Realising the Sustainability Cross-Curriculum Priority Through Action-Oriented and Transformative Geography Education

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Abstract

Sustainability is an important cross-curriculum priority in Australian education that is not commonly realised in schools and classrooms. In this article, we discuss the challenges and opportunities to enacting sustainability, suggesting that both top-down (systemic school-wide leadership and support) and bottom-up (individual educator's reflexivity) support for sustainability is needed. We postulate that an action-oriented and transformative geography education may support the realisation of sustainable world views for learners, and we present a simple learning progression for action-oriented education, adapted from the Australian Curriculum: Humanities and Social Sciences, for achieving this aim. In this way, geography teachers may be empowered to embed sustainability in their day-to-day teaching.

Keywords: Education for sustainability; cross-curriculum priorities; geography education; action-oriented education; transformative pedagogy.

Education for Sustainability

According to the Australian Curriculum, sustainability is one of three cross-curriculum priorities (CCP) that seek to 'provide students with the tools and language to engage with, and better understand, their world at a range of levels' (Australian Curriculum, Assessment and Reporting Authority [ACARA], n.d.a, para. 2). In this context, *sustainability* refers to:

> sustainable patterns of living [that] meet the needs of the present without compromising the ability of future generations to meet their needs. Actions to improve sustainability are individual and collective endeavours shared across local and global communities. They necessitate a renewed and balanced approach to the way humans interact with each other and the environment (ACARA, n.d.a, para. 2).

This definition draws primarily upon the notion of *intergenerational equity*, which is concerned with the importance of establishing a positive relationship between people and the environment, to ensure that future generations inherit a world that is healthy and sustainable (World Commission on Environment and Development, 1987). The relevance of sustainability at the local and global scales is also considered. This definition, which acknowledges the importance of action on local and global scales, is largely commensurate with conceptualisations of sustainability and sustainable development offered in the research literature. According to Stevenson (2007), sustainability is about 'socio-ecological relationships and connections' (p. 267). At the same time, Fien and Tilbury (2002) recognise that these relationships must be considered alongside 'economic, political, social, cultural, technological and environmental forces that foster or impede sustainable development' (p. 10).

Education has been widely recognised as a key enabler of a sustainable future (United Nations Educational, Scientific and Cultural Organization [UNESCO], 2018). The Agenda 21 action plan, that emerged from the 1992 Earth Summit (United Nations, 1993), called to educate people about sustainability and to encourage action on socio-ecological issues. International calls to educate and act were consolidated in the objectives of the UN Decade of Education for Sustainable Development, 2005–2014 (UNESCO, 2014). Australia responded quickly with a suite of national action plans, policies, and programs designed to realise education for sustainability in schools and classrooms (see Commonwealth of Australia, 2000, 2005, 2009). These policies aimed to 'equip all Australians

with the knowledge and skills required to live sustainably' (Commonwealth of Australia, 2009, p. 4) by reorienting education systems to sustainability. This involved building individual and organisational capacity to make informed decisions about, and act upon, sustainability issues. Schools were encouraged to have whole-school approaches to sustainability, provide professional development for teachers, and embed sustainability in curricula (Commonwealth of Australia, 2009).

The notion of Education for Sustainability (EfS) has roots in environmental education (Stevenson, 2007). According to ACARA (n.d.a), EfS is concerned with developing 'the knowledge, skills, values and world views necessary for people to act in ways that contribute to more sustainable patterns of living' (para. 2). EfS definitions also recognise the importance of education that is futures-oriented and empowers students to take informed action that promotes ecological and social justice (ACARA, 2016; Tilbury & Cooke, 2005). These ideas are consistent with broader definitions of Education for Sustainable Development (ESD), that also argue for action-oriented and transformative education: '[ESD] empowers learners to make informed decisions and responsible actions for environmental integrity, economic viability and a just society, for present and future generations' (UNESCO, 2018, para. 1).

Figure 1. Overview of the Sustainability CCP (taken from ACARA, n.d.a, para. 3)

Systems

Explore the interdependent and dynamic nature of systems that support all life on Earth and our collective wellbeing.

1. The biosphere is a dynamic system providing conditions that sustain life on Earth.
2. All life forms, including human life, are connected through ecosystems on which they depend for their wellbeing and survival.
3. Sustainable patterns of living rely on the interdependence of healthy social, economic and ecological systems.

World views

Enable a diversity of world views on ecosystems, values and social justice to be discussed and recognised when determining individual and community actions for sustainability.

1. World views that recognise the dependence of living things on healthy ecosystems, and value diversity and social justice, are essential for achieving sustainability.
2. World views are formed by experiences at personal, local, national and global levels, and are linked to individual and community actions for sustainability.

Futures

Build capacities for thinking and acting in ways that are necessary to create a more sustainable future. Promote reflective thinking processes in young people and empowers them to design action that will lead to a more equitable and sustainable future.

1. The sustainability of ecological, social and economic systems is achieved through informed individual and community action that values local and global equity and fairness across generations into the future.
2. Actions for a more sustainable future reflect values of care, respect and responsibility, and require us to explore and understand environments.
3. Designing action for sustainability requires an evaluation of past practices, the assessment of scientific and technological developments, and balanced judgements based on projected future economic, social and environmental impacts.
4. Sustainable futures result from actions designed to preserve and/or restore the quality and uniqueness of environments.

The Sustainability cross-curriculum priority

The Sustainability CCP in the Australian Curriculum is underpinned by three Key Concepts (Systems, World Views and Futures) and nine Organising Ideas that align to the aforementioned features of sustainability and EfS (Figure 1). Of critical importance to EfS and the Sustainability CCP is the action-oriented and transformative notion of educating *for* sustainability. Peacock et al. (2015) tell us that the future is an inherent consideration in the Sustainability CCP – present living must not compromise future generations. These authors conducted a document analysis that shows the use of present tense verbs throughout the Organising Ideas (e.g., 'living', 'engaging', 'creating') and text with a high degree of moral obligation (e.g., actions for sustainability *'necessitate'* a renewed and balanced approach; actions supporting sustainability *'require'* a consideration of interdependent social and environmental processes). Sterling (2010) asserts that a sustainable education paradigm is required for this type of futures-orientation learning. This may include opportunities to empower students to actively envision and create alternative futures, and act upon local and global sustainability issues (Sterling, 2010; Tilbury & Cooke, 2005).

Challenges and opportunities

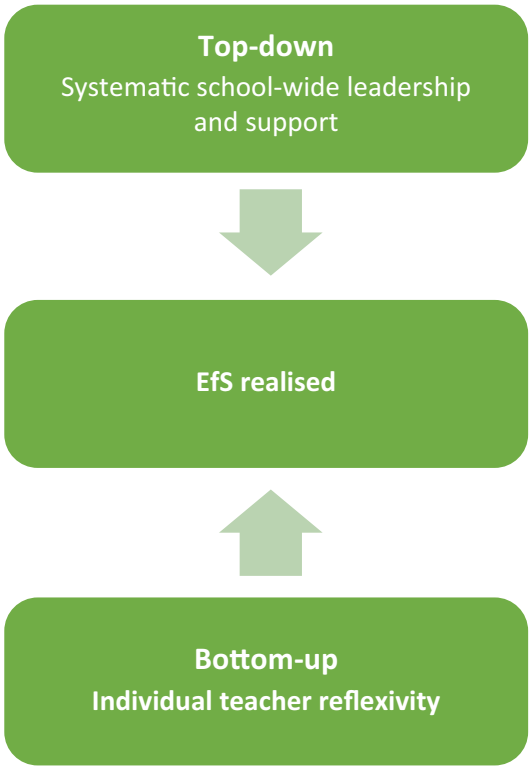
Despite strong international EfS policies, there is little evidence that EfS or the Sustainability CCP are being realised in Australian schools (Barnes, et al., 2018). In their recent research article, aptly titled *Sustaining education for sustainability in turbulent times*, Smith and Stevenson (2017) note that, in recent years, state and federal policy support for EfS in Australia has waned, leading to a 'hostile' policy environment wherein EfS must compete with other educational policies that '(overtly or covertly) receive greater priority' (p. 79). This means that in schools sustainability is 'falling between the cracks' in favour of such imperatives as literacy and numeracy (or other 'back-to-basics' rhetoric) that are tested and benchmarked across the country (Barnes et al., 2018, p. 390). While promising whole-school approaches to sustainability have been advocated for in the past (Australian Government, Department of the Environment and Heritage, 2005), it appears that the challenging and complex political and educational climate, in which schools currently operate, means that EfS is likely to be overlooked in favour of other priorities concerned with performativity and accountability. In this context, scholars agree the capacity to implement EfS with the aim of societal transformation is limited (Hursh et al., 2015; Smith & Watson, 2019).

Compounding these global challenges to realising sustainability in schools is the technical nature of curriculum in Australia, wherein important purposes of education like sustainable development tend to 'fall by the wayside' (Eisner, 1985, p. 81). The technical nature of curriculum emphasises well-defined, measurable learning objectives; carefully designed, sequential learning tasks that enable student achievement; and accountability upon teachers to provide evidence of their educational effectiveness through their maintaining of records of assessment scores. In doing so, greater attention is given to the processes in an education system, rather than to the substantive purposes of education. Researchers have cautioned that, in a process-oriented system driven by a technical orientation to curriculum, ESD is unlikely to receive any significant attention in the classroom (Tomas et al., 2020).

This is further complicated by the nature of CCPs that work *across* learning areas. While some authors believe the Sustainability CCP has the potential to position EfS more centrally and explicitly into teaching and learning in Australian schools (Dyment et al., 2015), Barnes et al. (2018) problematise this idea by pointing out that 'there is no explicit requirement (or accountability) for whether and how to teach [the CCPs], nor are there specific metrics to determine how successfully teachers have implemented them' (p. 380). This tension is evident in a study by Nicholls and Thorne (2017), who found that despite teachers' strong support for the Sustainability CCP, few have the necessary support and time to actually enact EfS in the classroom. Kuzich et al.(2015) also assert that there is 'a concerted lack of emphasis on a requirement for teachers to teach 'about' or 'for' sustainability' (p. 185), even in dedicated sustainability schools. They maintain that this is due to a lack of explicit guidance within the curriculum about how to teach EfS.

Given the challenges confronting top-down whole-school approaches to sustainability, there are calls for a multifaceted systems approach that places renewed emphasis on the role of the individual teacher in realising the goals of EfS (Figure 2). Ferreira and Davis (2010) contend that it is through a systems approach to EfS that 'small-scale changes . . . become a major change in the overall education effort that reaches across the system' (p. 280). Such small-scale changes are dependent upon how teachers may choose to act in ways that transform existing structures and systems. If teachers' actions are to be transformative, they must have the capacity to 'examine and articulate their internal conversations' so they can 'reflexively mediate their subjective knowledges, beliefs and capabilities with[in] these objective conditions

Figure 2. Individual educator's reflexivity may contribute to EfS being realised in schools



within which they work' (Ryan & Bourke, 2013, p. 414). This involves asking such questions as: *What is important to me? What options do I need to weigh-up?* and *What course of action will I take?* One way forward is to support teachers to view their moment-to-moment decision-making as a form of individual agency through which they may come to enact EfS principles.

Action-oriented and transformative geography education

With a view to empower teachers to think reflexively about embedding EfS in their practice, we now examine how the futures Organising Idea of the Sustainability CPP can be embedded in the Humanities and Social Sciences (Years F-6/7) and Geography (Years 7-10) learning areas. In doing so, we have synthesised a simple learning progression for action-oriented thinking from the curriculum. This learning progression encourages students to suggest courses of action in response to an issue or problem; predict possible and preferred effects of their actions; and reflect on their learning. We then describe pedagogic approaches that may support this learning progression, and advocate for geographic inquiry as a means to realising the transformative potential of the Sustainability CCP.

A futures-orientation can be supported throughout the years of formal schooling in Geography as students learn to act for a sustainable future (Figure 3). Primary school students may begin to develop this world view by envisaging a positive future in relation to a place of significance to them (e.g., a local park or playground), and suggesting simple courses of action that may realise their vision. Building in complexity, older students may begin to understand how multiple perspectives can influence people's actions, and the different outcomes that may arise when they take action. The feasibility of different courses of action may be considered. Secondary school students may examine how values inform people's perspectives and actions on sustainability issues. They may ask questions, seek and analyse information (by using geographic information systems), and formally communicate preferred courses of action identified through careful consideration of the interconnectedness of biophysical and human systems. Students can also develop more global perspectives on sustainability issues as they first consider personal or local issues of significance, and how courses of action on a local scale may contribute to global issues. In this way, geography students are positioned as activists who can learn about geographical knowledge and skills by contributing to a sustainable future.

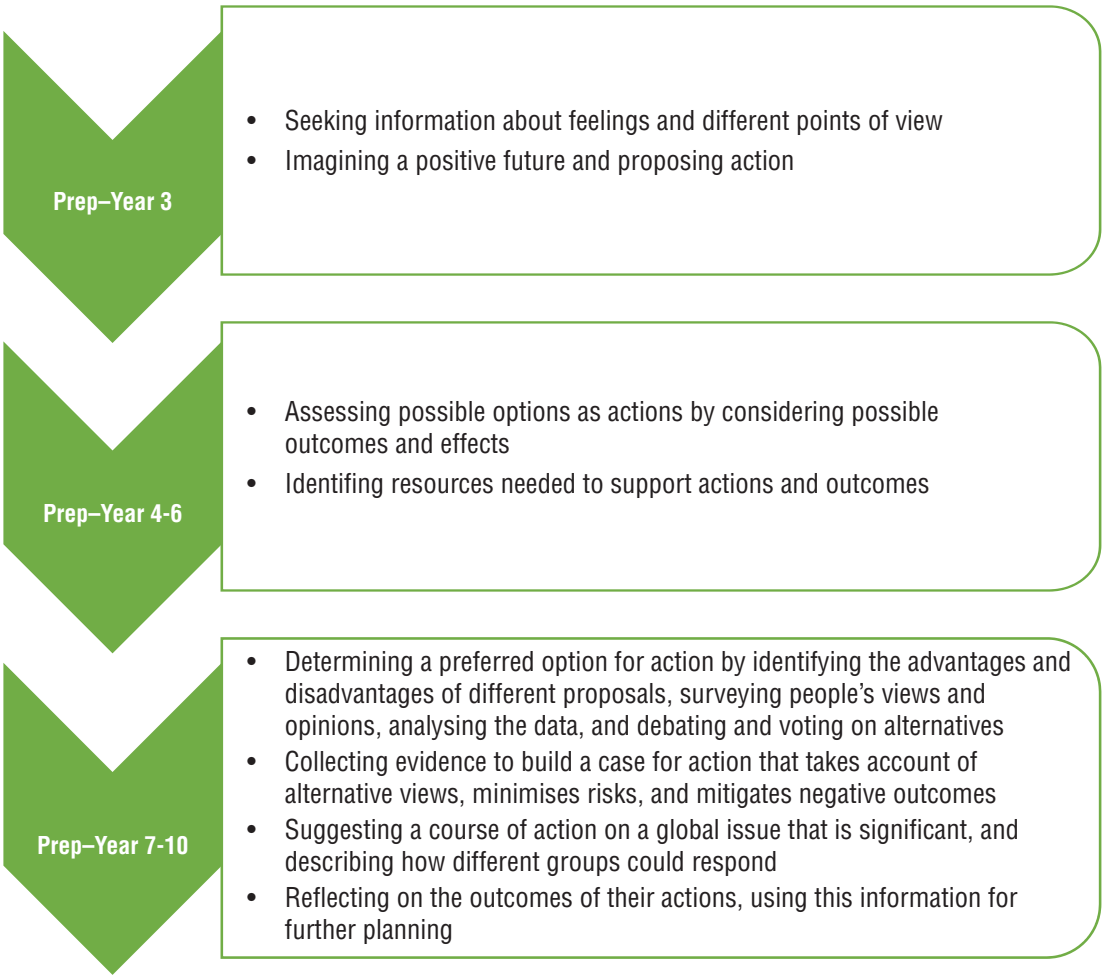
Geographical inquiry may be used to support the development of students' action-oriented world views. Questions that may guide a geographical inquiry are:

- What and where are the issues being studied?
- How and why does this issue work?
- What are the economic, social and political impacts of this issue on relevant stakeholders?
- What is being done or should be done to mitigate negative impacts and contribute to an alternative future?

Inquiry learning in this sense can encourage students to respond to their own concern or curiosity, and to investigate and act on a sustainability issue. This involves students in thinking through and solving problems associated with the issue. Students may collect and analyse data in order to reach their own conclusions, and decide on appropriate courses of action.

Drawing on work from preservice teacher education, we contend that transformative pedagogical approaches may be used within geographical inquiry. Evans and Ferreira (2020) define transformational learning as 'going beyond [the] acquisition of knowledge and understanding of concepts' and profoundly changing students' world views 'in ways that will ultimately lead to both personal and social transformation' (p. 29). Such pedagogic approaches, which are inherently student-centred and experiential, include role play and simulations; group discussions and dialogue;

Figure 3. A simple learning progression for action-oriented geography education (adapted from ACARA, n.d.b)



stimulus activities; debates; critical incidents; case studies; reflective accounts; personal development planning; critical reading and writing; problem-based learning; and fieldwork (Evans & Ferreira, 2020). The transformative potential of these approaches can be supported by engaging students in critical thinking, reflection, and values clarification and analysis, which encourages them to consider their own thoughts and feelings, as well as a range of perspectives, as they negotiate important socio-ecological challenges (Australian Government, Department of the Environment and Heritage, 2005).

Summary and conclusions

In this article, we have explored notions of sustainability and EfS, as a timely reminder of the importance and value of engaging students in education *for* and *about* sustainability. We have also briefly examined the Sustainability CCP, and the challenges and opportunities to realising sustainability in schools. In particular, given the current political, educational and curricular context that risks EfS 'falling through the cracks', we suggest that a renewed focus on the role of the individual teacher as reflexive practitioner is needed to mobilise opportunities to enact EfS principles in the classroom in these challenging times. Finally, we have used the Futures Key Concept in the Sustainability CCP to illustrate how an action-oriented, inquiry approach to Geography can be enacted from Prep to Year 10, with consideration of transformative pedagogical approaches. In this way, geography teachers can be empowered to realise the transformative potential of both EfS and the Sustainability CCP in their day-to-day teaching.

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