the frames of reference that we take for granted (Mezirow, 2000). As a result, education results in increased inclusion and reflection such that learners are able to effectively discern which behaviours are better able to achieve peaceful and sustainable ends. But there are challenges. Transformation is messy. It requires engagement with discomfort, challenging what may be deeply held assumptions and being able to manage often quite complex emotions on both a personal and collective scale. After all, the goal of transformation is not to reach a particular destination where one can claim to have 'been transformed', but to know transformation as an ongoing, iterative process – a mindset that understands and engages with a lifelong journey of continually seeking ways to achieve a more just and sustainable future.

To achieve such an aim necessitates a new engagement with the purpose of education. What is education for? This discussion has been taking place in fora such as UNESCO, resulting in their report 'A New Social Contract for Education' (UNESCO, 2023b). This calls for education to be focused on a just and sustainable future, with collaboration, community and intergenerational relational learning as core tenets. As mentioned earlier, the goals and recommendations of sustainable development are foundationally underpinned by a need for transformative learning.

A look at existing efforts seeking to educate about sustainable development are illustrative of the state of play. Whilst there are successful individual initiatives within the current formal systems of education, to truly embed transformative learning, radical change is needed (Bourn and Hatley, 2022).

There is a need to go beyond just making minor alterations to the curriculum, for example, to a new approach that honours both the purpose and potential of education for creating a more sustainable world. In other words, change must be systemic as well as personal and collective. This illustrates the tension, described by Wals et.al. (2009), between 'radical/revolutionary' transformation versus 'reformist' transformation within existing systems, as mentioned earlier in this report.

Recent guidance from the Department for Education in the UK sought to embed a greater focus on climate change and sustainability. However, the emphasis is on changes to the subject based curriculum in geography, science, citizenship and design and technology. This means that the review has not taken account of the challenges and opportunities that climate change presents to those who are preparing learners for living and working in the mid to late twenty-first century. Whilst welcome, it continues to advise individual initiatives rather than the more wholescale systemic changes that are needed. Along with tweaks to curricula, subjects are still taught in silos, assessment is still 'high stakes', and teacher CPD is still unfunded, lacking and failing to address the issues raised in this report. These are all things that will need a radical overhaul if the system is to support the true embedding of transformative learning that aims to result in Sterling's (2001) 'third order learning', leading to changes to the way learners see the world. This illustrates Wals' critiques of reformist transformation, and in many ways is a missed opportunity. Advocacy must continue and this is perhaps where those successful individual initiatives visible in the OSW case studies can create a groundswell for change.

However, too few organisations are asking these key questions. Too few are engaging in a discussion about the purpose of education, what types of learning are needed to achieve it, and what needs to change to get there. It is challenging, certainly. But the consequences of not doing so are grave. Transformative learning, taking into account the principles mentioned in this report, is a vehicle that can move the world towards the change needed for a just and sustainable – a transformed – future.

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Additional information

Relevant current resources

- The Inner Development Goals: https://www.innerdevelopmentgoals.org/resources
- Thoughtbox Education's triple wellbeing in the classroom model: https:/thoughtboxeducation.com/framework
- Force of Nature Discussion Guide for Educators: https://www.forceofnature.xyz/discussion-guide
- Oxfam 2018 Teaching Controversial Issues: A guide for teachers: https://education.rebootthefuture.org/resources/controversial-issues/
- Teaching controversial issues (J. Paace): https://teachingcontroversies.com/framework/

Key websites

- https://www.bridge47.org/global-citizenship
- https://data.consilium.europa.eu/doc/document/ST-10345-2022-INIT/en/pdf
- http://www.trainingfortransformation.ie
- https://www.unesco.org/en/fieldoffice/beirut/transformative-education?TSPD_101_R0=080713870fab2000b501e60095d13f0e2d1baa876987b3b20047ce05d397236e2e42dfa57dc36363088cf6a46c14300056600d61a5aaf557ef8db75959dd17f4d2cf058b080bd3c83ff454c2dfb4a3ea81da271b01a7125d5d834bc6d7b57d12
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Jenny Hatley is a researcher and teacher in the areas of global citizenship, social justice and values. She has published several papers and book chapters in this arena highlighting the need for learners and systems to centre social justice to achieve a more peaceful future. Her educational philosophy is informed by her time as an aid worker in areas of conflict and natural disaster, where education provided a concrete sense of hope to communities which enabled them to begin rebuilding. She currently works at Bath Spa University.

About the Development Education Research Centre

The Development Education Research Centre at the UCL Institute of Education is a world leading centre for the fields of development education, global learning and global citizenship. It runs a Masters programme in global learning, has a pool of doctoral students and acts as the secretariat for the international Academic Network of Global Education and Learning (ANGEL). It also engages in a range of research and consultancy projects and runs a series of online courses for teachers, academics and students on global education and education for sustainable development.

About Our Shared World

Our Shared World is a broad coalition of civil society organisations, professional bodies and academics in England advocating Target 4.7 of the Sustainable Development Goals in order to create a more sustainable, fairer, peaceful and resilient world. It has more than 150 members including civil society organisations, professional associations, teachers, academics, and student bodies.

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