

# Inquiry into the response of Western Australian schools to climate change

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Thank you for the opportunity to participate in the inquiry into the response of WA schools to climate change. We appreciate the focus and framing of your invitation; the climate crisis is the biggest issue of our times.

For 8 years, we three academics have been engaging collaboratively in research about issues of the Anthropocene. This includes climate change education. We currently hail from three academic institutions (Edith Cowan, Deakin, Notre Dame Universities), are located across Australia (Bunbury, Melbourne, Broome), engage from three different disciplines (social work, science and environmental education, Indigenous-informed research), and agree emphatically on the importance of addressing climate change from within an educational context.

Our joint and individual publications demonstrate our track record in this space.

- **Wooltorton, S., White, P., Palmer, M., & Collard, L.** (2020). Learning Cycles: Enriching Ways of Knowing Place. *Australian Journal of Environmental Education*, 1-18. <https://doi.org/10.1017/aee.2020.15>
- **Palmer, M., White, P., & Wooltorton, S.** (2018). Embodying our future through nurturing conversations: The change is in the doing. *Journal of Environmental Education*. 49(4), 309-317.
- **White, P., Wooltorton, S., Palmer, M.,** (2018). Confronting, Collaborating, and Crafting: An Enlivening Methodology for Academic Ecojustice Activism (Chapter 11) In A. L. Black & S. Garvis (Eds.), *Women Activating Agency in Academia: Metaphors, Manifestos and Memoir* (pp 111-122) Oxfordshire: Routledge
- **Palmer, M.** (2018). Sustainable-participatory social policy. In P. Beresford & S. Carr (Eds.), *Social policy first hand: An international introduction to participatory social welfare* (pp. 262-276). Bristol, UK: Policy Press.
- **Wooltorton, S.,** Collard, L., Horwitz, P., Poelina, A., & Palmer, D. (2020). Sharing a place-based Indigenous methodology and learnings *Environmental Education Research*, 26(7), 917-934. doi:10.1080/13504622.2020.1773407
- **White, P.J.,** Ferguson, J.P., O'Connor Smith N., & O'Shea Carré, H. (In Press). School Strikers Enacting Politics for Climate Justice: Daring to think differently about education. *Australian Journal of Environmental Education*.

In this submission we focus on three elements suggested from TOR #3: ***Barriers that schools encounter in undertaking climate action and how these can be addressed.*** We've addressed reluctant attitudes towards climate action, complexity, and resources / costs. From our perspective, policies and regulations will need to be developed through processes consistent with our recommendation for a new paradigm for education in Western Australia, using

processes which are inclusive, consultative, and premised on an ethic of respect for the natural realm, and a recognition of the value of diversity and decentralised decision making.

## Reluctant attitudes towards climate action

### **Our point of view**

We see the principal barrier to schools undertaking climate action as the overall paradigm from which the WA Education Department seeks to address the problem; this is a business-as-usual, growth-oriented paradigm which ignores (or possibly, actively rejects) an understanding of our planetary boundaries (D. Meadows, Randers, & Meadows, 2005). The evidence that we have extended the capacity of the Earth's biosphere to sustain the human and remaining non-human species in a healthy state into the next century is now well documented and understood (Bendell, 2020; Catton, 2006; D. Meadows et al., 2005; Wackernagel et al., 2002). Halting the devastating consequences of climate change; biodiversity loss; soil depletion; air and water pollution; and human suffering, requires a paradigm shift emanating from an examination of social, ecological, political and economic systems. But how do paradigms change? According to Meadows (1997):

*... you keep pointing to the anomalies and failure in the old paradigm, ... you insert people with [an understanding of] the new paradigm in places of public visibility and power. You don't waste time with reactionaries, rather you work with active change agents and with the vast middle ground of people who are open minded. (p. 84)*

### **What needs to happen**

We are writing our submission in the immediate aftermath of world leaders at the Glasgow COP26 summit making pledges to cap global temperature rise at 1.5 degrees above pre-industrial levels. As far we are aware there are no respected climate scientists who believe this is possible from within the current growth-oriented paradigm, which ignores the complex interrelationship between ecological problems and the key national and global systems mentioned above.

And so, our submission to this inquiry takes up this challenge, hopeful that members of the WA Parliamentary Education and Health Standing Committee are active change agents and open-minded to the notion of a new paradigm informing education's role in responding to climate change.

Our submission is premised on the notion that whatever is done in schools in response to climate change, needs to be informed by the notion of *prefiguration*, which involves developing relationships and practising behaviours which are consistent with what we want to see as the everyday practices of the future. This will mean addressing the barrier of an education system which continues to reinforce and treat as unproblematic, the notion of unfettered consumption, expansion, economic growth, and human beings inalienable right to exploit the natural realm.

Prefiguration will involve experimentation and learning to identify those aspects of culture (values, behaviours, symbols, and language) which we want to see in families, communities,

organisations and in particular, our schools; cultural attributes which can prepare young people for a complex, uncertain and dangerous future as the Earth heads towards ecological overshoot and climate catastrophe. This prefigurative approach is often referred to as 'building the new in the shell of the old' (Gradin & Raekstad, 2020).

## Complexity

### **Our point of view**

In exploring complexity, we want to acknowledge that our world now functions in a new epoch - the Anthropocene - where human impact has significantly changed Earth systems. Change has increased since the start of industrialisation in the early 1800s and exponentially since 1950. We understand that life on earth is in crisis, with the greatest issues of our time, climate change and biodiversity loss, impacting all species, many irrevocably through the sixth mass extinction (Ceballos, Ehrlich, & Raven, 2020). We need a different kind of change. We need leaders prepared to engage reflexively to generate bold new ways of educating for uncertain futures defined by complexity (White et al, In press).

General Systems Theory (GST) was used by D. H. Meadows, Meadows, Randers, and Behrens (1972) to support their original limits-to-growth thesis; the idea that infinite growth on a finite planet is impossible and would lead to major ecological and social upheaval by the early decades of the 21<sup>st</sup> century. Complexity Theory (CT) extends GST by focusing on the modern-day emergence of *complex adaptive systems* where the following elements are present, revealed and acknowledged: respect for diversity of components in the system; the absence of centralised control; the emergent nature of change; the role of relationships in the capacity for systems to self-organise; and the role of a certain amount of 'bounded instability' or presence of chaos in the system. Complexity Theory explains our current education system and ways of understanding how schools (as organisations, buildings, grounds, people, and curricula) interact with the other social, ecological, economic and political systems responsible for causing climate change and now responsible for halting it and reversing its impact. Complexity Theory helps us to think prefiguratively about how to manage interconnected 'wicked problems' (Palmer, 2015)<sup>1</sup>

Sir Ken Robinson provides a good example of how understanding complex, wicked problems, and importantly the interaction between them, can be a useful strategy for responding to them. He notes:

*As a species we are facing two major crises. The first is the climate crisis, which was there long before the [Covid-19] pandemic began and which is still waiting to be adequately addressed. If we do not approach the climate crisis as the emergency that it is, we will find ourselves facing extinction. ... The second crisis is in our ways of life through normalising stress, anxiety, and toxic patterns of behaviour. These two crises are deeply connected. Our neglect for our relationship with the natural world is as detrimental to*

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<sup>1</sup> Wicked problems are defined as those concerns emerging from the uncertain and complex interactions between economic, social and environmental systems for which there are no final answers. An effective dialogue (and ultimately something like a solution) around a wicked problem might be possible if the power differences and paradigm differences between stakeholders can be made explicit.

*our own wellbeing as it is to the planet. We can take lessons from one and apply them to the other. (Robinson, 2020, p. 8)*

The elements which are contributing to global warming, and therefore climate change, are carbon in the atmosphere, human population, human consumption (particularly in wealthy states such as Western Australia), human and other forms of waste. These are all increasing exponentially, so this cannot be treated like any other single disaster event; that is, we cannot restore to a semblance of what was before. The planet will continue to heat and the effects of this will continue to impact severely on all species, also exponentially, until there is substantial overshoot and collapse (Randers, 2008) or a radical shift in how we understand and work toward sustainability. This means changing the ways we live and work, changing the ways our services and governments operate, extracting natural resources at a replacement rate and changing the ways we understand waste, specifically putting waste materials back into the environment at a pace consistent with its absorption (Atkisson, 2011).

### **What needs to happen**

Our young people have already organised through the international and intergenerational School Strike 4 Climate (SS4C) - Australia – where they pledge three highly refined and nuanced outcomes for their future:

- Resourcing Aboriginal and Torres Strait Islander-led solutions that guarantee land rights and care for Country.
- Funding the creation of secure jobs that fast track solutions to the climate crisis and help communities recover.
- Funding projects that transition our economy and communities to 100% renewable energy by 2030, through expanded public ownership.

<https://www.schoolstrike4climate.com/pledge>

We expect that over time, these pledges will be developed by SS4C members to also include a guarantee of sovereignty for Indigenous Australians and an end to fossil fuel mining.

If Western Australian schools are to remain relevant, then they must adapt to provide the education our young people require. One option for this would be to design schools as community hubs for action and change. Such leadership for change could come from any or all levels of government (through policy formulation), from school leadership, teachers, students, and/or the community. It would be adequately resourced and flexible. Listening respectfully to young people and enacting the education that is required to prepare our future citizens for uncertain futures is fundamental to responding to climate change.

Other elements of a paradigm shift in education, consistent with Complexity Theory would include:

- demonstrating dispositions towards socio-ecological justice by understanding that power relations within and across societies re-inscribe systems of unequal advantage.
- enacting skills to research and critically appraise communications, make informed decisions, and act with communities to generate the change required.
- practising personal wellbeing and care.

- accepting responsibility to change individual practices, working toward personal and collective agency and resilience across local and global communities.
- embedding Indigenous knowledge and systems and respect for all beings into everyday practices.

In her PhD thesis in 2003, Sandra Wooltorton offered the following:

*I show that participatory structures, procedures and processes are necessary, but not sufficient for a socially transformative school-as-community culture and that socio-ecologically contextualised knowing is transformative knowledge about community sustainability. For people to behave in cooperative ways, they need to develop a practical, reconnective knowledge of cooperation. Likewise, for people to behave in ecologically regenerative ways, they need to develop a practical, reconnective knowledge of ecological reconnection.*

## Resources and cost

### **Our point of view**

Contrary to the dominant paradigm embedded in a business-as-usual paradigm which valorises consumption and growth (while perpetually bemoaning a ‘lack of resources’), an ecological paradigm works within the planetary boundaries and any effective response to climate change will seek to minimise costs and the use of extracted, non-renewable resources.

The economies of education need to be understood in the context of Kate Raworth’s donut economics (Raworth, 2018), incorporating a circular, closed loop economy at the local, national and global level. Schools are well placed to teach these economic principles to students through the curricula and though the physical elements of schooling such as utilities and equipment usage.

### **What needs to happen**

Many schools across Alberta, Canada were retrofitted for energy efficiency in 2004. Schools across the state of Victoria can engage with Resource Smart Schools - a program aimed at driving sustainability through utilities management. There are programs that focus on energy, waste, and other utilities, providing economic gains to schools which engage. We question motivations based on economics of a growth paradigm; notions of sufficiency, parsimony and thrift enacted in schools will result in lasting change in ways that change is needed.

The Story of Stuff provides a trilogy of insight...

<https://www.storyofstuff.org/movies/story-of-stuff/>

<https://www.storyofstuff.org/movies/story-of-change/>

<https://www.storyofstuff.org/movies/the-story-of-solutions/>

In Western Australia, the Independent Public Schools initiative has created a system which could easily be utilised to encourage local, adaptive, ecologically sensitive resources within the school environment.

We urge this inquiry to look deeply into the possibilities for schools and climate change education. A one size fits-all program of lesson plans will not generate the change that is required. We need a systemic approach that allows the complexity of the situation to be considered, enacted at a local level and with local support, yet mandated and state resourced. We encourage you to think big - as big and complex as our climate crisis has become.

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