

Student Action for the Environment: A Poetic Inquiry

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Abstract

The purpose of this study is to reframe education for sustainability (EfS) through the language of children taking action for the environment in their primary school. The language of sustainability is examined as well as the history of EfS in Aotearoa and related Māori concepts and metaphors. The researcher argues that despite children's vulnerability to climate change and environmental degradation, their voices have been marginalised from the discourse. Using the methodology of poetic inquiry and taking a phenomenological approach, the researcher observed and participated with students at two Auckland primary schools taking action in their enviro-groups. A variety of experiences are represented through the children's words in a series of found poems. Students experienced problem solving and decision-making, the freedom to engage in imaginative play, connecting with nature, and learning independently, with the help of teachers and whānau in ethically complex settings. The poems reveal an emotional, relational and embodied experience that the New Zealand Curriculum barely indicates. The researcher concludes that children's voices are essential to future curriculum development, engaging more people in the kaupapa and generating creative and bold responses to the current ecological crisis.

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Attestation of authorship

“I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person (except where explicitly defined in the acknowledgements), nor material which to a substantial extent has been submitted for the award of any other degree or diploma of a university or other institution of higher learning.”

Dedication

To my grandad who loved to garden and my great-great-great-great grandad who helped people across rivers.

Acknowledgements

Ngā mihi nui to my supervisor, Dr Adrian Schoone. I couldn't have done it without your patience, humour and expert guidance.

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Ethics approval was granted by Auckland University of Technology Ethics Committee on 16 June 2021, application 21/92.

Glossary of Māori terms

Ākonga – students, learner

Aotearoa – New Zealand

Atua - god

Awa - river

Hapū – kinship group, subtribe

Iwi – tribe

Kaik/Kainga - village

Kāi Tahu/Ngāi Tahu – South Island Iwi

Kaitiakitaka – guardianship

Kākāpō – flightless parrot

Kaupapa – agenda

Kia ora – hello

Kiore – rat

Mātauranga – knowledge

Mauka/Maunga - mountain

Mauri – vital essence, life force

Pākehā - originating in a foreign country

Taiao – environment

Taonga – treasure, prized possession

Te ao Māori – Māori worldview

Te Moana-nui-a-Kiwa – Pacific Ocean

Te Waipounamu -The South Island

Tipuna – ancestor

Waitaki - weeping waters (*wai* – water, *taki* – to weep, mourn)

Whakapapa – genealogy

Whakataukī - proverb

Whānau – extended family

Whare – house

Whetū - stars

Chapter One - Ko Waitaki te awa

It does not need that a poem should be long.

Every word was once a poem.

R. W. EMERSON

Pepeha

Ko Aoraki te mauka

Ko Arai-te-uru te moana

Ko Waitaki te awa

Ko Te Waimātaitai te roto

Ko Uruao te waka

Ko Kāi Tahu te iwi

Ko Kāi Tuahuriri te hapū

Ko Uenuku te marae

Ko Bradley tōku ingoa

This dissertation rests upon, and draws inspiration from three aspects of identity: the relationship of my whānau to the environment, primary teaching experience, and a love for words and language.

My whānau have been living in Aotearoa for many generations. My tipuna moved south from Tuahiwi in North Canterbury to Moeraki in the face of raiding by the Ngāti Toa chief Te Raupahara. They settled in Moeraki where my Māori tipuna, Pere Kapu, met and married an English whaler. Like most people who call Aotearoa home, I have a mixed heritage with relatives from the British Isles and Sweden. For myself and my iwi, Kāi Tahu, from Te Wai Pounamu, the landscape and its resources are seen as the main inheritance we will leave for future generations (Ngāi Tahu, n.d). I feel a sense of responsibility or kaitiakitaka for the natural environment and many of my interests revolve around the outdoors and being amongst nature. In these pursuits, I am immersed in the freshness and beauty of nature, experiencing feelings of freedom, exhilaration and awe.

First qualifying to become a teacher in 2015, I found a teaching position at a primary school in Auckland where I had the responsibility of promoting sustainability, coordinating the Enviroschools programme and facilitating a student environmental group. In this role, I became aware of the challenges schools faced implementing sustainable practices, the pressure on teachers to include sustainability in their classroom curriculum, and most importantly, despite these challenges, I saw the enthusiasm and commitment of students. When I started a Master of Education course in 2020, these students were never far from my mind.

Educating children about the natural environment and ways to live sustainably has become more common in Aotearoa over the past 50 years in spite of inconsistent governmental support (Irwin & Straker, 2014). This field of education is known, in Aotearoa, as education for sustainability (EfS). 'Sustainability' first appeared in the New Zealand Curriculum in 2007 (Ministry of Education [MOE], 2007, p. 39) however the references are few and fleeting and the document has been criticised for giving 'mixed signals' about the weight schools should give to EfS across their teaching programmes (Bolstad et al., 2015, p. iv). Children are being encouraged by motivated teachers and organisations such as Enviroschools to lead environmental projects in their schools and communities. Increasingly, they are being influenced by young

activists in the media (Sabherwal et al., 2021), but new ways to engage people are still needed (Department of Conservation, 2020).

Despite children's vulnerability to the present and future effects of environmental degradation and climate change (Malone, 2017), and the calls for children to be involved in decision making to protect the environment (United Nations, 1993), their voices continue to be underrepresented in this discourse. In a time where the efforts of governments and international organisations to promote EfS need to be bold and imaginative enough to catalyse change, alternative voices, including those of children, should be considered in order to make further progress in this field.

This research presents the everyday language of children aged between 8 and 11, who are engaged in action for the environment across two Auckland central primary schools, to poetically express what the experience of EfS looks and feels like. This knowledge is critical to the development of pedagogy and curricula relating to EfS. This research seeks to answer the question: 'What is the experience of students acting for the environment in an Auckland primary school?'

Poetry

For me, reading and writing poetry is a powerful and joyful experience. I am enchanted by poetry's ability to describe, juxtapose, contain complexity and mystery. Since ancient times, poetry has been used to describe nature, but it was not until the 18th century that the description of nature became a main subject of poetry (Perkins, 1995). More recently, poetry has been used in research to critique power structures, embody participants and open up research to a wider audience (Faulkner, 2019). It was these features that drew me to arts-based research and the methodology of poetic inquiry. Specifically, I used the 'found poetry' method, which entails extracting words from transcripts and shaping them into poetic form (Butler-Kisber, 2018). Found poetry has been used to amplify the voices of people in marginalised groups or situations (Schoone, 2020).

In a sense, all language is epistemological and ontological, and our experiences are composed and understood in words (Leggo, 2008, p. 166). This is why it is important to critique the language we use to define sustainability and how we talk about it in schools. My hope is that the words and experiences of students taking action for sustainability will juxtapose with the technocratic language and “tired models of sustainable development” to enliven the conversation about EfS (Malone, 2017, p. 59). Furthermore, the poems should resonate with the reader, evoking an emotional response and shared experience between the researcher, reader, and participants.

Dissertation overview

In chapter 2, I explore my research topic through a literature review examining definitions of sustainability, the history of EfS in Aotearoa and the role of student voices in the discourse. In chapter 3, I discuss my conceptual framework, introduce the methodologies of naturalistic and poetic inquiry and the method of found poetry. I also discuss the ethical considerations that informed my research design and process. In chapter 4, I present my findings in the form of found poetry which is analysed and discussed in chapter 5. Chapter 6 concludes my study and suggests possibilities for future research.

At either the beginning or end of each chapter I have included a research metaphor. The metaphor is written as a narrative, inspired by my notable tipuna, James Saunders-Loder, my first known English ancestor to settle in Aotearoa. In 2020, I travelled Te Wai Pounamu, visiting whānau, uncovering details about James’ life. I visited the places where he had lived, died and finally came to rest.

I invite the reader to journey back to the 1850s when James, known by Jimmy The Needle, was a ferryman on the Waitaki River (Figure 1). The river runs 209 kilometres from the glacial lakes at the heart of Te Waipounamu to Te Moana-nui-a-Kiwa (Figure 2). Shortly after the signing Treaty of Waitangi, when many now-extinct native species still survived, in a time before many common species were introduced (notably trout and salmon which are common today), before bridges, people stranded on the opposite bank would light a fire to show they needed passage across.

The metaphor likens research to crossing a river, and ferrying others on that journey too, just like my ancestor Jimmy The Needle.

Figure 1

Lower Waitaki River pictured from the International Space Station



Note. From *Waitaki River*, by Wikipedia, n.d, (https://en.wikipedia.org/wiki/Waitaki_River). In the public domain.

Figure 2

Map of Te Wai Pounamu showing the Waitaki River and its tributaries



Note. From *Waitaki River*, by Wikipedia, n.d, (https://en.wikipedia.org/wiki/Waitaki_River). In the public domain.

Chapter Two - Surveying the landscape

“This crossing can be treacherous, you know,” Jimmy looks at you, as if he is sizing you up, “so, the first thing you need to do is orientate yourself. To do that we need elevation. Follow me!” Jimmy kicks off his shoes and starts walking up a hill covered in a thick layer of springy grass.

You follow suit, a step behind the nimble ferryman. The springy grass feels good beneath your feet, providing ample grip. Close to the top, the landscape opens up before you. To the west, a long braided river winds back to its origin towards the snow covered mountains. To the east, you can see the Pacific Ocean, Te Moana-nui-a-Kiwa, stretching to the horizon. As dusk falls, pinprick lights appear, revealing the presence of people dotted across the dark expanse. Seaward, a brighter glow indicates a Māori village.

“The journey across this river is something you must do yourself. Stay in my hut tonight. Tomorrow you can visit others who will help you plan your course. You will find everything you need to build your waka here.”

I begin this chapter by describing the current context and need for a robust EfS curriculum in schools. Next, I explore the origins of the term ‘sustainability’ to better understand a discourse which entered the global stage “fraught with conflict as well as misunderstanding” (Hölzl, 2010, p. 432). Following this, I outline a history of EfS in Aotearoa, its local and global influences and the organisations working to promote it. Finally, the central place of student action is highlighted alongside the importance of including children’s voices in the discourse.

EfS – A response to environmental crisis

Education for sustainability (also known as education for sustainable development and environmental education) has been growing in prominence in Aotearoa and overseas for the past 50 years. However, critics have questioned the commitment of governments and international organisations to consistently

promote EfS in schools (McConnell, 2001; Irwin & Straker, 2014; Bolstad et al, 2015). As a result, many schools and teachers do not have the necessary resources or expertise to deliver this essential part of the curriculum. Boldness, imagination and commitment are needed to catalyse the changes necessary to tackle environmental crises and fresh approaches must be considered.

For decades environmentalists have been sounding a warning that modern industry and consumer habits are having profound, detrimental effects on the Earth. For the first time in history, more people live in urban areas than rural areas, with 60 million people in developing countries leaving the countryside each year (Malone, 2017). There is now overwhelming evidence that human activity is changing the environment in unprecedented ways (Ellis, 2018). Due to the rising levels of carbon dioxide in the atmosphere, the rate of extinction of species and dramatic increases in Earth's average temperatures, some scientists are willing to argue we are living in a new geological epoch: 'the Anthropocene' (Jickling, 2018b, p. 52). These changes, along with acidifying oceans, plastic accumulation and nuclear fallout will leave a lasting effect in rock, the basis for marking new intervals of geologic time (Ellis, 2018).

In Aotearoa, the natural environment faces many threats from urbanisation, intensification of agriculture and climate change. Since the arrival of humans, deforestation, the draining of wetlands, and the introduction of mammalian predators have wrought untold damage to native plant and animal species. In a country known as 'the land of birds', about 40 endemic bird species have already become extinct with a high proportion still threatened with extinction (Garcia-R & Di Marco, 2020). Wetlands support the greatest concentration of wildlife of any habitat, yet sadly, with only 10% of wetlands remaining, Aotearoa is a world leader in wetland loss (DOC, n.d, Peters & Clarkson, 2010). The decline in the water quality of rivers continues mainly due an increase in intensive dairy farming (New Zealand Conservation Authority, 2011).

As alarming as these statements are, "invoking ecological crisis – since the dawn of environmental education, and before – does not seem to have had much impact, pedagogically or otherwise" (Jickling, 2018b, p. 53). According to Morgan (2018), the dominant response to the environmental crisis from

educators has been to ignore the issue, hoping it would just go away. He believes that over a long period of time, advanced Western societies have evolved a type of thinking that has become detached from the environment and the natural world. This has contributed to the 'post-ecological condition' where the ecological crisis is acknowledged, but radical change is not considered (Morgan, 2018, p. 161).

Miller (1990, cited in Gough, 2020) proposes that in a 'throwaway society', a commonly held belief is that humans are set apart from nature, positioning themselves as superior to all other species. In this type of society resources are seen as unlimited due to people's ingenuity and ability to find substitutes. James (1994, cited in McMaster, 2013) observes that in a neoliberal capitalist society, it is "easier to imagine the destruction of the earth and nature than the end of capitalism" (p. 524). Malone (2017) insists that it will take more than "inter-governmental agendas and tired models of sustainable development to address the charge of the Anthropocene" (p. 59). We cannot hope to solve a problem using the same type of thinking that has created the situation in the first place; therefore new educational experiences and new relationships with nature need to be imagined (Jickling, 2018b).

Notions of sustainability

Within the space of 10 years more than 300 definitions for sustainability and sustainable development had already been identified (Dobson, 1996, as cited in Jickling & Sterling, 2017). The language used to describe ideas relating to sustainability is contentious, with different words reflecting different, and at times conflicting values and discourses. A key definition of sustainability does not exist, and the elusiveness and complexity of definitions is not helping the adoption of sustainable actions and practices that are urgently needed. Notions of sustainability are central to debates on EfS as many different meanings have been given to the same concept, leading to confusion and misunderstandings. In a study of New Zealand student teachers, it was found that many did not understand the complex concept, and over half of the participants did not have an accurate self-awareness of their understanding (Birdsall, 2014). Tulloch (2009) is concerned that definitions of EfS that are imposed on teachers "from lofty heights as finished products" will fail to become meaningful for them (p. 9).

The word 'sustainability' originated in German forestry management practices of the eighteenth century but did not appear in the Oxford English Dictionary for another 200 years, until 1972 (Le Grange, 2017, p. 93). New scientific ways of forestry were changing the face of forests in Germany, promising sustainable production of valuable timber and revenue for the government, yet these practices adversely affected local populations who were no longer able to access the forests (Hölzl, 2010). Attached to these novel accounting and management planning practices was a broad discourse of responsibility for future generations, yet the new practices were met with social protest and violent upheaval in the 1830s and 1840s (Hölzl, 2010).

The United Nations, Scientific and Cultural Organisation (UNESCO) played a major role in developing the aims and parameters of what they call education for sustainable development (ESD), proposing a global framework for environmental educational development in 1975 (UNESCO, 1975). Later UNESCO declarations further refined the aims and basic principles of environmental education that are evident in current curriculum and policy documents (Tulloch, 2009). 'Sustainable development' was first defined within the Brundtland commission report (WCED, 1987), *Our Common Future*, as: "Development which meets the needs of the present without compromising the ability of future generations to meet their needs" (p. 43).

González-Gaudiano (2005) questions whether it was necessary to coin the term education for sustainable development (ESD) at all, or if it was another device to cause "processes of change where nothing changes" (p. 248). With its contradictory and sometimes antagonistic dimensions, González-Gaudiano (2005) saw ESD as an "empty signifier" with no inherent meaning (p. 245). Part of the complexity in defining sustainable development is that, at the same time, it is a theoretical concept and a political ideal (Tulloch, 2009). Bonnett (2017) insists that the idea of sustainable development does not work as an instrument of change and has already failed to motivate us at a cultural level.

A slippery concept

The concept and definition of sustainability has been no less problematic in other countries and languages. In 2015 the World Organisation for Early Childhood Education (OMEP) undertook an international study of early childhood Education for Sustainable Development spanning 28 countries (Engdahl, 2015). In some participating countries, including Russia, there was no corresponding concept. With the interpretations of the concept in dispute among pedagogues in Russia, additional content had to be written to clarify the study's key ideas. Sustainable development was finally translated as "stable development" (p. 350). Although children showed understanding of the complexity of the problems facing the environment, almost no children recognised the concept of sustainable development. Notably, most children, however, were confident they could fix the problem.

EfS occupies an "awkward place" in education (Irwin, 2015, p. 58). According to Irwin (2015), it is susceptible to being politicised and instrumentalised. This becomes apparent in research that seeks to frame the natural environment in economic or technocratic terms. This type of language simplifies the task to an objective, rational, and technical problem rather than one that requires political or moral decision making (Rout & Reid, 2020). Martinez-Harms et al. (2018) hoped their study, reframing nature as 'natural assets' (p.1519) and providing 'ecosystem services' (p.1520), would facilitate more action-oriented research. However, the motivation to bring everything into our service makes things appear as an actual or potential resource whose being consists in their "availability for manipulation, exploitation, and consumption" (Bonnett, 2017, p. 89). Treating the environment in these terms may be doing more harm than good as this language serves to separate us from a direct experience with nature. The phenomenologist Martin Heidegger warns that if a technological enframing of the world as raw material at our disposal reduces the things around to mere objects, we ourselves become objects to be used (Peters, 2002). A more authentic experience would involve feeling, just as much as logical thinking, which this dissertation is seeking to address (Bonnett, 2017).

Overall, sustainability has proven to be a "slippery concept" because there is no one definition or explanatory model for it (Birdsall, 2014, p. 814). Irwin and

Straker (2014) note that the term has now been used “so often and so broadly that meaning and relevance is diluted” (p. 154). The concept is hard to pin down, dependent on culture and language, and likely to continue changing over time. An UNESCO (2005) report on the Decade of Education for Sustainable Development describes an ‘essential characteristic’ of education for sustainable development as “accommodating the evolving nature of the concept of sustainability” (p. 5). The plasticity of the term, however, exposes it to subversion by economic and political values and attitudes that have led us to the brink of ecological catastrophe (Jickling & Sterling, 2017).

Te ao Māori

In Aotearoa, the paradigm of sustainability for the indigenous Māori people should be taken into consideration given the treaty relationship (Treaty of Waitangi, considered to be the country’s founding document first signed in 1840) between Māori and the Crown (MacFarlane et al. 2019). For Māori, humans are seen as an intrinsic part of the environment and strive to live in harmony with ecosystems (Eames & Mardon, 2020). Culture and identity are also grounded in the ancestral landscape (Tomlins-Jahnke & Forster, 2015). While Māori have traditionally had strong connections with the natural world, the connection was severed by the onset of colonisation, industrialisation and urbanisation (Eames & Mardon, 2020).

Today, universities and wananga teach Mātauranga Māori - Māori knowledge of nature based on thousands of years of experience from life in Polynesia and crossing the Pacific (Harmsworth & Awatere, 2013). Mātauranga Māori helps Māori manage their land and resources, and informs how they relate to others (Harmsworth et al., 2016). When harvesting resources such as water, food or materials for shelter, the health and survival of all species and the environment is considered (Eames & Mardon, 2020).

The idea that everything is connected is fundamental to Māori, with Māori seeing nature as a web of subjects that share whakapapa (ancestral lineage) back to Ranginui (the Sky Father) and Papatūānuku (the Earth Mother). In this respect, Matthew Rout and John Reid (2020) from the Ngāi Tahu Research Centre at the University of Canterbury cite ‘mauri’ as an important Māori

concept. Mauri is a life essence that binds the physical and the metaphysical and measures the quality of relationships between all things (Rout & Reid, 2020). Seen through the lens of mauri, sustainability is driven by both love and necessity, providing an intrinsic and instrumental motivation (Rout & Reid, 2020). Acknowledging Māori perspectives and mātauranga is indispensable to guiding learning and action relating to the environment in Aotearoa. This is a key part of Enviroshools' kaupapa (philosophy/purpose), covered in more detail later in this chapter (Enviroschools, n.d).

When considering decision making relating to sustainable development through te ao Māori, environmental well-being would be the most important factor with economic well-being considered least important (Kennedy et al., 2020). The health of the natural environment would also be placed above cultural and community needs, as well as the needs of the whānau and business. Thus, with a focus on intergenerational equity, a comparable Māori definition of sustainability to that in the Brundtland report could be: "Sustainability ensures that social and natural environments are protected or improved to provide intergenerational equity at the very least" (Kennedy et al., 2020, p. 829).

EfS in Aotearoa

Teaching young people about their relationship with the natural world has been a special part of formal education in New Zealand since early colonial times, yet education in and for nature has held a tenuous place in the school curriculum (Irwin & Straker, 2014). Prior to 1939, New Zealand education debates were dominated by conservative traditionalists who viewed learning as serious work to be conducted indoors (Lynch, 2006). Subsequently, progressive educational thought and practice increasingly took hold, valuing knowledge gained from direct experience and the world beyond the classroom. In the United States, philosopher John Dewey also took note of the conflict between those focused more on the subject matter of the curriculum and those who prioritised the child's growth and own experience (Quay & Seaman, 2013).

In the early 20th century, the outdoors was widely regarded as a health-giving environment, and a romantic belief persisted that the natural environment could impart beneficial values (Lynch, 2006). Nature study, part of the primary school

syllabus from 1904, encouraged all teachers to venture outdoors, although the majority would still teach it from books (Ewing, 1970). There are numerous examples throughout New Zealand's schooling history of teachers promoting learning in nature and organising excursions for their students, but they were the exception rather than the rule (Lynch, 2006). Despite the rise of progressive, child-centred approaches to education, as well as the perceived benefits of education outside of the classroom, nature study only remained in the curriculum until the 1950's (Ewing, 1970). From 1956 there was an ongoing expansion of outdoor education throughout the country with its strongest curriculum associations being health and physical education followed by science, environmental education and social studies (Lynch, 2006). More recently, as public concern for the environment has grown, there has been a shift in the perception of what outdoor education can offer, with some viewing it as a "bulwark against the impending environmental crisis" (Quay & Seaman, 2013, p. 46).

The term 'environmental education' became popular in the 1960s reflecting changes to the political landscape and a growing concern for the impact people were having on the environment (Irwin & Straker, 2014). Aotearoa, however, has experienced a lack of commitment at a national level with McConnell (2001) calling for a major change to the political climate that would recognise environmental education as essential for young people and the future health of New Zealand and the planet. Environmental education is cross-sectoral, involves diverse stakeholders, and "connects with wider national and global interests in the relationship between humans and the natural world" (Bolstad et al., 2015, p. 7).

In 2015, the '2030 Agenda for Sustainable Development' was adopted in the United Nations along with 17 Sustainable Development Goals (SDGs) relating to three key aspects of sustainability: environmental, social, and economic concerns (United Nations, 2015). Aotearoa has also been influenced by the UN's worldview, with TKI (2020, December 17) setting out the key aspects of education for sustainability as environmental, social and economic with additional political and cultural dimensions. Although highly influential, Jickling (2018a) has criticised the United Nations and UNESCO's discourse relating to

education and the environment as lacking “any serious reflection about what education is, or could be” (p. 6).

The New Zealand government, councils, iwi, private companies and community organisations have been working together on various projects to promote EfS. The Department of Conservation (DOC), Ministry for the Environment and Ministry of Education have developed an action plan to achieve their vision that “all New Zealanders value a connection to the environment by actively working together for a sustainable future” (DOC, 2017, p. 15). Their objectives include celebrating the success of existing initiatives, strengthening networks to foster collaborative action, and building capability and capacity to engage people. The draft for DOC’s threatened species strategy (DOC, 2020) concedes that government agencies cannot make substantial advances on their own, and they “need to find new ways to engage people and rekindle their concern” (p. 39). Research involving people that are already engaged in this kaupapa, such as the present study, may provide some answers to this problem.

The curriculum

The past 30 years have been a major period of development for EfS theory and practice. This has coincided with neoliberalism becoming the dominant political and economic ideology in New Zealand, the principles of which continue to shape education policy (McMaster, 2013). Neoliberalism, is also at the heart of international conservation efforts which promise easy solutions to “complex and difficult problems” (Igoe & Brockington, 2007, p. 434). Despite the development of EfS, a consistent understanding has not been achieved across schools (Bolstad et al., 2015). *Guidelines for Environmental Education in New Zealand Schools* (MOE, 1999) was published to give teachers direction on how to integrate EfS across the curriculum but sustainability did not achieve a formal place in the curriculum until 2007. In the most recent New Zealand Curriculum (MOE, 2007), sustainability is mentioned twice, once as a ‘future focus issue’ (p. 39) and a ‘key value’ (p. 10). Additional guidance for educators can be found on the TKI website (TKI, 2020, December 17).

EfS does not have its own section in the New Zealand Curriculum, nor is it included in each of the learning areas. Bolstad et al. (2015) contend that the

document gives “mixed signals” about the weight schools should give to EfS across their teaching programmes (p. iv). Like other curricula overseas, looking to incorporate some version of EfS, these inclusions seem to be subsidiary to an education structure designed without any thought to environmental sustainability (Bonnett, 2017). Irwin (2015) contends that EfS is not a subdiscipline of education but “essential to the educational enterprise” (p. 58). Instead of tacking on new bits to the curriculum, it may be time to reimagine education in line with the needs of a new era. Diverse notions of sustainability should be considered and our relationship with nature examined. And, if we are to change our relationship with Earth and its other beings, learning must come through an active engagement with the natural world (Jickling, 2018a).

Students taking action

Taking action is a central principle of EfS and forms the context of this research. Eames et al. (2006) describe environmental education as an “intensely practical endeavour” (p. 3). TKI (2020, December 17) highlights that EfS provides students with the opportunity to take action in their communities and engage in genuine learning. What Birdsall (2010) refers to as ‘pro-environmental behaviour’ includes direct and indirect action and can take place in the private or public sphere (Sass et al., 2020). Direct action has a direct impact on the environmental problem whereas indirect action aims to influence others to act in a pro-environmental way (Birdsall, 2010). In a recent study of 10 to 13-year-olds, Sass et al. (2020) found that young adolescents saw a wide variety of actions as possible for people their age and made connections between the different areas of sustainable development, however the students did not carry out any of the proposed actions during the research.

Eames (2010), the author of several reports on student learning and pedagogy relating to EfS in Aotearoa, identified five critical areas that students need to develop in order to properly engage in action for sustainability:

1. experience
2. connectedness
3. reflection
4. action taking

5. visions of a sustainable future

Eames (2010) suggests the development of each area shows the ‘action competence’ of a child. The idea for action competence was developed by Danish school researchers Jensen and Schnack (1997). They embraced a democratic approach to empowering students to act for the environment as an alternative to the traditional science-oriented approach or the tendency to focus on behaviour modification. What is concerning about the notion of ‘action competence’ is that it may give educators the impression that only certain students have the necessary competencies to take action, thereby excluding others. There is also little empirical research available on what action competence looked like in practice.

Green school movement

The green school movement has been instrumental for children becoming involved in action for the environment globally. This movement focuses on a whole-school approach to improve school environments and encourages students to take on local problems and find solutions while thinking globally (Gough et al., 2020). Whole school approaches to sustainability have been found to facilitate student participation in EfS (Birdsall, 2010). Aotearoa’s EnviroSchools programme, like many similar school programmes internationally, can trace its origins to the 1992 United Nations Conference on Environment and Development, also known as the Earth Summit (Gough et al., 2020).

Promoting the ideas of EfS in schools, EnviroSchools is a national programme that encourages young people to design and lead environmental projects in their schools and communities (EnviroSchools, n.d). It has a kaupapa of action-learning, cultural responsiveness drawing from Māori perspectives, “and which sees whole schools as connecting to communities and the environment” (Eames & Mardon, 2020, p. 49). As well as being a practical realisation of the Treaty of Waitangi, the developers of the EnviroSchools programmes believed that indigenous perspectives could help reconnect people to their environment (Eames & Mardon, 2020). These types of programmes value student-led action and give students opportunities to develop a disposition where they can be active citizens and agents of change (Gough, 2020). By developing their own

initiatives that are driven by their own efforts, students create a feeling of ownership and belonging (Andreou, 2020).

The Enviroschools network has steadily grown since its inception in the 1990s, yet in Auckland the participation rate of schools remains low with only 12% of early childhood centres, 40% of primary and 34% of secondary schools signed up to the programme in 2021 (Enviroschools, n.d). Insufficient funding is a possible barrier to more schools joining as there is often waiting lists for schools ready to join (Eames & Mardon, 2020).

The prominence of place

Sustainability practices and learning are often based in the locality of schools, facilitated by people working together in the community. In their study based in Victoria, Australia, Green and Somerville (2015) found sustainability education to be an emergent practice “constituted in the relation between teachers, students and community members and the materialities of local places” (p. 832). The students’ learning connected them to the world outside of their school through their actions in “local wetlands, woodlands, gardens, creeks and rivers” (Green & Somerville, 2015, p. 838). Community partnerships were also found to be an essential part of integrated sustainability programmes.

Children’s immediate experience of nature is not only valuable for their well-being and health, but crucial to an authentic education and learning what it means to be human (Bonnett, 2017; Malone, 2017). Phenomenologically, place does not refer to the physical environment alone, but “the indivisible, normally unnoticed phenomenon of person-or-people-experiencing-place. This phenomenon is typically multivalent, complex and dynamic” (Seamon, 2014, p. 11). In previous studies, child-nature relations in urban environments have been shown to be at times uncomfortable, difficult and tricky encounters (Malone, 2017, p. 90). However, once people come to feel part of a place, they can associate their personal and group identity with the identity of the place (Seamon, 2014). Places to which children are attached can also be safe havens where they can “retreat from threats, engage in problem-solving, and gain emotional relief” (Scannell & Gifforde, 2014, p. 26).

Indigenous ways of knowing the world have traditionally involved place-based pedagogies (Penetito, 2009). Wally Penetito (Ngāti Hauā, Ngāti Raukawa), an expert in Māori education, advocates for the wider adoption of Place Based Education as a means for students to learn more about their locality and their relationship to it. This would benefit Māori students who “already have a well-rehearsed traditional and historical affinity to Place Based Education practices” (p. 24). Another aim of Place Based Education is “to develop ecological consciousness and the understanding needed to maintain sustainable communities (Penetito, 2009, p. 17). Penetito (2009) argues that there is a need to develop a consciousness of the environment in order to overcome the detachment caused by familiarity with place. The places where we spend most of our lives are most vulnerable to destruction because we see them every day and find it hard to evaluate the changing reality most familiar to us (p. 11). Macfarlane et al. (2019) also support the inclusion of place-education teaching approaches to validate Māori epistemology and pedagogy. At Te Pā o Rākaihautu school in Christchurch, place-based education activities have pushed learners to become agents of change within their families and wider cultural landscape (Macfarlane, 2019).

In this research, I was sensitised to the issue of place by splitting my time between a familiar and unfamiliar school. Taking a phenomenological attitude to seeing the world (expanded upon in chapter 3) was an easier task in the setting of the new school. Grbich (2013) describes this critical attitude as taking the position of an alien from another planet.

Connecting to nature

Some scholars believe that aspects of modern education are distancing us from our natural connection with nature and tendency to look after ourselves and the environment. In recent times, due to the promotion of rationalistic pedagogies, learning has been increasingly understood in terms of metrics: a process of “accumulation and acquisition of discrete knowledge objects, skills and competencies” (Barnacle, 2009, pp. 23). Rationalistic conceptions of learning presume a hierarchical model of the subject where a rational mind presides over an indifferent body (Barnacle, 2009). This has consequences for how we view and connect with the world.

Alternatively, Le Grange (2017) discusses an ontology of immanence, where the subject becomes ecology rather than a transcendent human. This has ramifications for how we view action. From this perspective, humans' capacities to live, love and connect with the world cannot be taught. The imperative to care is within us, part of our being in the world, but becomes obscured by schooling, culture and the demands of society. Environmental action becomes 'simply doing' rather than appealing to constructs such as sustainability (p. 104). An education informed by ethics of immanence can increase students' powers of acting, unlocking their "collective capabilities and capacities to make a difference (or rather be a difference)" (p. 104). Writing from an ecological posthumanist perspective, Malone (2017) shows how the lives of children are entangled with the non-human world, acknowledging human and non-human relations as "intra-active, agentic and lively" (p. 254).

The role of children's voices

This research positions children's voices and their actions as relevant to knowledge construction in the field of EfS. While children are capable of engaging with complex and social issues (Engdahl & Rabušicová, 2011), the academe, governmental agencies and special interest groups largely dominate the discourse. Decisions that affect children have largely been left to the adults "who feel they are capable of taking into account the best interests of the child through their own history, perceptions and experiences of being a 'child'" (Malone, 2017, p. 29).

Given the values of our neo-liberal capitalist society, with little economic or political power, it is unsurprising that children and the voices of non-human others' have been left out of the debate. Yet, while the discussion remains between adults, we miss the opportunity to engage with children and "learn about being in a dynamic relation with the planet" (Malone, 2017, p. 59).

'Agenda 21', the action plan created at the 1992 Earth Summit, calls for children to be involved in environmental protection and decision making (United Nations, 1993). As well as their intellectual contribution, it cites young people's ability to mobilise support and their unique perspectives as a basis for their involvement. As well as being "highly aware supporters of environmental thinking," children,

in both developing and industrialised countries, are particularly vulnerable to the effects of environmental degradation (United Nations, 1993, 25.12).

Now, it is time to include the lively voices of children, “full of creative wonder” (Leggo, 2016, p. 54). Previous studies relating to students and EfS have focused on student knowledge, pedagogy and students' ideas for action (Birdsall, 2010; Eames, 2006; Sass, 2020) but there has been little research into the experiences of young people involved in environmental projects. Encouraged by the movements that they see in the media, students are increasingly finding their voice and taking action for the environment. Sabherwal et al. (2021) have found evidence for the “Greta Thunberg Effect” where people who were familiar with the young environmental activist Greta Thunberg were more likely to take collective action for global warming than those who weren't (p. 329). They also found evidence to support the idea that youth figures like Greta Thunberg could shape collective efficacy, the belief that by working together with like-minded individual people could make a difference, providing further motivation to take collective action. Organisations like Enviroschools have also encouraged students to participate in school decision-making processes where traditionally they may not have been considered to have a voice (Bolstad et al., 2015). ‘Empowered students’ is a main principle within the Enviroschools kaupapa, where children’s perspectives are valued for their knowledge and insight, and “they are supported to take action for real change” (Eames & Mardon, 2020, p, 53).

My research draws attention to the voices of children who are actively involved in action for the environment at their school. Their words and actions will give insights into an important area of education which has previously not taken them into proper consideration.

Conclusion

The word ‘sustainability’ has its roots in a turbulent period of German history where technical management solutions to forestry issues had negative consequences for local people and biodiversity (Hölzl, 2010). Since ‘sustainable development’, was first defined 35 years ago, hundreds of definitions and

similar terms have been created, confusing those who seek to describe and understand what should be a natural and universal idea.

Given Aotearoa's bicultural heritage, it is unsurprising that there have been different and often opposing conceptions of the environment and sustainability in this country since the arrival of Pākehā over 200 years ago. Today, Māori and Pākehā ideas and values can be seen working side by side in schools thanks to programmes like Enviroschools. Although Enviroschools has grown out of a global political process, it has developed locally and organically with schools and students at the heart of the process (Eames & Mardon, 2020). However, after 30 years of slow and steady growth, schools that belong to this programme are still the minority with insufficient funding as a possible barrier to school participation.

Since colonial times, EfS and related subjects such as nature study, outdoor education and environmental education have held a tenuous position in Aotearoa schools. Despite varying governmental support for EfS, and the mixed messages as to its importance, there are small groups of students who continue to relate their environments and take action in their schools. If there is to be a new vision for education that prioritises students' direct experiences of nature over abstractions and empty signifiers, then we must look more closely at these experiences and listen to what these students have to say. Through their actions and words we can move beyond the terms handed down to us, that instead of providing clarity and direction, have left us uncertain and confused.

Now you have a sense of where you are, and the character of the river, it is time to start designing the waka that will get you safely across. It must be able to carry the taonga you have brought, and withstand the vagaries of the mighty river.

Chapter Three - Building the waka

*A child said What is the grass?
fetching it to me with full hands;
How could I answer the child? I do not
know what it is any more than he.*

*I guess it must be the flag of my
disposition, out of hopeful green
stuff woven.*

Walt Whitman, 1855

On reviewing the curriculum documents and literature relating to EfS in New Zealand, I noticed there were important voices missing from the discourse, particularly those of children. It was necessary to develop a research approach that would position children's voices and actions as relevant to knowledge construction in this field – to build a waka that would get us from shore to shore. This chapter shows why poetry is suited to this research, how it can be used to give voice to the experiences of underrepresented groups while critiquing power structures and remaining accessible to a wide audience. I will present definitions of poetry, discuss poetic inquiry as a methodology and my approach to it. I will show how poetic inquiry links with my conceptual framework, and how a naturalistic approach will help me to achieve my research goals and answer my research question: 'What is the experience of students taking action for the environment in an Auckland primary school?'

[One school on a mountain, one by the sea](#)

I conducted my research at two public primary schools in central Auckland. One school, next to one of Auckland's famous volcanoes, was well-known to me. I had been a teacher there for four years, still working there as a release teacher part-time. The other was in a nearby suburb close to a popular beach. Both schools had established enviro-groups dedicated to promoting sustainability in their school and community and were committed to the Enviroschools programme that positions schools as "sites for food production, biodiversity, habitat and cultural expression" (Eames & Mardon, 2020, p. 54). Twenty-two

students, as well as the two teachers responsible for sustainability at the schools, consented to take part in the study.

In one school the enviro-group students had various responsibilities around the school and were seen as leaders by the staff and other students. They were in the middle of a project making recycled cups for local cafes and starting a collaboration with a local pest-eradication group. Only the senior students, those in year 5 and 6 (nine to eleven years old), were able to join. In the other school, the enviro-group was working on a play to present to the rest of the school and was taking care of the shared school gardens. This group was open to all students between years 3 and 8, however the participants were all from year 3 to 5 (seven to nine years old). Over four lunchtimes, I observed and participated in two meetings, two whānau presentations and two outdoor sessions, asking questions, recording sound, words and making notes of my impressions. Later, I wrote 'found poetry' from the audio recordings and transcriptions.

Doing research in a place that was well-known to me enabled me to approach the research from the position of an insider (Sherry, 2012). I had not taught any of the children before, but I was a familiar face to them. An advantage of doing research at the other school was having the opportunity to see something familiar through fresh eyes while being aware of the "communicative rules" used by children of that age group in that area of Auckland (Eder & Fingerson, 2002, p. 184). This also helped me with the timing of questions during my observations. The teachers were present during each session, freeing me up to observe, participate and pose questions.

Conceptual framework

Considering the focus of my inquiry is the experience of students, I have decided to take a phenomenological approach to the research. Primarily, phenomenologists seek to answer questions concerning "the nature of a particular phenomenon as lived and experienced by an individual" (Pate, 2008, p. 2). According to Martin Heidegger (1972), who drew on ideas from his teacher Edmund Husserl, the founder of phenomenology, Husserl taught the practice of phenomenological "seeing" (p. 78). Seeing something

phenomenologically means “seeing it as a ‘phenomenon’, as something that appears or gives itself (in our awareness or consciousness)” (van Manen & van Manen, 2021, p. 8). To enable phenomenological seeing, one must transform the “natural attitude”, or the taken-for-granted attitude people have most of the time, into the “phenomenological attitude” (van Manen & van Manen, 2021, p. 9).

Phenomenology is similar to poetry as both attempt to “access language that authentically speaks the world rather than abstractly speaking of it” (van Manen, 1990, p. 13).

Language and experience

My research attends to the everyday language of students engaged in action for the environment. Heidegger saw language as the ‘house’ of Being, and poetics as a way of opening a new world (Irwin, 2015). In a sense, our world is constructed through language. Crotty (1998) contends that it is language that shapes what we see and how we see it, and ‘it is these things shaped for us by language that shape reality for us’ (p. 88). Mills (1997) notes similarly that “the only way we have to apprehend reality is through discourse and discursive structures” (p. 54). It is thus important to acknowledge how the language in which certain concepts like sustainability are framed has an impact on the way people think and act in the world. Rout and Reid (2020) propose that it is the English language itself most responsible for promoting a mechanistic and objectifying view of the world, and it is this instrumental relationship with nature that “lies at the heart of our impending climate catastrophe” (p. 945).

The spoken conversations between students, the teacher and myself are of particular value to my study. Showing alternatives to the language commonly used to describe EfS may serve to both critique and enliven it. Instead of the language drawn from the neoliberal focus of government policy (Benade, 2011), this study focuses on the living language of those that practice it, to reflect their felt experience.

The physical world

Co-existing with the world of language and symbols is the fundamental and primitive material and biological world. Rout and Reid (2020) argue that humans are ‘preontological’, meaning that we “experience and understand reality

phenomenologically without the need for a codified explicit ontology” (p. 945). Nature is made of incredibly complex open systems and our incomplete understanding of it is built on a mixture of embodied experience, our sense of being and a negotiated interpretation of reality (Rout & Reid, 2020). With an inability to process all the information we are exposed to, what we interpret as reality is literally not true, but there are methods to help bridge the gap between what we experience in our body and our negotiated constructed reality. In this study poetry acts as such a bridge.

The body is how we connect to the world, to nature and to others. We need a body to experience the world and to learn, and we learn “through our emotions as well as through analytical thought” (Glesne, 1997, p. 218). Ignoring the role of the body, and understanding knowledge simply as the domain of thought, leads to much different networks of relationships and responsibilities than if we are able to value “bodily, emotional, and intuitive-spiritual knowing” (McKeon, 2019, p. 59). Action, a key characteristic of EfS, necessarily requires a body, and I propose that taking action for the environment is, at least partially, an emotional experience. EfS is an embodied practice that involves the whole person. By paying attention to the biological in my study, I hope to offer a more distributed and less hierarchical conception of mind-body relations which has dominated western thought since the time of influential Western philosopher René Descartes (Barnacle, 2009). Conscious embodiment, such as embodied representation through poetry, helps to undo the mind-body dichotomy by joining the material world with that which has been socially constructed. Barnacle (2009) argues that our gut feelings are not merely metaphorical but crucial sensations intricately involved in sense making. Ellingson (2012) likewise urges researchers to pay attention to gut knowing as they analyse data and engage in embodied sense making and reasoning. Knowledge which is grounded in bodily sensations includes the uncertainty, ambiguity, and messiness of everyday life and “is inherently and unapologetically subjective, celebrating—rather than glossing over—the complexities of knowledge production” (Ellingson, 2012, P. 530).

A naturalistic approach

In addition to prioritising words, bodies and place in my research, I have used naturalistic and interpretive approaches to better understand the experiences of students acting for the environment. Environmental education researchers have been turning towards such approaches to “probe more deeply into the rich interconnections and complexities that underlie their discipline” (Eames et al., 2006, p. 3). A fundamental idea of naturalistic inquiry is that the researcher cannot understand human behaviour outside of its context, therefore it was critical that I observed the students directly (Owen, 2012). Participating with the students allowed me to become more immersed in the scene and better understand the activities from their point of view (McKechnie, 2012). Ensuring that students were with their peers, doing what they would normally be doing at that time, contributed to students feeling comfortable and expressing themselves more freely. Conducting research at the students’ school, in their classroom or school grounds, further enhanced the naturalness of the interview context (Eder & Fingerson, 2002). These measures served to mitigate a potential ‘fear of the recorder’ which could have made student contributions inhibited or reserved (Flick et al., 2004, p. 290). Another advantage of participating and interacting with the participants in person was the opportunity to generate meaning through verbal and nonverbal communication as a co-construction (Ellingson, 2012).

To weave together elements of language, the relationships between self, others and place, and to best represent the experience of students taking action for the environment, I turned towards arts-based research.

Poetic Inquiry

Arts-based research is an umbrella term for many methodologies with a “constructivist, emotive, empiricist research aesthetic” (Finley, 2008, p. 79). Researchers have used arts-based research to relocate inquiry from elitist institutions into “the realm of local, personal, everyday places and events” (Finley, 2008, p. 72). Poetic inquiry, an arts-based research methodology, “is the use of poetry crafted from research endeavors, either before a project analysis, as a project analysis, and/ or poetry that is part of or that constitutes an entire research project (Faulkner, 2017a, p. 210). Faulkner (2017a) sees

poetry in research as a way to tap into universality. By creating something out of the particular, it becomes universal when the audience can relate to it or experience the work as if it was their own.

Poetic inquiry has been used by researchers to reflect embodied experiences and practices. In their research of female mothers who are poets, Faulkner and Nicole (2008) show that the women bring embodied knowledge to poetry; “the body and the self and the poet and poetry interwoven” (p. 88). This subverts the deeply implanted idea in Western cultures that the mind is superior to the body, an idea often reflected within conventional research methodologies (Ellingson, 2012). Faulkner (2019) sees the use of poetry as a way to refuse “the mind-body split still present in much academic work” (Faulkner, 2019, p. 20). Glesne (1997) felt that including poetry in her research was a move away from dichotomous thinking toward more divergent thinking. Listening for poetry means listening with our *whole body* and it is a stepping away from Cartesian duality (Penwarden & Schoone, 2021). It is also a way of troubling the illusion of a human/nature divide (Beavington, 2019).

Poetry

Definitions of poetry are fraught with difficulty, however, here I will share some ideas about what poetry can be. Poetry (from the Greek *poiein*, to make) “creates or makes the world in words” and, like the world, everything within a poem can have significance (Leggo, 2008, p. 166). It is an invitation to experiment with language, of knowing and engaging imaginatively with our experiences (Leggo, 2008). Billy Collins (2003) describes a poem as “an interruption of silence, an occupation of silence; whereas public language is a continuation of noise”. For Longenbach (2008) poetry is the sound of language in lines as “line is what distinguishes our experience of poetry as poetry, rather than some other kind of writing” (p. xi). Annie Finch (cited in Faulkner, 2019, p. 12) thinks that structure is a defining feature of poetry. This structure can be the repetition of any elements which could be aural, visual or conceptual. Richardson (2002) stresses that poems are consciously constructed to evoke emotion and to be felt. Even if the mind resists “the body responds to poetry (Richardson, 2002, p. 879). Finally, given that authentically representing children’s voices is central to my research, poetry can closely represent the way

that people talk, “their language use, and patterns of speech” (Faulkner 2019, p. 75).

The accessibility of poetry

From my own experience reading widely as a graduate student and research assistant, I often struggled to connect with jargon-filled research that seemed to be written for the few. I wanted to present my own research in a way that would be accessible to a wide range of people. Prendergast (2009) considers to engage in poetic inquiry as much a calling as it is a method, and it was engaging with Schoone’s (2020) poetic work regarding tutors that opened up possibilities for my own research. For Faulkner (2019), it is a sign of authenticity, when someone else’s voice reaches you, mirroring your own experiences, even if they are not identical.

Poetry has been used to represent the human experience in a form that is more “easily consumable, powerful, emotionally poignant, and accurate” than prose research reports permit (Faulkner, 2019, p. 39). Unlike conventional social science writing, Richardson (2002) sees poetry as more welcome in diverse settings. Poetry and poetic inquiry “can carry something of the mystery of a human being, which writing research in prose cannot” (Penwarden & Schoone, 2021, p. 356). Schoone (2021) sees the poem in research not merely as decoration, but a “means to see into the world” (p. 61). In this case, as the means to see a world mediated by adults, through the eyes (and voices) of children.

As well as opening research to a wider audience, poetry in research invites interactive responses, “intellectual and emotional and spiritual and aesthetic responses” (Leggo, 2016, p. 61). By experimenting with poetic form, Glesne (1997) invited readers to attend to her writing with “their minds, feelings, and self-reflection” (p. 215). For her, the amalgamation of science and the literary in what she termed ‘poetic transcription’, opened up a spirit of discovery and creation in the researcher and the reader. Schoone (2021) believes it is the author’s responsibility to help the audience engage with the work and to build a space for the reader “to participate in the poetic proclamation” (p. 68) and Finley

(2008) sees the power of arts-based research as promoting “dialogic, performative, activist” responses from an audience (p. 79).

Poetry as critique

Poetry is powerful because it helps to critique power structures (Faulkner, 2019). It is an effective way “to talk back to power” (Prendergast, 2009, p. 562). In this research, poetic inquiry offers a means to question the current frameworks and power structures that currently exist in the field of EfS, while permitting the nuance, contingency and ambiguity that exists in educational settings (Jacobs, 2008). Leggo (2008) contends that our thoughts and actions are often constrained by the discursive patterns and frames that society excludes or permits, but it is our imagination that allows us to break free from stereotypes and create other possibilities. By exploring artful ways of being in the world, arts-based researchers make a challenge to the dominant, entrenched academic community who prioritise scientific ways of knowing (Finley, 2008). As well as providing a fresh addition to the EfS discourse, presenting research as poetry derived from children’s action for the environment, subverts traditional power structures and opens up new possibilities.

While the use of the term sustainability has been criticised for its many definitions and ambiguity, qualitative researchers use poetry in their work precisely because of its “slipperiness and ambiguity,” but also for its precision and distinctiveness (Faulkner, 2019. P. 12). By attending to particulars, researchers who use poetry can challenge scientific writing that focuses on comparative frameworks (Richardson, 2002). Poetic inquiry has also been used by researchers to engage as active witnesses within their research sites, “as witnesses standing beside participants in their search for justice” (Prendergast, 2015, p. 683).

Many of the poems written for this research project could be considered ‘ecopoetry’. Ecopoetry is environmentalist by nature and must be about the “nonhuman natural world” (Shoptaw, 2016, p. 395). Shoptaw (2016) also describes ecopoetry as “nature poetry that has designs on us, that imagines changing the ways we think, feel about, and live and act in the world (p. 408).

Beavington (2019) included ecopoetry throughout his experience on a trip to the Amazon from Canada to help his students engage with the unfamiliar climate and geography and “provide a political voice to rekindle a relationship with the land” (Beavington, 2019, p. 49). Ecopoetry uses poetic language to build a relational connection with the natural world and to question privileges and hierarchies (Beavington, 2019). Rekindling this connection with nature alongside bold critical thinking will be crucial to unwinding the causes of the current environmental crisis and taking the discourse beyond what is currently prescribed in the curriculum.

Found poetry

Found poetry, the predominant method within poetic inquiry and of this research, is “the act *and* art of extracting words from transcripts and shaping them into poetic form” (Pate, 2014, p. 5). Previously, found poetry has been used to “represent the experiences and bring understanding to a range of people in marginalised groups or situations” (Schoone, 2020, p. 15). Butler-Kisber (2018) notes that found poetry can be used to portray salience, poignancy and emphasise the participant's voice. Schoone (2021) describes the experience of writing found poetry as the poem calling “from within the text...for my attention” (p. 61). Using the transcribed audio recordings and research journal, I wrote poetry reflecting the actions, experiences and conversations of students in their school enviro-group. This method allowed me to represent individual voices as well as a collective voice representative of the group.

Butler-Kisber (2018) suggests that demonstrating exactly how poets move from thoughts and sensations to words on the page, like any creative process, remains elusive, however I will attempt to give a basic account of my process. The process that I used to write found poetry was based on that of Walsh (2006) and Prendergast (2015). Walsh (2006) read transcripts many times while making notes and finding recurring themes. She played poetically with the segments of conversation, distilling themes and progressively writing succinct versions of them. Prendergast (2015) adapted the ‘catch and release’ method from the phenomenologist Kurt H. Wolff when writing found poetry based on the work of other poetic inquirers. As she read, she would let the poems “wash over” her and let whatever impact each one might, or might not have, happen”

(p. 683). Afterwards, she highlighted the words that resonated or made an impression on her. Below, Figure 3 is an excerpt from my transcript after highlighting what I considered salient expressions.

Figure 3

Highlighted excerpt from transcript

38.31 Naaah. Ahhhhhh! Ohhhh.

Whoah (me)

It's stuffed. Wait, what? Taxidermy. Its tail's chopped.

Here comes some more (Teacher)

Aahhhh! Oooooooh. That's cute!

Stoat! It looks cute, but it isn't cute.

Aahhhh! Oooooooh. Possum!

Oh, so you borrowed them? (teacher)

Really fluffy. For some reason I like rodents. But I don't like what they do.

It's actually...! (after touching one)

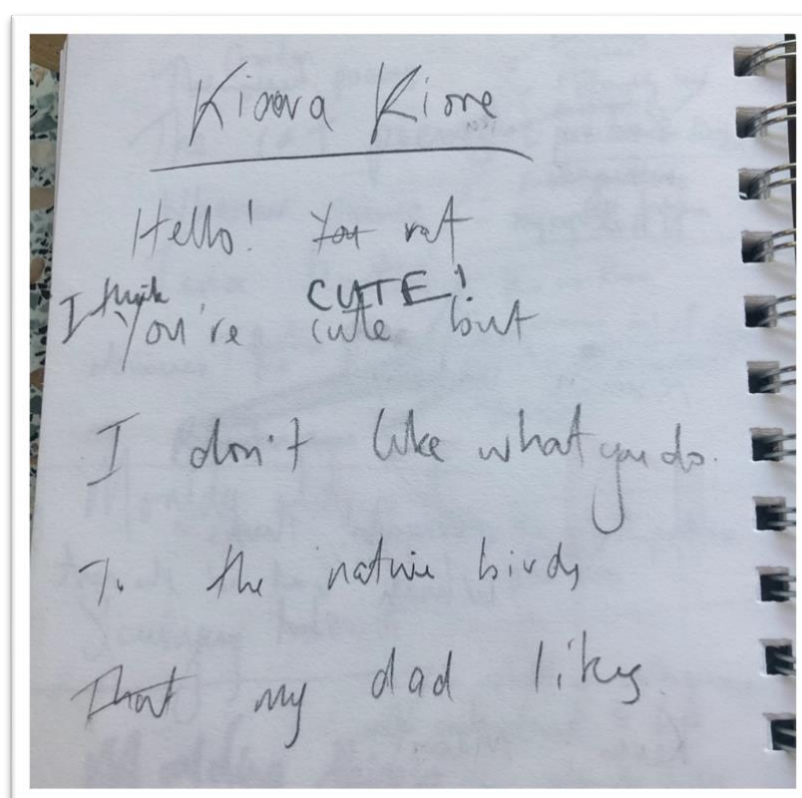
Oh, come in Mr D. We're looking at possums and stoats and rats. And all sorts of

From the highlighted transcript, I played with words and phrases to iteratively construct poems that conveyed ideas, images or feelings relating to what I

observed. At the start of the poetry writing process, I had a strong sense of the poems I needed to write, and roughly how many there would be. For example, I knew there would be a poem based on the play the students were practicing, one about the different things they grew in the garden and one showing the tension of finding introduced predators cute while recognising a need to destroy them. Below, Figure 4 is draft of a poem from my notebook. In this case the poem did not make it to the publishing stage but, as you will see in chapter four, I used many of the lines in other poems including the title.

Figure 4

Draft poem from researcher's notebook



Some poems are narrative in style, sharing the student's stories or describing specific experiences, others are set out like lists or conversations. I endeavoured to include emotion, sensory details and give my poems a lyrical

quality. The lyrical quality of poetry draws attention to the mystery and ineffability of things, as well as drawing attention to the perishability of what there is in the world (Faulkner, 2009). I was also conscious of representing nonverbal signals and cues in my research, such as tone of voice, pitch and rate of speech since research shows that 90% of meaning is nonverbal (Ellingson, 2012). Since rhetorical choices made while transcribing typically erase bodies completely (Ellingson, 2012), I took notes of nonverbal signals during my observations and used the audio recordings as well as the transcription when writing the poems.

I made the decision to include several 'teacher poems' as part of my findings since the teachers played an instrumental role in the groups and were key part of the students' experience. Likewise, I included 'researcher poems' to acknowledge my part in the experience, to be reflexive and allow myself more creative freedom. When writing found poetry with the intent of representing others' voices, the poet cannot help but include some of themselves in the creation. This idea is echoed by Penwardern and Schoone (2021) who find that by taking up and re-using words with an authorial intent, meaning endures but also changes. In the process of creating the poems, I was not only trying to make sense of data but also attempting to use the students' words to convey the emotions which the observations evoked in me (Glesne, 1997).

Another way I tried to elicit children's voices authentically was by allowing the participants to pick up a second recording device and ask each other questions. This method was developed by Tobias Hecht (1998) who made "radio workshops" in which participants handled the audio recorder and asked each other questions (P. 197). Hecht (1998) also found success using this method in a study of street children in Brazil where children took the tape recorder and interviewed other children on their own. I used this method at the school where we were working outside in the gardens and collected valuable additional data from the second recording device. One downside is that the recorder may be controlled by a particular student or students which may limit the responses of other students. Figure 5 shows an example from the transcript where students were arguing over who would hold the recording device and be the 'interviewer'.

Figure 5

Excerpt from transcript

28.00

Noob, are you the interviewer now are you? (me)

Yeah, I'm the interviewer. I'm the interviewer now. I'm interviewing everyone. We've all got codenames (Noob)

Technically that would be my job regularly but... (Minecraft Pro)

It's my job now (Noob)

Dammit. That means I'm... (Minecraft Pro)

You're fired (Noob)

Note. I have used the students' chosen pseudonyms which were later transformed into a found poem.

Thematic analysis

Once I was satisfied that I had written all the poems to represent the corpus of gathered data, and feeling particularly attuned to the ways children described action for the environment, I began a thematic analysis. Thematic analysis is the process of identifying patterns or themes in qualitative data (Maguire & Delahunt, 2017). For Maguire & Delahunt (2017), thematic analysis is a flexible method of analysis that goes beyond simply describing what has been said to interpreting and explaining it. I followed the process described by Clarke and Braun (2006), first deciding to identify themes in an inductive or 'bottom up' way (p. 83) at a latent, or interpretive level (p. 84). A thematic analysis at the latent level "starts to identify or examine the underlying ideas, assumptions, and conceptualisations – and ideologies - that are theorised as shaping or informing the semantic content of the data" (Clarke & Braun, 2006, p, 84). The following is a brief description of each phase of the thematic analysis process that I undertook. I have added an extra step to the process described in Clarke and Braun (2006) as I have used my poems as the data set.

Phase 1: Immersing myself in the data by listening, transcribing and repeated reading.

Phase 2: Writing found poetry

Phase 3: Manual coding of the data set

Phase 4: Searching for themes

Phase 5: Reviewing themes

Phase 6: Defining and naming themes

Phase 7: Producing a detailed analysis of each theme

From my analysis I identified four major themes that I will discuss in chapter five, as well as six statements representative of the students' experience.

[Ethics and issues of quality and craft](#)

My study was approved by the AUT Ethics Committee (AUTEC) so I could observe students and teachers at their school. I was sensitive to the power imbalance between child and adult in addition to that which would normally exist between researcher and participant. Gary Alan Fine and Kent Sandstrom (1988, cited in Eder & Fingerson, 2002) argue that in any participation event with children, the adults cannot have equal status because “the social roles of the participants have been influenced by age, cognitive development, physical maturity, and acquisition of social responsibility” (p. 14). In line with my naturalistic inquiry, I mitigated these factors by carrying out the research in the children's normal class or school outdoor setting and using non-directed questions to provide more opportunity for children to collaborate in their answers and expand on each other's responses. To protect participants anonymity, nothing has been included that could make them or their school identifiable.

As a beginning poet-researcher, with the desire to grow as a writer, there was a need to study poetry, poetic techniques and practice writing my own poems. Faulkner (2019) believes that finding poetic truth is not as simple as extracting phrases from transcripts, but requires a more focused attention to craft issues. This includes attention to “images, line, rhetoric, metaphor and simile, music, voice, emotion, story, and grammar” (Faulkner, 2019, p. 133). Researchers who are interested in poetic inquiry should study and practice writing poetry in the same way that they study research writing. My starting point was to read a wide

range of poetry, listen to audio from my research trial and write poems of my own. I practiced reworking poems and received feedback from my supervisor. Above all, I heeded the advice of Leggo (2008) who wrote that researchers wanting to learn the craft of poetry “need to be ready to play with the possibilities of language” (Leggo, 2008, p. 170).

I used a wide range of poetic techniques while crafting the poems: repetition of sounds, alliteration, onomatopoeia, the visual use of line, rhyme, image and metaphor. In an effort to show that taking action for the environment is as an embodied experience I included bodies, senses, feelings and exclamations. Honouring the children’s words and speech styles was an important consideration, so I chose to include poems that used the children’s words exclusively, grouped together to give their voices the space and respect they deserved. I did not alter any of their words and largely kept phrases together. Although I may not have written the poems in the same style as the children, I tried to channel their energy by adopting a playful approach to writing and a willingness to experiment.

Being reflexive is important in any form of qualitative research, but it is especially important in the representation of poetic projects to show how understanding has occurred, how the researcher has influenced the research process and interpreted the participants’ narratives (Faulkner, 2019). While being aware that I would be putting myself into the content of the poems, I strived to avoid colonising the students’ stories by my usage of their words (Smyth & Murray, 2000). What we are left with is what Glesne (1997) describes as a ‘third voice’ “that is neither the interviewee’s nor the researcher’s but is a combination of both” (p. 215).

Covid-19

Undertaking my research amidst the Covid-19 pandemic posed many challenges. I was fortunate to access two schools during this period and collect sufficient data, however my planned research was ultimately cut short.

Part of my original research design was to give a poetry writing lesson to the students and give them the opportunity to represent their experiences as a

member of the enviro-group. During this session, I intended to share my found poems with the students and listen to their feedback. Unfortunately, I was unable to complete this part of the research and I was also unable to accompany an enviro-group on a rat-trapping expedition around their neighbourhood or deliver their hand-made Koha Cups to a local café (see the poems DOC 200 and Koha Cups in chapter 4). This would have been an opportunity to observe students in places outside of their school.

Conclusion

In this chapter I have shown the power of poetry to critique power structures, engage authentically with a range of audiences and how poetic inquiry has been used to represent the experience of people in marginalised groups. This methodology fits into my conceptual framework where language creates reality and allows for the inclusion of the physical world, the researcher and the embodied human experience.

You stand in front of your waka, admiring your workmanship. It looks sturdy enough to navigate the Waitaki.

“Putting this together must have taken some effort! Some art and effort...” said Jimmy respectfully. “Now all that’s left to do is carve a pattern onto the bow. Something worthy of the taonga you are carrying.”

“Call me when it’s done and I will see you off. The next part of your journey can only be done alone.”

Chapter Four - The Crossing

My research findings are presented in this chapter as a collection of found poems, written from the audio recordings and transcriptions of observations at two central Auckland primary schools. The poems are presented on one side of the page, to value the children's words and to give the reader space to consider and respond to them in their own way. On the other side you will find further context, explanation and insights into each poem with children's words shown in italics. You may like to read these with the poem or choose to read all the poems uninterrupted.

This is an explication and not a summary as 'to summarize a poem in order to present the result would destroy the result because the poem itself is the result. The poem is the thing' (van Manen, 1990, p. 13). In the spirit of Glesne (1997), I invite readers to attend to these poems with "their minds, feelings, and self-reflection" (p. 215).

The poems are in four parts: *GARDEN POEMS*, *RAT POEMS*, *TEACHER POEMS*, *RESEARCHER POEMS*

GARDEN POEMS use words from a group of students who were gardening. They also rehearsed a play, written by a group member. The plot is reflected in 'The Worker'.

RAT POEMS are from a group learning about rats and rat trapping from their teacher and two visiting whānau members. The poems from these two parts are made of the students' unaltered words.

TEACHER POEMS are crafted from teachers' words and phrases to express their perspectives.

RESEARCHER POEMS use my own words from transcripts and research journals. Student voices can also be heard interspersing these two parts.

GARDEN POEMS

Codenames:

Mr Sockie

Pipsie & Emsie

~~Factory Worker 2~~

~~Nice Ninja 8~~

Noob

B e a d a . k . a B i g C h u n g a s

M

Mindcraft Pro

~~Fifi Fox Face~~

~~Fifi Fox Fur~~

Fifi

The Worker

Pūkeko homes destroyed

By my planet-polluting boss.

Afraid of getting fired, I zip it

Until, at last, Mother Earth calls her

A pea-brained cheese-headed idiot!

And I open my big mouth to say - *I quit.*

Codenames:

Codenames introduces the protagonists of the research. I asked each participant at this school to choose a pseudonym or codename by which I could refer to them in the research. These are the names they chose, including their crossed-out initial ideas, with the exception of Mr Sockie, my sock-covered recording device and Bead a.k.a Big Chungas, a caterpillar.

The influence of YouTube and online gaming is apparent from the names Noob, Minecraft Pro and Nice Ninja 8. Big Chungas is an internet meme based on the Bugs Bunny cartoon character.

The Worker

This poem is based on a play the children wrote and performed at their school assembly. After their meeting, the children decided to have a rehearsal. There was a lot of laughter and excitement surrounding the play, especially when rehearsing the more provocative lines. There were a few “hiccups” during the rehearsal so lines continued to be discussed on the walk over to the gardens. The script was written by students with some advice from the teacher who suggested removing some of Mother Earth’s more colourful language (e.g. idiot has ableist connotations). In a later conversation a student agreed – “I don’t think you should say the idiots bit.”

The play depicts two greedy “inventors” whose “plastic factories” are “polluting the earth” and destroying the pūkeko’s wetland home. The self-described “genius” inventor and factory owner is chastised by Mother Earth who in a “booming voice” commands them to stop polluting. An employee sensitive to the animals’ plight finally confronts her uncaring boss and resigns.

Whetū Garden

Someone sprinkled a bunch of seeds all over the place

and now there's

strawberries

capsicums

pink potatoes

purple carrots

and weeds.

weeds	weeds	weeds	weeds	weeds	weeds
weeds	weeds	weeds	weeds	weeds	weeds
weeds	weeds	G A R D E N	weeds	weeds	
weeds	weeds	weeds	weeds	weeds	weeds
weeds	weeds	weeds	weeds	weeds	weeds

Whetū Garden

This poem is made from the fruit and vegetables the children said they were growing at school and home. It shows abundance and the variety of what can be grown in Auckland's subtropical climate. It also shows the disorder of sharing a garden with a community. Someone has planted seeds without taking responsibility for the weeding. Whetū, the name of the garden, is the Māori word for stars. The seeds strewn through the garden are also like stars.

The students care about the gardens and enjoy identifying the plants that are growing in it. They tell stories of their home gardens and their parents' love for plants. The students show concern when watering the "parched strawberries" in the north facing garden on a hot afternoon. At the start of summer the heat can become too much for the students too - "sometimes it's a bit too hot and I wanna go down somewhere else."

G A R D E N

A concrete poem, the words make up the general shape of Whetū garden. The garden was an important place for the enviro-group, but it was also a shared space with the rest of the school. There was uncertainty as to which plants were weeds and which were seedlings. On one hand a student thought – "that's what the weeds in my garden look like" and on the other hand someone recently "sprinkled 200 cucumber seeds over the whole-entire garden".

The teacher provided some clarification on some plants that looked similar to lettuces, "They're weeds in the sense that they grow on their own. We did not plant them. But they're also good to eat so we've been leaving them."

Feeling good

Freedom. Freedom.

When I'm walkin'

Feeling good

Freedom. Freedom.

Feeling good

Like I should

Farmers' market

Picking mint

To sell

At the farmers' market

People are gonna want to buy that

Y'know!

Nature is so good

I feel like we should protect it

That's all I'm saying

Feeling good

This poem is made up entirely of students singing to themselves in the garden. The lyrics of the songs may be reflective their mood. “Feeling good like I should” are lyrics from the song ‘Sunday Best’ by Surfaces. It is another example of the influence popular culture. Book characters, such as Voldemort from Harry Potter, were also invoked during imaginative play.

Farmers’ market

The enviro-group was transplanting mint to be sold at the annual farmers’ market. Each class makes or brings things to sell and the enviro-group usually has their own stall. The children discussed last year’s market, who was on which stall, and what they had made and bought. Last year “sales were good”, with the proceeds being donated to DOC to help protect the endangered kākāpō and sponsor an environmental education programme for underprivileged children.

The final line foreshadows a bitter disappointment. Selling the mint was a student’s idea and it was received positively by the group. The teacher was “pretty confident because mint is so hardy as long as it gets enough water.” However, when I attended the school’s farmers’ market two weeks later I saw that the mint was not a big seller. The enviro-group member stationed behind the stall was visibly upset, being comforted by her mum.

Nature is so good

This poem was made from a response to my question – why are you in the enviro-group? I wanted to delve into the students’ motivations for their actions, careful not to influence them by how I framed the question.

Some other responses from the students were: The environment’s important. It’s worth protecting. We want future generations to continue. I like looking after the planet. I like being in Enviro-group because the environment... if it’s ruined, people won’t be able to play outside. We’re destroying nature. It’s a planet worth saving. One of the reasons I joined Eco Warriors is because we’re doing a play. I like being outdoors. I like animals cos they’re cute. I like people to listen. Because I want the future generations to be good and carry on.

RAT POEMS

The Rodent Problem

My mum found a dead rat under her bed.

She has a really sensitive nose

It was a huge problem.

Aaaaah!

Stoat! Looks cute.

Possum! Really fluffy.

Rat! For some reason I like rats. I just don't like what they do.

DOC 200

Baby Rabbit
Run away
And take your baby bro

The Victor trap
Is really strong
It kills with just one blow

(Wait, why would they... eat their own kind?)

Baby Rabbit
Run away
And take your baby bro

You might, you might
You really might
Be eating your GRANDDAD YO!!!

The Rodent Problem

On this day a student's granddad and another student's dad had come to talk to the group about rats. This poem is about sharing stories. After one child shared an anecdote others were very keen to share their stories too. The title is ironic since, although a "huge problem" for the child's mother, this is not the main problem we have with rodents in Aotearoa.

Aaaaah!

"Aaaaah!" Is the surprised reaction to a dad producing a stuffed rat, stoat and possum in the classroom. The last line shows a conflicted feeling towards rat. There is an emerging understanding that the "cute" appearance of these predators belies the damage they do to native wildlife. Another concrete poem in the form of a rodent or mustelid.

DOC 200

This poem is written like a rhyming children's song warning a rabbit to stay away from a trap. This particular trap, the DOC 200, made by the Department of Conservation, uses freeze-dried rabbit as bait. A student's grandfather had brought in trap along with some freeze-dried rabbit for us to smell. His admission that he had caught baby rabbits in the trap was met with shock and confusion – "Will baby rabbits like.. wait... why would they eat their own kind? They try to eat their own kind! They're trying to eat...you might be eating your grandfather yo!"

Mouldy old rat...

...scurrying around moulding things.

Koha Cups

Ok

Basically

Coffee sacks

Pics peanut butter jars

Velcro with

Odd colour changes

Bikes

Scooters

Cafes

FUTURE GENERATIONS

It's kind of like
you want people
to keep looking after the Earth

like my dad
he's quite a bird person
and my mum

she loves plants.

My grandad knows all about it.
He helped plant our plum tree.

Mouldy old rat...

This short descriptive poem is made from two different conversations two weeks apart. When listening to the audio recording of the second session, the word "moulding" stood out to me. It reminded me of something I had heard in the first session and indeed a student had talked about a mouldy rat, although in a slightly different context. I believe student 1 inspired student 2.

Student 1: *Preferably you would check it every day because it's nicer to handle a fresh rat than a mouldy old one.*

Student 2: *They're a pest because they can sometimes be annoying, scurrying around moulding things. Spreading diseases.*

Koha Cups

Koha Cups was a project the enviro-group was working on to make and deliver recycled cups to cafes where customers could use them as takeaway cups. This was based on a successful project undertaken by another Auckland school. There were many logistics to work out for this project but many offers of help from students and their whānau: "(My mum) taught me how to sew, so I can sew some things."

FUTURE GENERATIONS

In this poem students share their family's love for nature. It also positions their parents and grandparents as experts that we can learn from. When talking about the grandad who was demonstrating the traps a student says, "He's not gonna cut his finger off. He's a professional trapper haha."

Students often mentioned their parents, grandparents and siblings whom they would occasionally run into while working outside. Two of the participants were twins.

The title shows an awareness by the students of the notion of generations: "Sometimes precious things are passed down generations." 'Future generations' also makes part of the Brundtland report definition of sustainable development (WCED, 1987).

TEACHER POEMS

Kia ora, Kiore

Polynesian rat
Voyaging, voyaging, voyaging
Some survive

Bokashi

Whoaaaah! It does stink!
Can you smell it from there?
Smells horrible.
Get away from it.
So disgusting.

*It's also kind of alive.
A kind of ferment.
It helps things grow.*

Very gross.

Yuck.

The wonderful things we do

I'm conscious we're running out of time
and there's still things we need to talk about
sweetheart.

You do wonderful things.
Remember when we planted 490 native trees
next to a beautiful creek?

Let's save the kiwi, darling,
and other native birds
because we still have time.

Kia ora, Kiore

This poem stems from a conversation about how rats came to Aotearoa. The teacher asked students to think about the inquiry they were doing last term and the reply was “voyaging! voyaging! voyaging!” The first Māori settlers brought rats, called kiore, as a source of food. A special delicacy, forest reserves were created so they could breed and in the right season be harvested for food (Bradford, 2008).

Bokashi

Bokashi is a type of small-scale composting that means ‘fermented organic material’ in Japanese. It produces nutrient-rich compost that will help your garden grow. The students did not like the smell at all, yet this did not stop the teacher from using it as a teaching opportunity (the middle lines in italics).

The wonderful things we do

Time was a key consideration during each of the sessions. The enviro-groups meetings were during lunchtimes when there were often other activities going on. Some students needed to manage their other commitments such as kapa haka, drama, and library duty. Time was also a concern for the teachers – “And then guys, I’m just really conscious of the time and wanting you to get some time outside and me to eat my lunch before I go back to teach.”

There is another more ominous reading of “running out of time” where, at some point in the future, we may be facing dire ecological crises.

The teacher, who uses affectionate names for the children, celebrates what they have done and ultimately delivers a hopeful message that we should keep trying to save native endangered species.

RESEARCHER POEMS

Recording (for AUT research purposes):

children's voices laughing, squealing, chattering, singing
clinking, bouncing, clanging, rattling, pouring water over gardens
and over feet... *oopsieeeeees! hahaha*

and birds' voices

singing.

Assembly lines (and other words for sustainability):

Oh!

Uggggh

Arrrrrrrghh

Grrrrrrrrrrrrrr!

GRRRRRR!

Ow, ow, ow, ow, ow.

huhuhuhuhhuuhuh

The Supervisor

Will you be scared?

No, I say.

But you may be scared...

Of my poems

full

of

rats!

Recording (for AUT research purposes):

This poem is made up of background noises I could hear on the audio recording. The bouncing and clanging came from the nearby basketball court. The list is interrupted by a child who has poured water over someone else's feet - "oopsieeeeees!" - and resumes with the only non-human activity that I could identify, birds singing.

Although I did not sense what Flick et al. (2004) described as "fear of the recorder", the students were certainly aware of the recording devices (p. 290). At one point the students, who were having fun interviewing each other, were reminded by another participant that the recording was "going to be heard at AUT a couple of times for research purposes".

Assembly lines (and other words to describe sustainability)

Each line of this poem represents a student's action including: smelling the bokashi, watching a rat video, pretending to be a Halloween character with a spiky tool with a long handle, pulling weeds, carrying a heavy watering can, and finally pretending to cry because, to them, the bokashi just smelt so bad.

In the garden the teacher described us working like an "assembly line" when putting the mint into pots. Students also line up for assembly, and read lines from their play (to be performed at assembly). The second part of the title is critical of attempts to define the complicated notion of sustainability.

Finally, assembly lines could be the researcher assembling letters and words into lines for his dissertation. On this assembly line the words are getting longer and longer, using up finite resources, the available word count.

The Supervisor

This poem is made from a conversation I had with my supervisor. He asked if I was scared of sending him the first draft of my poems. I took this as a challenge, and instead imagined *him* being scared of reading my poems.

I feel like this attitude made the process more enjoyable and allowed me the freedom to make bold choices. My supervisor encouraged me to play with language and be myself.

The river has risen substantially since you set off. Its twists and flows are hard to predict. It feels dangerous. The scenic sandy islands you observed from the hill are now threatening obstacles to avoid.

Halfway across, you are gripped by fear. Looking back towards the shoreline, you make out Jimmy's figure, hand raised in a farewell salute. The last part of this journey requires courage and faith. Faith in yourself, the waka, and all those who helped you to build it. Human and non-human.

Chapter Five - View from the other bank

The boat finally comes to rest on the other bank. Disembarking, you pull the waka onto the shore. Things look different from here. You are seeing the landscape from a different perspective, but somehow you feel different too. Almost like another self was left behind on the other bank.

In this chapter I identify the major themes of the poems revealed through my analysis. Key elements of the findings, organised into statements that represent the students' experiences, are further discussed with links to theory, literature, and examples from the transcript. Finally, I summarise what the children's words say about their experience and its significance to EfS.

Themes

Attending to the language within the poems, I undertook a thematic analysis using the steps described by Braun and Clarke (2006). There were four major themes interspersing the data which are explored in further detail below: whānau and community, connection to place and nature, student agency and freedom, and learning experiences.

Whānau and community

When it comes to taking action for the environment in schools, the observations and poems show both students and whānau are generous with their time and energy. Many of the projects taken on by the enviro-groups were for the community but would also not be possible without support from the community. Parents and grandparents were involved in the farmers' market, Koha Cups and rat-trapping projects (Farmers' market, Koha Cups, DOC 200), testament to the children's ability to mobilise support (United Nations, 1993). Whānau also came to watch the students perform their play at the school assembly (The Worker).

Children being part of a group socially interacting with other students, teachers, whānau and other members of the community contributes to feelings of togetherness and belonging (MOE, 2007). As individuals, environmental problems are too big to solve, perhaps even too big to comprehend. Morton (2013) describes climate change as a 'hyperobject', an object so massively distributed, involving temporalities beyond the human-scale, that it defies knowing. Yet, the students, who are aware of local and global environmental

issues, with the support of their school, whānau and community, had the confidence to take action.

While community and community engagement is emphasised in the EfS documentation, the central role of whānau is not as visible (TKI, 2020, December 17).

Connection to place and nature

Humans, and particularly children, possess “an innate desire to seek close relations with nature and other forms of life” (Malone, 2017, p. 81). Rout and Reid (2020) argue that there is a spectrum of humanity’s relationship with nature. One end of the spectrum is characterised by distinction, difference and domination, while at the other end “culture is understood as part of nature, existing in an entwined, inseparable interdependence (Rout & Reid, 2020, p. 945). The children’s words and interactions suggest they sit somewhere between the two ends of the spectrum, but I argue that they saw themselves as more interconnected than separate.

Nature was a recurring theme throughout the poems. The enjoyment and surprise children felt being in nature, interacting with earth, water, plants and animals was clear to me as an observer and I hope this shines through in the poems (for example, Feeling Good, Nature is so good, DOC 200). For Bonnet (2017), things occurring in nature are mysterious and “offer invitations to participate in their being in unique and never wholly predictable ways” (p. 83). For the participants in this study, school was a place to discover and explore nature which was known to an extent, but in other ways was entirely unknown. Below is an example of student noticing something for the first time:

“I’m finding something! Brad, Brad, Brad, Brad. This is not even a regular plant. Brad. Smell it, smell it. It’s not... what is this? Coconut? Bradley, what is this? Brad, Brad. I found some hairy stuff.” (Minecraft Pro)

“I don’t know. What is that?” (Me)

“There’s more. There’s a lot of it. This is like the husk of a coconut. But coconuts just can’t grow here. Plus it’s massive. Brad. Look at this! Does anybody know what these are?” (Minecraft Pro)

Their experiences of nature were not restricted to outdoor settings. Sometimes, the naturally world encroached on their home lives with undesirable results (The Rodent Problem).

Student agency and freedom

The essence of this theme was captured by the poem 'Feeling good' made from snippets of children singing outside. By the end of the second gardening session I too was caught up in this free and easy mood, evidenced by my humming caught on my recording device. In 'The Supervisor' I stake a claim for agency and freedom as a post-graduate student wanting to write poems about rats.

Joining the school's enviro-group was a voluntarily action from these students. Unlike the other compulsory areas of the curriculum, the children were there because they wanted to be. In the shared garden, next to an active building site, the children made the best of their current situation. Sharing the space with so many others was not easy, but they exemplified a 'key competency' in the New Zealand curriculum, "managing self" (MOE, 2007, p. 12). Generally, the children were confident decision-makers and problem-solvers. On discovering the gardening equipment locked in the shed, a student volunteers to go to the staffroom to get a key from their teacher, when the line to fill up watering cans is getting too long a student says, "I want to find another place to fill these. It's too slow here", and when a dad's pest-free community leaflets run out a student offers, "We've got a printer at home and I can make some". This aligns with the United Nations view at the 1992 Earth Summit, where young people were characterised as highly aware and capable of contributing to environmental protection (United Nations, 1993).

In one enviro-group, the children had been writing and rehearsing a play that they wanted to present to the rest of the school (The Worker). This 'indirect action' aimed to influence their peers to act in pro-environmental ways (Birdsall, 2010). The teacher provided a space for them to rehearse and scheduled their performance at the school assembly, but otherwise this initiative was completely student-led. This approach is supported by Jensen (2002) who asserts that

action “should be decided upon by those preparing to carry out the action” (p. 326). The degree to which they had a sense of pride and ownership for this project was demonstrated when they continued to discuss and practice their lines outside of the classroom.

Learning experiences

Over the four sessions there were many instances of teaching and learning opportunities experienced by the students. These unstructured learning and play experiences are often identified as the ‘informal curriculum (Malone & Tranter, 2003, p. 289). The *TEACHER POEMS* give examples of teachers giving informal lessons to the students, attempting to make the most of learning opportunities which, in some cases, were met with resistance (Bokashi).

Conversations between students showed they were learning from the environment and each other, for example “What’s the thing called that we were planting yesterday?”, “Which ones are the mint?”, “What’s an earwig?” and “Do we need the full root?”. The poem, ‘Mouldy old rat...’, exemplifies the complex ways in which students make meaning and develop their understanding from one another. Children also have conversations relating to their learning in the enviro-group in their free time. The following was shared by a group member who was speculating on the diseases that could be spread by rats:

You could get Black Death. We were talking about that at lunchtime.

Yeah, in New York. We were talking about rat trapping and then we went onto the Black Death probably came by rats.

School grounds provide real-life natural learning experiences and opportunities to develop important lessons on “cooperation, ownership, belonging, respect and responsibility (Malone & Tranter, 2003, p. 289). Yet, despite the potential for learning in outdoor environments, they tend to be underutilised by teachers for formal lessons. Children can spend up to a quarter of their day engaged in play-oriented activities in the school grounds, and while this time is often undervalued it is essential to a child’s learning (Malone & Tranter, 2003).

Further discussion

The following discussion is based around six statements that I have interpreted from the poems about students' experiences of taking action for the environment in Auckland primary schools.

“I have a license to be free in this place”

During the observations the students seemed comfortable and confident to say and do what they felt like. I think that it was feeling safe in their school environments which gave the children their 'license to be free'. In the garden, children had access to a variety of different tools and decided what they wanted to do, be it watering, weeding, planting, rehearsing the play, or simply sitting and waiting for their shoes to dry. Throughout all sessions I observed an openness and willingness of the children to share their experiences. They showed a clear enjoyment of sharing anecdotes and reminiscing about past events. This sharing was facilitated by the teachers and whānau asking questions. With the children, one story naturally led to another to an extent where the adults would cut the sharing sessions short in order to keep to schedule.

Time schedules (The wonderful things we do) were restricting to the environmental groups doing what they wanted to do during the lunchtime sessions which were punctuated by school bells. The problem with our highly regimented lives is summed up by Le Grange (2017) who believes that our natural instinct to care is being obscured by “schooling, culture and the demands of society” (p. 104).

Malone (2007) believes that parents' concern for children's safety have led to a phenomenon of 'bubble-wrapping' children which is having a dramatic impact on children's experiences of their environment. This overprotectiveness, combined with the trend of apartment living and large houses on small blocks of land, could also lead to children lacking in “environmental competence, sense of purpose, social competence, self-worth and efficacy and resilience” (p. 523). In middle-class Western society, school grounds are becoming one of the few

places where students can interact with peers outdoors with minimal adult control (Malone & Tranter, 2003).

“I can play with the environment, making it part of my imagination”

The school environments that I observed were shaped by the playfulness and imagination of the children. Gray (2015) considers the principal emotions connected to play to be interest and joy, suggesting this is what makes play significant. From a language perspective, Moore (2014) considers play dynamic, providing opportunities for ongoing dialogue and practicing new words and language.

In ‘The Worker’ children are sharing a message through artful means. They have used their empathy and imagination to explore what it might be like for an adult to face an ethical dilemma at work. Not only does the play have environment themes, the children chose to practice and develop the play outdoors. In ‘Codenames:’ the children take on alter-egos. The poem includes imagined and non-human characters with which they have conversations (“Mr Sockie”, a phone, and “Bead”, the caterpillar).

There were more opportunities for children to talk and use their imaginations in the outdoor sessions I observed than those indoors, where the meetings were mostly teacher-led. Kelly et al. (2013) propose outdoor environments as providing endless possibilities for children to explore using their specific interests. The outdoors helps children to develop concepts, spark imagination and is an optimal setting for resourcefulness and creativity (Kelly et al. 2013).

“I tolerate complexity”

EfS, like most fields of education, is complex and it is important that children's perspectives are heard despite their potential to add to the complexity. There were several occasions where I felt students were presented with complex ethical questions represented in the poems ‘GARDEN’, ‘DOC 200’ and ‘Kia ora, Kiore’.

In the garden, the teacher helped students make the distinction between certain plants and weeds, but there was more of a grey area around the trapping and killing of animals. DOC 200 attempts to capture the moment where a student is trying to understand a story she is told about a rabbit being caught in a trap (using freeze-dried rabbit as bait). The nervous laughter following her 'think-aloud' shows the moral uncertainty felt by some students.

Morris (2020) examines the project to eliminate possums, stoats and rats in Aotearoa by 2050 (Predator Free NZ Trust, n.d) using 'just war' theory. He finds the use of school children as participants in the 'war' against 'pests' problematic due to risk of them losing empathy for animals and people, and becoming desensitised to violence. Student participants in this project could be likened to the use of "Private Military Contractors" during a conventional war (p. 97). Wallach et al. (2015) argue that compassion, and consideration to all nonhuman individuals whether they are native or not, is key to ethically appropriate conservation practice. A Māori worldview establishes that all life forms are interdependent, so environmental practices must be underpinned by a code of ethics based on "mutual respect, reciprocity and care" (Tomlins-Jahnke & Forster, 2015, p. 46).

'Codenames:', with its computer-based characters "Noob", "Nice Ninja 8", "Big Chungas" and "Minecraft Pro" is an example of a digital world infiltrating the physical world of school and nature. For the students, there was no clear delineation between these two parts of their life, and they seemed comfortable with the natural and digital co-existing in the same space. Given how the Covid-19 pandemic has forced schools in Aotearoa and around the world to use online teaching and learning practices, and the subsequent increase in time children spend in front of computer screens, this phenomenon is set to grow.

["I value the collective over the individual"](#)

The children take action in the enviro-group together. Some of their actions are local (The Worker, Whetū garden), based in their community (Koha Cups, DOC 200) or contributing to causes at a national level (Farmers' market). There are signs that the students were taking a relational view of nature "where they are

not exempt or exceptional to the ecology of the planet”, but rather a part of the interconnected whole. (Malone, 2017, p. 85).

When answering my question “why are you in the enviro-group?”, students gave global reasons, invoking their concern for the state of the environment, the planet, and future generations. As well as stressing how important the environment was to them, students thought others “should learn how important the environment is” too. This fits with another ‘key competency’ in the New Zealand Curriculum, “participating and contributing”, where the purposes that bring people together can be “local, national or global” (MOE, 2007, p. 13). By contributing and participating in communities students develop a sense of belonging and confidence to participate in different contexts (MOE, 2007).

However, membership in the enviro-group was not open to all students at either school. This raises the question why all children cannot be included in group-based student action projects at their school? For schools that rely on public funding or community fundraising, finding enough trained staff and resources may prove to be a barrier (Eames & Mardon, 2020). Others may not consider children in the early primary school years to have the requisite ‘action competence’ to participate (Eames, 2010).

“I value nature for reasons other than its instrumental benefits”

In the past two decades there has been an increased emphasis on promoting the instrumental value of nonhuman nature and wildlife such as the use of ‘ecosystem services’ (Martinez-Harms et al., 2018; Wallach et al., 2018). The problem is that by seeing nature as only good for the benefits it provides, there will be little motivation to protect it from the inevitable “more efficient and cost effective alternatives” (Wallach et al., 2018, p. 1261). The children in this research, however, related to nature in more caring and emotional ways, with stoats and possums, widely considered pests, appreciated for being “cute” and “fluffy” (Aaaaah!). This perspective may not be uncommon, with Vucetich (2018) suggesting that a large sector of the public attributes intrinsic value to living organisms.

There are several references to children using anthropomorphism in the poems, where human characteristics are attributed to plants, animals and objects (Codenames, The Worker, DOC 200). The pūkeko has a “home”, the baby rabbit had a “grandad”, and the strawberry plants are “thirsty”. After spotting a caterpillar on a swan plant a student exclaims, “this guy is called Bead! He used to have a family”. “Sad. Really sad,” another student replied, “We need to have a funeral for them”.

While the idea that animals experienced feelings like humans was once seen as unsophisticated and naive, the scientific world is starting to accept that animals have “rich and deep emotional lives” (Bekoff, 2010, xviii). The appearance of Mother Earth as a character in the children’s play also links with te ao Māori where the Earth is personified as the mother figure, Papatūānuku, responsible for nurturing and caring for all life forms (Tomlins-Jahnke & Forster, 2015). Rout & Reid (2020) believe that anthropomorphism is the most basic way of expressing deeper animist concepts. Animism is an inherently relational model of reality that underpins most indigenous relationships with nature (Rout & Reid, 2020). While in the past indigenous people have been characterised as ‘naïve’ ‘primitive’ and ‘childlike’ because of their use of the animist metaphor (Reid et al. 2017), Lakoff and Johnson (2003) see metaphors as a fundamental cognitive device and a means through which humans understand and communicate their ‘sense of being in the world’.

However, the students are not separate from the neoliberal capitalist world they inhabit. Commerce is central to the poems ‘The Worker’, ‘Farmer’s market’, where students are coming up with ideas to raise money kākāpō at the school’s market and ‘Koha Cups’, about the collaboration between the enviro-group and local businesses.

“I use different language to the curriculum and policy documents”

As a whole, these poems represented an alternative language for expressing engagement in the environment based on children’s action in their school. For children, nature evokes a delight, that at times, is expressed as sounds rather than words (Aaaaah!, Bokashi, Recording, Assembly lines). Using examples

from the transcript, their language was concrete - “Ow! Prickle”, embodied - “Mmmm, I can smell them”, relational - “This is the garden me and some other people in the class planted”- and expressive of emotion - “Oh, they changed the lock A-GAIN!?”.

Children did not use the technical language of frameworks, competencies, resource management, or development goals. In fact, there was one word which, conspicuous by its absence, did not find its way into any of the transcripts. Although I am confident what we were doing was actually EfS, there was no mention of that controversial word coined in Germany so long ago – sustainability.

[What does EFS stand to learn from this?](#)

From these data and analysis, EfS can learn that whānau is crucial for children taking part in action in their schools, and, particularly outdoors, students feel free to play, use their imagination and confidently make decisions about what they will do. Knowing that students who are engaged in action for the environment also have active digital lives, opens up new avenues to engage people in this field in the future.

The findings also show that children empathise with a range of non-human entities and do not automatically feel that ‘pests’ are bad. With a growing recognition of the sentience of many nonhuman animals (Wallach et al., 2018), having ethical conversations with children, respecting their thoughts and concerns relating to pest control and other areas of controversy, will only add the robustness of the debate and help us reach more satisfactory outcomes.

Environmental educators now have the opportunity to ask themselves whether they wish to reinforce the mind-body, human-nature divides where humans are positioned as “exceptional and outside of nature” (Malone, 2017, p. 92) or embrace indigenous metaphors that authenticate interconnectedness and belonging.

Further examination and exploration of these elements in the field of EfS will contribute to more meaningful learning experiences that elicit a range of feelings, emotions and help us to become more human.

Chapter Six - The end is a beginning

Globally, children are part of the great urban migration of the Anthropocene where many end up in the “contested, ambiguous spaces of the world’s largest cities” (Malone, 2017, p. 2). In both developing and developed countries, children are particularly vulnerable to the effects of environmental degradation and climate change (United Nations, 1993, 25.12). It is becoming clear that children’s encounters with nature are not only valuable for their health and well-being, but central to learning what it means to be human in relation to other humans and the non-human world (Malone, 2017). In Auckland, Aotearoa, children are engaging with nature in their schools and some take action for the environment as part of an enviro-group.

While EfS has grown over the past 30 years, it is still the minority of students who have the opportunity to learn about sustainability and take self-directed actions. Without further governmental support and more explicit guidance in the New Zealand Curriculum, it is likely EfS will continue on the same trajectory, which could be too little, too late. Understanding the experiences of children and listening to their feelings and perspectives can only serve to strengthen the kaupapa.

Approaching the research phenomenologically, utilising the methodology of poetic inquiry I was able to shine a light onto the experience of students taking action for the environment in their primary schools. By being present and participating with the students, I was able to interpret their words and represent their experiences as found poetry. The children’s language was revealing of an embodied, emotional, learning experience.

A thematic analysis of the poems revealed four main themes: whānau & community, connection to nature & place, student agency & freedom, and learning experiences. Closer analysis of the poems showed the children’s inclination to anthropomorphise nature, indulge in imaginative play, and their ability to be in a complex ethical environment. Children felt free to express

themselves, make decisions, share stories, and used language dissimilar to that used in the complex definitions and frameworks relating to sustainability.

I believe this research demonstrates the importance of adding children's voices to the discourse of sustainability and more broadly humans' relationship with nature. Their creativity, curiosity and enthusiasm will be essential to creating an EfS that is up to the challenge of living with 'hyperobjects' such as climate change (Morton, 2013). A commitment by the government to consistently fund and promote EfS in schools will help support more of these programmes that every child should have the opportunity to experience.

Reflection on methodology and methods

In a culture where the language and speech of children are often marginalised (Eder and Fingerson, 2002), the methodology of poetic inquiry allows children to speak for themselves in the data, acknowledging their unique voices and honouring their speech styles, words, rhythms, and syntax (Richardson, 2002). Using poetry in my research captured the humanness of the participants and was a step away from dichotomous thinking to more divergent thinking (Glesne, 1997). The nuance, complexity and depth of feeling people have for this topic makes it fertile ground for poetic inquiry and other arts-based inquiry.

What is a poem good for?

Perhaps the most important question that a researcher can ask is not "is this a good poem?" but instead "what is a poem good for?" (Leggo, 2008, p. 169). My hope for readers, that made it across the river so to speak, is that they have questioned the language used to describe EfS, and the position that action for the environment currently holds in the curriculum. I hope that via the poems readers have gained some insight into the experience of children taking action for the environment in their schools, recognising the importance of their voices and, perhaps, even felt an emotion for which there currently is no word (Collins, 2003).

Possibilities for further inquiry

Giving participants the opportunity to write their own poetry would have provided interesting data to add to the analysis. This would be another way to value diversity and inclusivity in field-based research (Finley, 2008). By making this writing session a group activity, where students help each other and share ideas, they could further “develop and convey aspects of peer culture” in their talk and poems (Eder & Fingerson, 2002, p. 183). The process of responding poetically to the children’s poems would demonstrate social construction, meaning-making and how point of view can offer different interpretations (Faulkner, 2019).

Since the current research was limited to four sessions, a more in-depth phenomenological study could reveal more nuances of children’s experiences. The experience of students taking action for the environment in a Māori educational context is another avenue for further study.

What’s in a word?

Finally, the term ‘sustainability’. Do we really need it?

Yes. We need it

And the UN boffins

The Minecraft Pros, the Noobs

The Gretas and the Elons

And the little girl who asked to join us in the garden

We need connection

We need mauri

We need kākāpō

We need kiore

Yes. We need it

till someone writes a really good one-word poem.

Safely across the river, and ready to continue on your journey, you think of Jimmy. While staying with him, you pieced together bits of his story – the tragedy in Manchester, his penitence in Australia, the whale-boats of Moeraki, love, loss and finally a settled life, in the kaik next to the river. Here, he saw out his days helping people across its everflowing threshold.

On first hearing them, his parting words were mysterious, but now you turn them over in your mind again. It was a Māori whakataukī, taught to him by his wife.

Ko au te awa ko te awa ko au -

I am the river; The river is me

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