

TAKING THE KIDS TO THE PARK: ON-COUNTRY LEARNING ABOUT CLIMATE CHANGE

MARK WERNER, JUDITH WILKS, ANGELA TURNER

Judith Wilks et al demonstrate the importance of learning from Aboriginal approaches to caring for Country as they tackle climate change in the classroom...

PREFACE

I was surfing the other day and the conditions started to change. A rip had formed where I was sitting, and water was heading back out to sea. This is not unusual, and I instinctively moved to ensure that I remained in the best position. I could have stayed where I was (but I'd probably still be there). I am also a high school teacher. My desire to learn fuels my passion to teach. As both a teacher and surfer I rely on my instincts and situational awareness to ensure my students are engaged and focused on their learning. If what I am doing is not working, then I must make changes for the benefit of my students' learning. The ongoing challenge for teachers lies in the confines of our scope of control. I can make incremental adjustments (within my role description as classroom teacher) that will have some benefit to student outcomes. I cannot however undertake the seismic shift that is so desperately needed to support the ongoing growth of our kids' learning. If under some miracle I could, and let's set aside the fact that we are in a crippling staffing shortage, then I would suggest one strategy: 'onCountry learning' to remind ourselves what teaching was like before schools had fences, and off campus excursions didn't involve half a dozen layers of risk assessment paperwork. [Mark Werner]

INTRODUCTION

In 2021 a collaboration between school teachers, university teacher-researchers, and a local council established an outdoor learning setting in a park known as 'Dawkins Park Reserve', in Macksville, rural NSW. This group coalesced around a shared desire to promote local resilience to climate change impacts, and to strengthen the local community's understanding and engagement with local Indigenous cultural and scientific knowledge. This park was chosen as a setting primarily for two reasons: it was within walking distance of a high school, and it was suffering real and visible biodiversity breakdown due to the effects of climate change.

Being part of this collaboration as two university researchers (Wilks and Turner) was a rich experience in terms of the lasting relationships built with local teachers and moreover, witnessing the enjoyment and significant growth in the students' understanding of climate change. In Turner and Wilks (2022) we recounted our experiences and research findings, concluding with a concerning paradox: as the benefits of place-based environmental learning become better known, in practical terms it is getting harder to achieve with teachers increasingly burdened by layers of paperwork, risk assessment protocols, policies and procedures. The resulting disembodiment of learning from the natural environment is especially concerning, given that the endeavour of education has its very roots in nature, where over 250 years ago Jean-Jacques Rousseau recognised nature as the child's best teacher (Taylor, 2013). Caught in the current risk-averse milieu, many educational systems have forgotten these roots in the face of increasing litigation, and educational trends that marginalise the connectedness between nature and children and young people. (Wilks, Turner & Shipway, 2020).

Our particular focus here is to convey the experiences of collaboration that involved the teaching of climate change. We share how a different approach to teaching and learning in this rural setting might be sustained into the future through engaged environmental and Indigenous cultural learning, and creating a smoother transition for students between primary and secondary school.

The enactment of positive change is not possible without first acknowledging the need for a new direction. In the high school learning environment, collegiality and the courage to innovate are important ingredients for success in cross-curriculum and cross-cultural teaching and learning. In 2020 a small collegiate of like-minded teachers saw an opportunity for their Year 7 students to investigate climate change through authentic, active, environmental learning experiences. Even though well-established

relationships with local Aboriginal elders and Knowledge holders already existed, it was critical to invite them into our teaching collegiate. Consequently, they became integral to the students' outdoor learning experiences.

The authors all live and work on [Gumbaynggirr Country](#) located on the [NSW Mid-North Coast](#), NSW. Mark Werner is a proud First Nations man from the Torres Strait, a Dauareb and member of the Ulag Clan, a clan of the [Zagareb Tribe of Mer](#). He is also a Geography/History high school teacher.

BACKGROUND

At Macksville High we were seeking to create a different type of learning environment, albeit on a shoestring budget. In order to better engage Year 7 students, we were compelled to try something new, and it turned out to be something that became a highly influential force in our teaching — the creation of a teaching and learning Year 7 'Hub' [Mark Werner].

The Hub was a learning environment established to provide students with a smoother transition from local primary 'feeder' schools into high school. It was designed with the goal that a foundation year of focused interdisciplinary teaching and learning would support the academic success of students, and address some of the poor student learning habits we were noticing. Students coming into Year 7 are confronted with up to fifteen different teachers. This not only impacts on their sense of connectivity and engagement with the new learning environment of high school, but also on the teaching staff's capacity to develop an understanding of each student's strengths, capacities and inherent learning styles.

The Hub space was an open learning space (conjoined classrooms) housing up to fifty students, three teaching staff (English, Maths, Science and Geography/History), and one student learning support officer. Each lesson could be delivered to the whole group or, alternatively, a targeted skills intervention lesson could be taught on a rotation basis.

The [Year 6 – Year 7 transition is often experienced by students as a difficult period](#), thus there was a significant focus on student wellbeing. For students being part of this core group provided them with the continuity and consistency lacking in the traditional Year 7 structure. The establishment and maintenance of consistent class-

room expectations provided a foundation for improved learning outcomes within a safe and predictable place, more attuned to the students' social and emotional needs. The teacher-student ratio afforded staff the space to develop stronger relationships with students, target their skills, identify curriculum overlap, and withdraw struggling students to a different space without disrupting the learning of their peers.

Improving our knowledge, understanding and agency about climate change is urgent. The rapid deterioration in Earth's natural systems presents unprecedented challenges for teaching and learning that is capable of encompassing, and bringing meaning and immediacy to the scientific, the ecological, the social, the economic/political, the moral, the cultural and the ethical dimensions of climate change (Haraway, 2015). It is not surprising that in recent years climate change learning has been embedded into Australian school curricula. In Australia, climate change learning in schools must provide the scope across key learning areas for students to be able to acquire deep knowledge about the many dimensions of human-caused ecological change. Learning about climate change therefore has played an increasingly significant role in NSW school curricula.

A series of cross curricular, collaborative learning programs and resources was developed by teachers in the Hub prioritising learning about [climate change](#), and, under this umbrella, teaching the themes of 'identity' and Aboriginal and Torres Strait Islander histories, cultures and sciences. The environmental learning activities at the Park were designed to deepen students' knowledge of climate change through authentic learning about water quality, biodiversity, ecological and technological processes in [Dawkins Park Reserve](#).

Activities and resources were designed to promote engagement with the Australian cross curriculum priorities [Sustainability](#) and [Aboriginal and Torres Strait Islander Histories and Cultures](#). Students learned about how our ecological landscape is shaped through natural and human-caused factors; the influences of this on animal behaviour patterns; how humans interact with ecosystems; and how these interactions may be achieved in a sustainable way. At Dawkins Park Reserve students were exposed to 'real world' hands-on activities such as collecting water 'bugs' as the students called them [microorganisms], identifying flora and fauna, observing

bird migration patterns, testing the water, and using maps, photos and light microscopes to analyse their water samples.

FINDINGS

The interconnectedness of fieldwork skills combined with a highly relevant case study at Dawkins Park Reserve engaged both students and teachers, and through this experience they developed the necessary knowledge to understand climate change at a deep level. But we were only able to examine climate change in any depth because of the Hub model. Previously there were very few interdisciplinary options and subjects were taught in silos.

Well established community relationships with local Aboriginal elders and local Knowledge holders also proved to be pivotal. Students learned about clan size and what the size of the group should be to sustain itself. They learned about sustainable lifestyles in the Indigenous context, how a typical day was broken up in the clan, and about structured lore/systems. They enjoyed the [Gumbayngirr cultural narratives](#) through stories, dance, song, and art.

Students participated in an 'On Country' cultural immersion field trip. This excursion was organised to support the unit of learning called 'Identity'. During this experience students and staff were offered an alternative learning environment. This alternative learning environment shifted behaviour and attitudes of both students and staff. The logistics of the journey focused on ensuring Aboriginal perspectives from across their valley were well represented. The day started with a Welcome to Country in Bowraville, delivered by a local knowledge and language holder, who then shared the history and narrative of his town and community. The immersive experience continued as the students travelled to Nambucca Heads and were met by traditional owners, elders and knowledge holders who shared narratives, culture and experiences. A smoking ceremony and the re-creation of a local dreaming narrative (using the students as actors and participants) enriched the students and teacher understanding of local Aboriginal culture and identity. The final leg of the journey was to [Scotts Head](#). Once again cultural protocols were observed, and students and teachers learnt more about the Gumbayngirr creation narratives regarding the how the sea was created

and how waves were made. This was followed by the playing of Traditional Indigenous Games on the beach and reflecting on the history, purpose and relevance of these activities

Teachers' interest, enjoyment and excitement in teaching climate change were stimulated by these events. Commensurately there was an increase in their self-efficacy and confidence as their knowledge grew and their understandings and perceptions deepened. It was clear that the growth in these attributes was connected to their own learning about climate change at the park. Teacher A recounted their journey as follows:

I think at the beginning ... I kind of had that attitude of 'nah Climate change' ... I'd glaze over. But now I think I have a better understanding myself, and I think the enjoyment of teaching it, through the process that we followed ... has improved my knowledge of climate change, as well as my enthusiasm for teaching it, and passing it onto the students, and encouraging them to do something [about it].

Teachers shared that at the Park they had been caught up in the same feelings of excitement and the fascination as the students when they were discovering new knowledge through for example, water sampling activities. And the growth in both teacher and student knowledge and enthusiasm had an entwined, spiraling effect, with each promoting the other. The teachers became co-inquirers with their students because they were also making deeper connections between the different scales of climate change. Teacher B said "*I think the connections I was able to make within my own personal life, and how little things that I can do can make a big difference on a bigger picture, certainly grew.*"

While the teacher's learning design and programming benefitted, they also stated that they now found it easier to link teaching about climate change with the Australian Curriculum's Sustainability priority area. Furthermore, they envisioned the Park becoming a 'centrepiece' for future learning about the impacts of climate change at the local level, as it offered great affordance in terms of teaching, learning and benchmarking about key concepts in geography such as place; space; environment; interconnection; scale; and change. Fieldwork *is* geography; it is at its very heart (Laws, 1984; Bliss, 2009). From Teacher C's perspective,

the experience “gave me more time to spend investigating on a local level, and a pathway to teach it through because sometimes you think, ‘how am I going to embed this into the program?’ but here, if it’s the centrepiece of the program, it’s really simple.”

The teachers related that teaching climate change through an Indigenous lens gave students the opportunity to hear about Aboriginal perspectives of pristine environments and no trace practises. The Aboriginal guides embedded language into their stories. Although the Park is not an Aboriginal sacred site as it is human built, there are many sites in the district and the area has strong links to *Gumma*, where fresh water supply and the Nambucca River link to the sea. Students looked at the variety of vegetation types available, and their traditional Gum-baynggirr names and purposes. Students were shown the Lomandra grasses used for weaving baskets, and were encouraged to speculate about what type of things these baskets might have carried. Teacher D explained:

We’ve tried to open up their understanding as to what Indigenous communities are about and different aspects of their lives and we’re certainly incorporating a little bit more of that to increase the understanding because for some of them they really had limited understanding of pre-European settlement in the area.

Students came to realise that there were many places around them, in their daily lives, that have stories. Student A shared: “Just knowing about it makes you feel more connected”, and another (Student B) said, “Stories make it easier to remember things.”

Teachers not only observed the stimulation of their students’ interest, passion, enjoyment and engagement in learning about climate change, they also noticed their students were reflecting far more deeply about their responsibilities in relation to it. The following observations were made in this respect:

There were a lot of light bulb moments, a lot of students not only learning the information, but then also getting a bit of a fire in their belly, really wanting to change, really wanting to make action, and asking questions like what can they do about it to change. they’re kind of at that age where they’re starting to understand the world isn’t perfect. And we’re kind of called, aren’t we, it’s all our responsibility to all do something about it for the future. (Teacher A)

I guess for my generation we kind of feel responsible for what’s happened, and these guys kind of inherit a lot of our shortcuts and kind of short-sightedness. Whereas you get some students who kind of straight away think, they just lay the blame, and see the dire consequences straight away. And then to get other students that kind of perk them up by saying, “How about this and for solutions? (Teacher B)

Students were excited about seeing things in ‘real life’ at the Park and teachers could see them getting ‘hooked in’ to their learning there. Teachers were not having to deal with behaviour issues because the setting catered for a wide variety of learners and all students were so engaged: “they really benefit ... all of them ... from experiential learning where they’re hands on. They’re measuring ... they’re testing ... they’re collecting, analysing and comparing ... they’re really focused and on-task” (Teacher C). This reinforced for teachers how important it is for students to have place-based, authentic learning experiences and to “try and get the kids out of the classroom and give them those real-life experiences as much as we can” (Teacher D). When they returned to classroom learning the teachers noticed a real enthusiasm borne from what they had done at the Park. Students were motivated to venture hypotheses, do their own research, and give class presentations on what they had found out.

In their discussions with researchers before they went to the Park, students used terms such as ‘nervous’, ‘devastated’ ‘not confident’ to describe their thinking about climate change. Teachers observed that as a result of the activities their students demonstrated a greater confidence and a richer vocabulary when postulating connections between the local and the global in relation to climate change. They related that through being at the Park students were able to link their learning about climate change to a place with which they were familiar and in so doing enriching their knowledge and understanding. As Teacher A explained, “having something to pin it on”, and Teacher B observed “We’re having conversations with the students where they wouldn’t have made the links previously ... floods in West Germany, record temperatures in Europe”; and another: “... for them to get an understanding about the relationship between fossil

fuels and carbon emissions...It was kind of like just opening the door for a lot of them. They really hadn't thought about it before, even though they've heard some of the phrases and things like that. But for them to get an understanding of the causes and the links, and also some of the possible solutions".

According to Teacher D, the conversations they were having with their students and what they did at the park had opened up their thinking to beyond their 'small world' to "*what's happening around them and how that impacts everybody else in the world*". Moreover, Teacher B observed that the program had encouraged students to have bigger thoughts beyond themselves, to "*go deeper ... and tie a lot of things in with climate change.*"

REFLECTION

It not surprising that in recent years learning about climate change has played an increasingly significant role in NSW school curriculum. There are now frequent mentions of the term climate change, with *Sustainability* framing the entire curriculum as one of the three Australian curriculum priority areas. Nevertheless, such curriculum elements represent relatively new and emerging fields of study in both primary and secondary curricula, and teachers have had to quickly 'come on board' with teaching them across *all* curriculum areas, as they are no longer just located within the traditional domains of geography and science. The students perceived the potential for cross curricula learning about climate change emanating from their experiences at the Park. They expressed a desire to see more art, mathematics, and writing, in addition to geography and science, associated with their activities there.

Through professional channels many teachers have anecdotally reported a lack of confidence in teaching climate change despite the many excellent professional development opportunities and resources that have been created for teachers. The problem has been that the majority of these are text-based and designed to be delivered in a classroom setting - either in digital or paper-based format. This has led to a focus on 'climate science' and environmental 'issues' (Loughland, Reid, and Petocz, 2010) privileging knowing facts about climate change over more experiential, sensory engagements inhibiting the creation of deep knowledge which, as Jensen and Ross argue, is so vitally important underpinning "*all edu-*

cational skills we value...knowledge begets knowledge", (2022, p. 23). The experiences of teachers and students at Dawkins Park most certainly aided the development of deeper content knowledge about climate change.

Students related that they loved learning outside the classroom, that they felt more focused and "*a bit more free*" (Student B). Paradoxically, they felt "**less distracted... if that makes sense**" (Student C). They enjoyed learning through their senses – listening; seeing; touching and feeling; and smelling – and in so doing they felt more connected to the environment. They were more able to make connections between the local and the global manifestations of climate change; the interactions between plants and animals and the seasonal influences relating to climate change. Teachers observed students to be more curious, interested, engaged and both student and teacher appreciation of Aboriginal and Torres Strait Islander cultural, language and scientific knowledge increased. Teacher feelings about self-efficacy in teaching climate change also improved.

As others have experienced in similar, recent programs (Burgess & Thorpe, 2024; Spillman et al., 2022), we found that well established community relationships with local Aboriginal elders were vital to the success of the program. The students thoroughly enjoyed the telling of Gumbayngirr stories by the Aboriginal knowledge holders. Through embedding an Aboriginal voice in the activities, students' cultural awareness and engagement with holistic, spiritually-based connections to Country were enhanced. Story telling involves feelings and emotions, and helps young people to follow a series of events through a story's structure, and to understand choices people have made in the past and the consequences of those choices (Seefeldt, Castle & Falconer, 2014, p. 232).

The Hub enabled the Year 7 student cohort to be taught as an entity, as opposed to separate classes, by a core group of teachers enabling a significant focus on student wellbeing. Students were provided with continuity and consistency during what is often experienced as a difficult transition from primary to secondary school. The synergy generated through the combined efforts of highly trained professionals created momentum and enthusiasm within the learning environment. The collaboration facilitated an even deeper mutual regard

for colleagues' professionalism, their discipline and content-specific knowledge. Sharing a teaching space between colleagues and freely exchanging ideas and feedback empowered and invigorated teaching.

CONCLUSION

It is imperative that our students are climate change literate. This involves understanding how our ecological landscape is shaped through both natural and human-caused factors; the ways in which water is integral to the survival of all living things; how this influences animal behaviour patterns; how humans interact with ecosystems, and how these interactions may be achieved in an environmentally sustainable way.

It was obvious to us as teachers that students were developing understandings about climate change at a deep level. As clearly beneficial as it was to take the students to this rich environmental and cultural learning setting, we were only able to examine climate change to the depth we did because of the added affordances that the Hub model offered for enriching teaching and learning. That we managed to interconnect learning about climate change with fieldwork attached to a highly relevant case study at Dawkins Park Reserve which clearly engaged the students was achieved in large part because of the Hub. Learning stations have been created at the Park for future outdoor environmental education activities, and their continued use will augment students' understandings about climate change vulnerabilities, risks and adaptation responses.

Just as swimmers and surfers must react to the sudden formation of an ocean rip, it is imperative in teaching to change what is not working. When you change your perspective on historical, entrenched challenges in education you can deliver enhanced student engagement and success. Macksville High School in rural NSW had the courage and conviction to embrace remodelling education delivery to its newest students when it literally flung open the school gates to a world of possibilities.

Postscript

Although the 'physical' Hub no longer exists, relational links between the participating teachers remain strong, and the possibility still exists for cross curriculum project-based learning because of these links. Ironically, external factors associated with climate change conspired

to erode teacher motivation around its continuance. These included COVID-19 and the accompanying lockdowns and extended periods of learning from home, teacher shortages and time constraints largely borne out of the COVID-19 driven workforce-wide impacts, and prolonged flooding in the region causing major disruptions to everyday life. Possible areas of future focus are teaching space redesign, classroom furniture, and redistribution of students into subject-specific skill rotation groups that coalesce around social interactions, friendship cohorts and abilities.

REFERENCES

- Bliss, S. (2009). Fieldwork: The heart of geography. *Geography Bulletin*, 41(1), 7-11. <https://search.informit.org/doi/10.3316/aeipt.183894>
- Burgess, C., & Thorpe, K. (2024). How teachers can use the Learning from Country framework to build an Aboriginal curriculum narrative for students. *Journal of Professional Learning*. NSW Teachers Federation.
- Jensen, B., & Ross, M. (2022, September 23). One million left behind. *The Australian*. <https://www.theaustralian.com.au/>
- Laws, K. (1984). Learning geography through fieldwork. In J. Fein (Ed.), *The Geography teacher's guide to the classroom* (pp. 134-145). MacMillan.
- Loughland, T., Reid., & Petocz, P. (2010). Young people's conceptions of the environment: A phenomenographic analysis, *Environmental Education Research*, 8(2), 187-19. <https://doi.org/10.1080/13504620220128248>
- Seefeldt, C., Castile, S., & Falconer, R. (2014). *Social Studies for the preschool/primary child*. Pearson.
- Spillman, D., Wilson, B., Nixon, M., & McKinnin, K. (2023). 'New Localism' in Australian Schools: Country as Teacher as a critical pedagogy of place. *Curriculum Pedagogies*. 43, 103-114
- Taylor, A. (2013). *Reconfiguring the natures of childhood*. Routledge.
- Turner, A., & Wilks, J. (2022) Whose voices? Whose knowledge? Children and young people's learning about climate change through local spaces and indigenous knowledge systems, *Children's Geographies*.

<https://doi.org/10.1080/14733285.2022.2139591>

Wilks, J., Turner, A., & Shipway, B. (2020). The risky socioecological learner. In A. Cutter-Mackenzie-Knowles., A. Lasczik., J. Wilks., M. Logan., A. Turner, A., & W. Boyd, (Eds.), *Touchstones for deterritorializing socioecological learning: The anthropocene, posthumanism and common worlds as creative milieux* (pp. 75-99). Palgrave Macmillan.

ABOUT THE AUTHORS

Mark Werner

Mark is Daureb and part of the Ulag Clan which is a clan of the Zagareb Tribe of Mer in the Torres Strait. He is a secondary trained teacher and holds a Masters in Indigenous Languages. He lives and works on the Mid North Coast of NSW. He is passionate about Aboriginal and Torres Strait Islander education, the environment and creating On Country immersive learning experiences.

Dr Judith Wilks OAM

Is Adjunct Associate Professor at Southern Cross University, Faculty of Education, and also Adjunct Associate Professor, Nulungu Research Institute of the University of Notre Dame Australia. She is an experienced educator with a significant research, teaching and community engagement track record in regional education services delivery in both the higher education and schooling sectors. In 2023 Judith was awarded the Order of Australia Medal (OAM) for Services to Education. Her research interests and publications stretch across a number of fields. These include the promotion of agency, resilience, and citizenship skills through participatory methodologies for children and young people in environmental education learning settings. Judith has also been an active member of national research collaboration (Nulungu Research Institute) that has sought to promote access, participation and success in higher education for Aboriginal and Torres Strait Islander students. In recent years she has undertaken considerable research work in the Western Kimberley region focusing on strengthening the learning experiences of Aboriginal and Torres Strait Islander higher education students living in remote locations.

Dr Angela Turner

Dr Angela Turner has 22 years higher education teaching experience. She holds a Bachelor of Education Technologies (Hons) and a PhD in Food Technology education. Angela has been recognised for integrating the domains of teaching and research through a Southern Cross University Vice Chancellor's Teaching Citation (2018); School of Education Recognition Award (2018); Australian College of Educators Award (2017). Her research projects have received competitive grant success over the years for actively forming university-school community engagement with rural primary and secondary school communities that have advanced teaching, learning and assessment in the classroom as an ongoing educational enterprise. She is currently an Adjunct Senior Lecturer/Researcher at Southern Cross University and a curriculum advisor for the NSW Education Standards Authority (NESA) curriculum reform for Technological and Applied Studies 7-10.

